



KunLun Energy Company Limited

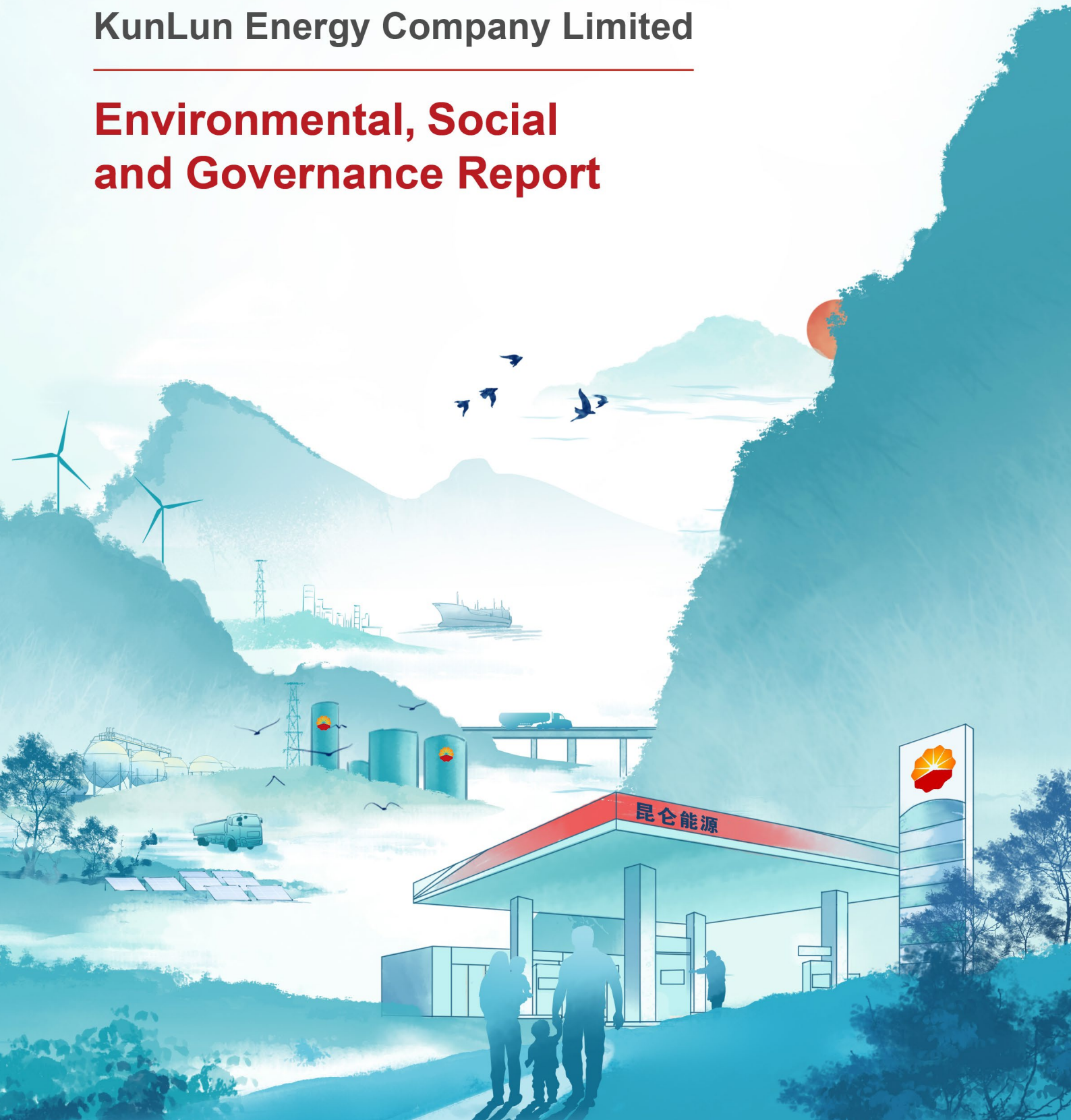
(Incorporated in Bermuda with limited liability 於百慕達註冊之有限公司)

昆 侖 能 源 有 限 公 司

2022

KunLun Energy Company Limited

Environmental, Social and Governance Report



CONTENTS

About this Report	01
List of Abbreviations	02
About Kunlun Energy	03
Message from Chairman	05
Focus on ESG Goals to Drive Sustainable Development	07
2022 ESG Highlights	11
Honours in 2022	13

01 Building a Strong Foundation for Governance 15

ESG Management	17
Communication with Stakeholders	20
Materiality Assessment	21
Compliance and Risk Management	23

02 Ensuring Quality for a Trustworthy Company 27

Feature: Remarkable Achievements In Safety Governance	29
Quality Management	35
Customer Services Management	37
Supply Chain Management	40

03 Embracing a Green, Low-Carbon Future 43

Feature: Accelerating Climate Change Action Towards Low-Carbon Transition	45
Environmental Protection Management	53
Pollution Prevention and Control	54
Resource Utilisation and Ecological Conservation	56

04 Fostering Prosperity and Harmony for All 59

Feature: Empowering an Efficient Energy System with Digital Intelligence	61
Delivering Social Value	65
Protecting Labour Rights	71
Focusing on Talents Development	74
Safeguarding Occupational Health	77

Future Outlook	79
Appendix	81



ABOUT THIS REPORT



PURPOSE OF THE REPORT

This report is the "Environmental, Social and Governance Report" (referred to as "**this Report**" or "**Report**") issued by **Kunlun Energy** Company Limited (referred to as "Kunlun Energy" or "**the Company**" or "**We**"). The purpose of this report is to summarise Kunlun Energy's philosophy in fulfilling its three major responsibilities of environmental, social, and governance in 2022, the management system and related practices it follows, and the response to important issues of concern to key stakeholders.



REPORTING PERIOD

This Report is prepared on an annual basis, and the reporting period is from January 1, 2022 to December 31, 2022 (referred to as "**this Year**"). Part of the content in the report extends to the beginning of 2023.



REPORTING SCOPE

This Report covers the Company's environmental, social and governance management systems, objectives, commitments, key projects and measures in relation to ESG matters and activities relating to the operation of the Company. For the list of the Company's subsidiaries covered in the Report, please refer to Note 38 "Principal Subsidiaries" in the consolidated financial statements set out in the Company's annual report 2022.



BASIS OF PREPARATION

This Report is prepared in accordance with the Environmental, Social, and Governance Reporting Guide (referred to as "**ESG Reporting Guide**") in Appendix 27 to the Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited (referred to as "**Hong Kong Stock Exchange**"). We have followed the reporting principles of materiality, quantitative, balance and consistency, as well as the "mandatory disclosure" requirements and "comply or explain" provisions.

- **Materiality:** By conducting materiality assessment, we have identified the importance of ESG issues to different stakeholder groups. The Company intends to prioritise responses to those ESG issues with higher materiality.
- **Quantitative:** This Report has presented ESG key performance indicators (referred to as "**KPIs**") in a measurable manner and disclosed calculation standards and statistical scope of quantitative parameters.
- **Balance:** This Report provides objective facts, and discloses both positive and negative indicators, presenting an unbiased view of the Company's ESG performance.
- **Consistency:** Unless otherwise stated, this Report uses a consistent statistical methodology as prior years, to ensure a meaningful comparison with historical data. Any changes in the statistical scope will be annotated and explained accordingly in this Report.

This Report is prepared with reference to GRI Sustainability Reporting Standards (referred to as "**GRI Standards**") published by the Global Sustainability Standards Board (referred to as "**GSSB**"), Recommendations of the Task Force on Climate-related Financial Disclosures (referred to as "**TCFD**"), as well as other relevant standards and guidelines. In addition, this Report is also prepared with reference to the disclosure requirements set forth by the State-owned Assets Supervision and Administration Commission (referred to as "**SASAC**"), as well as ESG rating agencies.



INFORMATION PREPARATION

All information disclosed in this Report is derived from the Company's internal documents, statistical data and summaries and statistics of the fulfilment of responsibilities by the subsidiaries of the Company. This Report is prepared by the Sustainability Committee, reviewed by the management and approved by the Board. Unless otherwise stated, all amounts stated in this Report are in Renminbi (referred to as "**RMB**").



FEEDBACK AND CONTACTS

The Company looks forward to hearing your valuable opinions and suggestions, to improve the sustainable development performance and ESG capability. If you have any questions about this Report or require a printed version, please contact us at through email info@kunlun.com.hk or telephone (852) 25222282.

LIST OF ABBREVIATIONS

Abbreviation	Meaning
BOG	Boil-off gas
CDP	Carbon Disclosure Project
CNG	Compressed natural gas
DJSI	Dow Jones Sustainability Indices
ESG	Environmental, social, and governance
ISO	International Organisation for Standardisations
IPCC	Intergovernmental Panel on Climate Change
LNG	Liquefied natural gas
LPG	Liquefied petroleum gas
MSCI	Morgan Stanley Capital International
QHSE	Quality, safety, health and environment
SDGs	Sustainable Development Goals
TCFD	Task Force on Climate-related Financial Disclosures



ABOUT KUNLUN ENERGY

COMPANY PROFILE

Kunlun Energy Company Limited is incorporated in Bermuda listed on the main board of the Hong Kong Stock Exchange (stock code: 00135.HK). Kunlun Energy is an integrated energy company controlled by PetroChina Company Limited (referred to as “PetroChina”) and a constituent of the Hang Seng China Enterprises Index. Kunlun Energy’s businesses focus in four segments: Natural Gas Sales, Sales of LPG, LNG Processing and Terminals, and Exploration and Production, which are important elements of PetroChina’s natural gas value chain.

Kunlun Energy has become one of the largest enterprises engaged in natural gas utilisation and sales of LPG in the People’s Republic of China (referred to as “PRC”), with LNG and CNG terminals covering across the whole country.

In 2022, the Company’s natural gas business covering provinces, autonomous regions and municipalities across the country

31

Natural gas sales volume

44,988 million cubic metres

Year-on-year increase

7.1%

Natural gas users

14.713 million

Kunlun Energy gives full play to the advantage of business synergy, focusing on development concept of “adhere to green and low carbon, achieve high-quality development and build beautiful ecology”. The Company is committed to providing safe and stable gas supply as well as high-quality and efficient customer service for all kinds of users, creating significant value for shareholders. We are making positive contributions to promote economic and social development, and striving to become an internationally renowned and China’s first-class integrated green energy provider.

Indicator	Unit	2021	2022
Sales revenue	RMB in 100 million	1,385.5	1,719.4
Total assets	RMB in 100 million	1,325.8	1,388.9
Sales volume of natural gas	100 million cubic metres	420.0	449.9
Annual sales volume of LPG	10,000 tonnes	598.6	561.6
Numbers of users	10,000 users	1,384.6	1,471.3

CORPORATE CULTURE

<p>Development goal</p> <p>build an internationally renowned and China’s first-class integrated green energy provider</p>	<p>Enterprise mission</p> <p>devote to green energy and empower better life</p>	<p>Development strategy</p> <p>innovation, resource, market, internationalisation, green and low carbon</p>
<p>Integrity philosophy</p> <p>fairness in power, integrity in profession</p>	<p>Compliance philosophy</p> <p>law as top priority, compliance first, integrity and trust, justice and rights</p>	<p>Quality, health, safety and environment philosophy</p> <p>people focus, quality foremost, safety first, environmental protection priority</p>
<p>Customer service philosophy</p> <p>start from the customer needs, aim for customer satisfaction, exceed customer expectations</p>	<p>Talent development philosophy</p> <p>embrace knowledge, honour talent, empower dreamers to achieve success</p>	<p>International cooperation philosophy</p> <p>mutual benefit, collaborative development</p>

MESSAGE FROM CHAIREMAN



Chairman and Executive Director

Fu Bin

It is my great honour to present this report to you. I would like to express my sincere gratitude for your unwavering care and support towards Kunlun Energy.

Time has passed by swiftly, and we have successfully navigated through the pivotal and tumultuous year of 2022 with unwavering unity and courage. The global geopolitical landscape has brought about significant changes to the energy industry, presenting us with multiple challenges such as the sharp increase in imported gas costs, intensifying regional supply-demand contradictions, and frequent safety accidents in the industry. In the face of these challenges, Kunlun Energy has remained steadfast in implementing the new development concept, persevering in our pursuit of progress while maintaining stability, and continuously deepening our reforms. We have strived to expand our business market, adjust our business structure, promote transformation, and manage risks. Through concerted efforts, we have achieved commendable results in corporate governance, energy security, green transformation, and social responsibility. Our economic performance has reached a historical high, and we have made significant breakthroughs in reform and development. Leveraging our resource advantages, we are committed to building a more standardised, open, dynamic, and resilient enterprise. We are dedicated to promoting high-quality development in the natural gas business to create greater value for our shareholders, customers, employees, the public, and other stakeholders.

Kunlun Energy is deeply committed to implementing enterprise reforms that are aligned with the new era, in order to establish a solid foundation for sustainable development.

Standardised corporate governance and operational systems are essential for a company's long-term growth and development. Furthermore, ESG factors are driving forces that shape corporate values and underpin the implementation of new development concepts. At Kunlun Energy, we have integrated ESG considerations into our top-level design, operations management, strategic planning, and risk management. We are continuously exploring new impetus for reform and development, leveraging compliance management to drive our reform efforts. Over the past year, we have strengthened our compliance governance system and implemented the authority of the Board of Directors. We have also progressively enhanced our management and incentive structures based on market principles and have endeavoured to maintain positive interactions with investors. Notably, we have successfully completed the "Three-year Action Plan for State-owned Enterprise Reform", achieving synchronised improvements in our corporate governance system and modernisation levels.

Kunlun Energy is pleased to announce the successful completion of our three-year special rectification action for safety production, which has significantly elevated our safety management practices to a new level.

The increasing severity of gas safety situations in recent years has further reinforced our steadfast adherence to people-oriented and safety-first principles. We have harnessed the power of digital technologies to empower gas infrastructure construction and continuously strengthen our management of hidden dangers associated with urban gas. This year, we have successfully completed the three-year special rectification action for safety production, which involved a systematic and comprehensive approach to addressing risks in areas such as urban gas and hazardous chemicals. We invested a total of RMB 1.7 billion to rectify these hazards. Our ultimate objective is to achieve comprehensive pipeline digital mapping control, facilitate the intelligent and intensive transformation of safety production management, and promote the digitalisation of safety management practices. Our unwavering commitment to safety and proactive approach to hazard management have yielded promising results, with zero work-related fatalities reported in 2022 and a significant decrease in lost worktime rate due to work injuries. These achievements have significantly solidified the foundation for high-quality development of the Company.

Kunlun Energy has expedited the implementation of green development strategies and is actively coordinating efforts to promote business growth and low-carbon transformation.

The shift towards green transformation is a practical requirement for traditional energy companies to enhance their market competitiveness and achieve sustainable development while adhering to the "dual-carbon" target. Kunlun Energy is committed to promoting the construction of new energy systems, expanding strategic investments, and transforming its industrial chain. This year, the Company has initiated the construction of "zero carbon emission stations" as pilot projects and carried out energy-saving technology renovations, resulting in a significant reduction of 2,300 tonnes of standard coal throughout the year. We emphasise the simultaneous promotion of natural gas and new energy businesses and have established photovoltaic, wind energy, and wind-solar complementary projects based on local conditions. Six photovoltaic projects have already been completed and are now operational. Furthermore, the Company is striving to develop a carbon-neutral model in new towns, parks, and buildings while accelerating the transformation towards becoming a comprehensive green energy supplier. We are dedicated to becoming a pioneer in achieving the dual-carbon goal and leading the way in the gas industry.

Kunlun Energy is committed to sharing values and promoting mutual benefits while actively fulfilling social responsibilities and obligations.

As a red chip listed company, it is imperative and incumbent upon us to lead by example in fulfilling the state's major decisions, ensuring basic livelihood guarantees, and reflecting societal values by implementing the new development philosophy. Kunlun Energy has been responsive to the national rural revitalisation strategy and the United Nations' "2030 Agenda for Sustainable Development". We have firmly fulfilled our corporate social responsibility and actively participated in public welfare undertakings. This year, we have placed emphasis on brand construction, with customers as the core, and deepened cooperation with local governments, enterprises, and the media to promote local economic development. During the Beijing Winter Olympics and Winter Paralympics, we provided services for around 1,800 people and invested a total of RMB 110 million. We have also focused on educational support, charitable donations, rural revitalisation, and other fields, contributing to society and benefiting a total of 18,125 people. We have established a diverse, equal, friendly, and inclusive corporate culture that provides employees with comprehensive physical and mental health protection. With the implementation of the talent-strong strategy, we are dedicated to promoting mutual growth between employees and the company.

Looking back on 2022, we are proud to have made significant progress in sustainable development, which has been recognised by various awards and ratings. Our company has achieved an A level rating in the "Double-hundred Enterprise" of the State-owned Enterprise Reform "Double Hundred Action", and we were rated as "Excellent". Furthermore, our MSCI ESG rating has been upgraded to BBB, and we have raised our rating for climate change from the CDP to B-, reaching a management level for the first time. In addition, we were once again shortlisted in the "State-owned Enterprises ESG Pioneer 50 Index", moving up from 26th to 17th place. Looking ahead, Kunlun Energy affirms its commitment to upholding our corporate philosophy of "dedicating energy, creating harmony", as we strive towards our vision of becoming an internationally renowned and China's first-class integrated green energy provider in China. We remain resolute in our efforts to generate value for all stakeholders, advance national strategies, meet the needs of our constituents, and foster industry development. We are dedicated to fostering greater harmony in society, and will work in collaboration with all stakeholders to achieve this goal.

FOCUS ON ESG GOALS TO DRIVE SUSTAINABLE DEVELOPMENT

Sustainable development is the shared future for humanity. As an enabler for companies to achieve sustainable development, ESG is important for Kunlun Energy to continuously enhance corporate governance and promote coordinated economic and social development. To this end, the Company benchmarked world-class enterprises and United Nations Sustainable Development Goals (referred to as "SDGs"), and established an ESG targets management system that reflects the Company's leadership on managing the ESG targets customised for Kunlun Energy.

Through this initiative, we aim to improve ESG governance through target-driven strategy, and solidify management accountability, in order to further enhance our ESG performance and management capabilities. In addition, we strive to partner with stakeholders to address the global social and environmental challenges through ESG practices, to contribute to the sustainable development of our planet.

Our ESG targets management system covers the Company's ESG material issues, which comprises five main themes, including green and low-carbon development, health and safety, talent development, product responsibility, and compliant governance. Within each theme, we also broke down the targets and clarified actions and responsible departments to ensure the target-owners' responsibility of realising these targets as scheduled.



Green and Low-carbon Development

Targets

- By 2030, to peak CO₂ emissions, and to lower methane emissions intensity by **20%** compared to 2020
- By 2040, to lower CO₂ and methane emissions intensity by **40%** respectively compared to 2020
- By 2050, to achieve "**net zero**" emissions
- By 2025, to complete low-carbon transformation for **60%** eligible stations

Actions in 2022

- Promoted "zero carbon emission stations" pilots to explore the carbon reduction potential
- Accelerated the deployment of new energy projects
- Carried out energy-saving renovations and optimise energy management system
- Conducted pipeline leak detection and repairs, and recycled boil-off gas (referred to as "BOG") generated in the process
- Explored integrated energy service models and gradually promoted energy transition



Health and Safety

Targets

- By 2023, to maintain **0** incidents of general Class A accidents (or above)
- By 2023, to achieve **100%** for the coverage and rectification of safety inspections
- By 2023, to maintain the coverage of safety emergency plan drills at **100%**, to achieve **100%** for the coverage of special drills among affiliated units, and **100%** coverage of the digital emergency plans
- By 2023, to achieve 100% for the coverage of safety training, with average training hours to reach **32** or above

Actions in 2022

- Enforced the safety accountability system, strengthened the assessment and reward-punishment mechanisms
- Strengthened the investigation and management of safety hazards, and regularly conducted inspections of affiliated units
- Regularly carried out emergency drills, improved the emergency system to enhance emergency capabilities
- Strictly carried out occupational hazards detection according to national requirements and provided professional protection equipment
- Conducted occupational health checks for employees with additional healthcare programmes
- Provided additional insurances including critical illness insurance and supplementary medical insurance
- Promoted the establishment of Healthy Enterprises to meet the standards
- Drove the transformation of employees' mindset towards health

- By 2023, to reach **100%** for the coverage of occupational hazards detection
- By 2023, to reach **100%** for the coverage of occupational health check
- By 2023, to decrease the non-production fatalities by **10%** compared to 2022

- By 2023, to achieve **100%** for the completion of Healthy Enterprises

Talent Development



Targets

- By 2023, to reach at least **90%** for the vocational training coverage
- By 2023, to reach at least **85** for the average vocational training hours
- By 2023, to maintain the number of child labour or forced labour cases at **0**

Actions in 2022

- Customised training programmes for different talents
- Conducted a number of training activities through various channels such as CNPC e-learning, training institutions, and cooperation with universities
- Strictly complied with labour regulations and established an incident handling and self-inspection mechanism

Compliant Governance



Targets

- To continuously improve the corporate governance system
- By 2023, to reach **100%** for the coverage of Board-level anti-corruption trainings, including seminars, centralised training, or distribution of training materials
- By 2023, to reach **100%** for the coverage of employees' compliance and anti-corruption trainings, and to continuously increase the coverage of anti-corruption training for contractors

Actions in 2022

- Revised corporate governance policies including compensation policy, whistleblowing policy, and related party transaction policy
- Organised anti-corruption training and seminars for Board members
- Conducted compliance and anti-corruption training for employees through workshops, legal sections, speech contests, online courses etc.
- Distributed anti-corruption training materials to suppliers and contractors to enhance business ethics education

Product Responsibility



Targets

- By 2023, to maintain customer satisfaction rate at **98%** (or above)
- By 2023, to maintain the resolution rate of customer complaint at **100%**
- By 2023, to maintain completion of product quality testing at **100%**
- By 2023, to maintain the natural gas quality testing and sampling pass rate at **100%**
- By 2023, to reach **100%** coverage for the supplier evaluation, including topics on compliance, environment, business ethics, health and safety, quality, human rights etc.

Actions in 2022

- Developed the guidance "Standardisation of Natural Gas Customer Service Business Processes" to regulate customer service processes and standards
- Established and improved the customer complaint handling mechanism, and launched the nationwide customer service hotline 956100
- Strengthened quality standard construction by revising 10 institutional standards including the "Quality Management Measures", and continuously carried out ISO 9001 quality management system certification
- Conducted gas quality sampling and monitoring through internal inspection and external agencies
- Continued to improve supplier management methods and organised supplier evaluation annually
- Conducted irregular supplier product quality inspections

2022 ESG HIGHLIGHTS

Environmental

Carbon Emissions Reduction

17.3%
decreased in methane emissions

2
LNG plants were conducted clean production audits

11,193
trees were planted

Energy Usage

180 million kWh
renewable energy procurement

480,000 kWh
solar power generation

2,300 tonnes of
standard coal
energy-saving amount

Environmental Management

100%
green enterprise certification for affiliated units

12,000
participants of environmental protection training

Corporate Governance

Anti-corruption Management

6
Board's authority schemes established to deepen the term system and contractual management

Improved compensation policies
with a clawback mechanism, linking ESG performance to compensation

100%
Anti-corruption training coverage

"Whistleblower Policy"
revised and released

Social

Safe Production

RMB **1.7** billion
invested in three-year special rectification action for safety production

0 fatalities due to work-related incidents

Lost time injury rate has **significantly decreased**

120,000 km
digital pipeline network

Products and Services

ISO 9001
promote the quality management standardisation

2,770
times of annual gas quality sampling test

99%
customer satisfaction rate

Occupational Health

Talent Development

100%
occupational health check coverage

100%
occupational health hazards detection coverage

0
newly added occupational diseases cases

25,455
participants of occupational development training

14.5%
percentage of female in management positions

Social Welfare

Supply Chain Management

100%
new suppliers signed the "Supplier Qualification Commitment"

RMB **15.28** million
invested in social donations and consumption assistance

18,125
beneficiaries of public donations



Governance

HONOURS IN 2022

- Shortlisted in "Central Enterprises ESG Pioneer 50 Index" (No. 17th)
- Shortlisted in "Central Enterprise ESG Governance Pioneer 50 Index", and "Central Enterprise ESG Risk Management Pioneer 50 Index"
- Selected as an excellent case in the "Research Report on ESG of Listed Companies Controlled by Central Enterprise (2022)"



- Rated as an **A-level "Double-hundred Enterprise"** in the State-owned Enterprise Reform "Double-hundred Action" organised by SASAC, and recognised as **"outstanding"** enterprise among "Double-hundred Enterprise"
- Shortlist in the **"Model Enterprise in Corporate Governance"** by SASAC

- Won the **"Best Listed Company"** award in the 12th China Securities Golden Bauhinia Award



- Won the **"Best ESG Award"** at the 6th Golden Hong Kong Stocks organised by the financial media Zhitong Finance



Won Institutional Investor awards in Power sector:

- Ranked **1st** in the **"Most Honoured Company"**
- Ranked **2nd** in the **"Best ESG"**
- Ranked **2nd** in the **"Best Investor Relations Company"**



ESG Rating Performance



- MSCI ESG rating upgraded to

BBB



- CDP climate change questionnaire rating upgraded to

B-

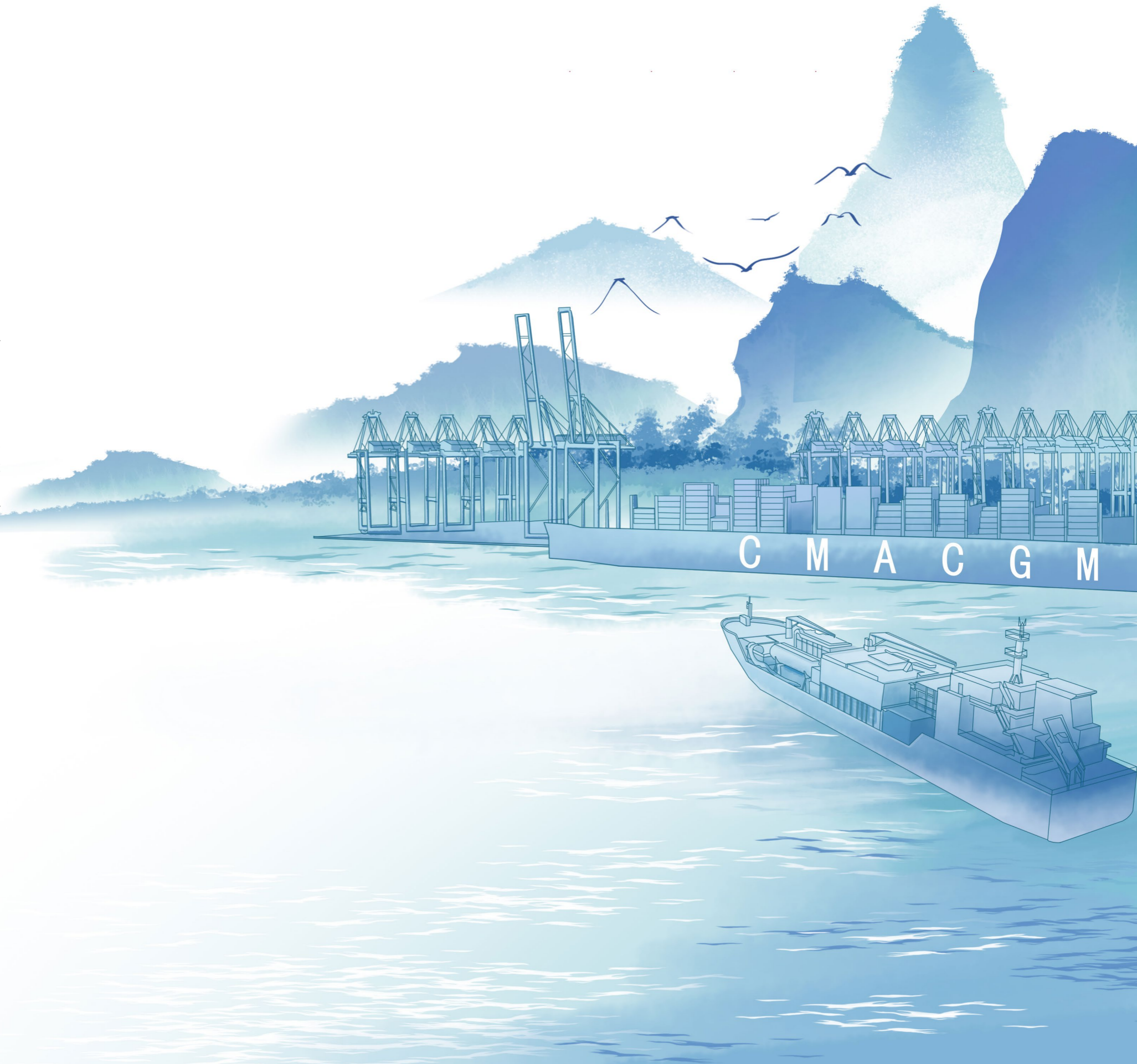
- Actively responded to the **S&P Global Corporate Sustainability Assessment (CSA) questionnaire**

01

BUILDING A STRONG FOUNDATION FOR GOVERNANCE

Kunlun Energy believes that good governance is the cornerstone for achieving sustainable development. Therefore, the Company focuses on improving governance processes, standardising governance mechanisms, and enhancing governance levels as long-term priorities. In response to changes in the external environment and the demands of various stakeholders, Kunlun Energy continuously enriches and improves the governance of the Board and the management of all levels. In recent years, ESG has gradually become an indispensable part of Kunlun Energy's corporate governance, which also plays an important role for promoting the modernisation of corporate governance to a new level.

- ESG MANAGEMENT
- COMMUNICATION WITH STAKEHOLDERS
- MATERIALITY ASSESSMENT
- COMPLIANCE AND RISK MANAGEMENT



ESG MANAGEMENT

Kunlun Energy not only incorporates ESG requirements as an important part of the Board governance and corporate management, but also optimises the ESG governance framework and strengthens the Board supervision, to continuously enhance the overall ESG capability and performance.

Board Statement

The Board of the Company takes the overall responsibility for ESG management strategy, supervision, and reporting. The Board regularly receives reports from the Sustainability Committee on material ESG issues for assessment and decision-making, and regularly reviews material ESG-related risks to ensure all risks are effectively managed and monitored. The Board also supervises regular communication with stakeholders and determines materiality assessment, in order to ensure our ESG priorities meet stakeholders' requirements and continuously improve ESG management. Regarding ESG targets related to the Company's business, the Board periodically reviews the target setting and implementation, tracks target progress and completion, to promote our ESG performance with higher standards and supervision measures, and strives toward the goal of becoming an internationally renowned and China's first-class integrated green energy provider.

Corporate Governance

During this reporting period, Kunlun Energy has continued to strengthen the construction of the Board and to improve the Company's governance system. The Company strictly implements the "Opinions of the State Council for Further Improving the Quality of Listed Companies", and has formulated multiple Board authority schemes, such as the "Board Meeting Rules", the "Board Authorisation Management Measures", and the "Authorisation Decision List", in order to clarify the boundaries of power and responsibility among different governance levels. This allows the Board to fully play their role in "strategic decision-making and risk prevention", standardises Board authorisation management behaviour, and improves the efficiency of autonomous operating decisions. At the same time, we have established a "1+N" system¹ for equity management, to strengthen compliance management of equity investment and enhance risk prevention and control capabilities. Through a series of good reform practices, the Company was selected as a model enterprise for corporate governance of state-owned enterprises by the SASAC, and was awarded the "Excellent" rating in the 2022 "Double-hundred Enterprise" evaluation.

Board diversity and independence

Having a diverse board is critical for improving corporate governance, achieving strategic goals, and promoting sustainable development. Kunlun Energy is continuously enhancing the diversity and independence of the Board, and aims to establish a healthier structure of Board members. The Nomination Committee under the Board, selects director candidates based on objective standards and various factors that contribute to board diversity, including but not limited to gender, age, culture, race, skill, knowledge, professional experience, educational background, and other requirements set by the regulatory authorities.

In compliance with the independence guidelines stipulated in the listing rules, Kunlun Energy considers all of its independent non-executive directors to be independent, without any connections between board members, and possessing professional expertise, experience, and contributions to the Company. The Nomination Committee conducts at least annual reviews of the Board's composition to ensure its diversity and independence.

¹ The "1+N" system of equity management refers to a method of equity management and a set of supporting implementation rules.

Compensation policy

Kunlun Energy continues to strengthen the implementation of the Board's authority, promote term and contract-based management for Directors and senior management, and consistently enhance the compensation management system to improve the Board's execution capabilities.

In 2022, the Company has issued the "Kunlun Energy Managerial Member Compensation Management Measures (Trial)" and the "Kunlun Energy Managerial Member Performance Evaluation Measures (Trial)", which implement an "advance monthly payment, combined with annual and term assessment" system for the annual salary of managerial members (including Directors and senior management). A clawback mechanism has also been established. The compensation of managerial members will be settled based on annual performance evaluation, and if it is lower than the settlement level, it will be paid in full in one lump sum. On the other hand, if it exceeds the settlement level, the overpayment must be clawed back. Moreover, the evaluation criteria for managerial member compensation are linked to ESG indicators such as compliance management, customer and service satisfaction, technological innovation, risk prevention and control, quality, safety, and environmental protection, etc. This helps to further promote the implementation of ESG related responsibilities and enhance ESG performance.

Management of related party transactions

Kunlun Energy attaches great importance to the management of related party transactions, strictly following the regulations such as the "Company Law of the People's Republic of China" and the "Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited". The Company has formulated the "Kunlun Energy Related Transaction Management Measures" to ensure that our related transactions comply with the principles of integrity and fairness, adhere to commercial principles or general business terms during the execution process. The "Kunlun Energy Related Transaction Management Measures" clearly define the scope of related parties, the classification of related transactions, the responsibilities of various organisations and functional departments, and standardise the processes of related transaction agreement signing, approval, upper limit management, information disclosure, control, etc., to ensure strict control of the entire process of related transaction risks.

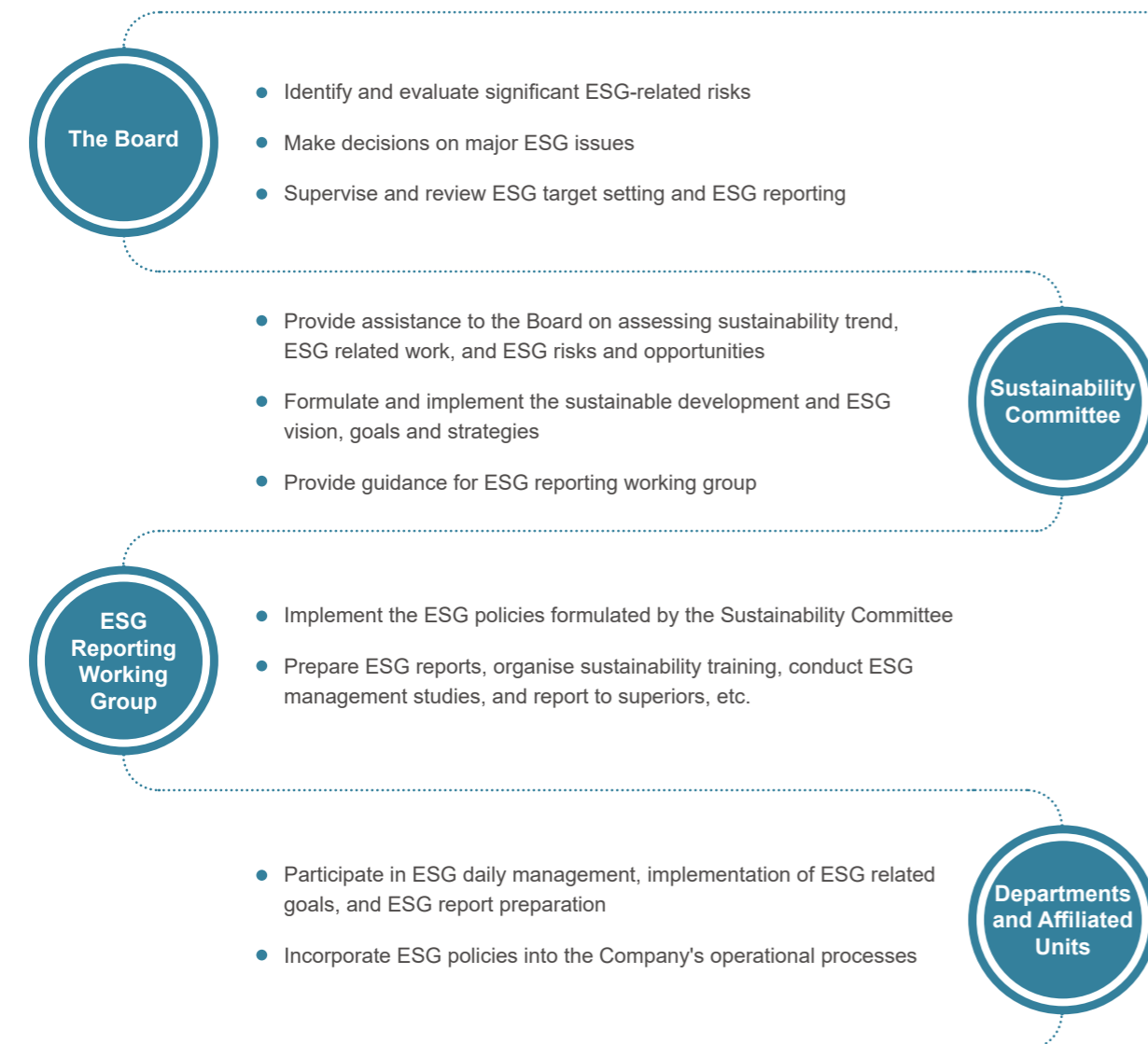
Key Tasks and Achievements of ESG Management in 2022

Kunlun Energy is working to improve the Sustainability Committee's functions to enhance ESG governance and implement ESG management systematically, in accordance with SASAC's "Double-hundred Actions" and efforts to improve listed companies' quality. In 2022, Kunlun Energy has deepened its research on capital markets and industry trends, with more leading research output on development strategies, ESG construction, and green development, which have been integrated into the Company's development strategy. Meanwhile, the Company actively engages in communication with capital markets and rating agencies to strengthen the information transparency with better comprehensiveness, effectiveness, and continuity, thus enhance its market value. The 2022 ESG management highlights and achievements are as follows:

-  Established a sound ESG target system and with solid accountability
-  Responded to international ESG ratings, with MSCI ESG rating upgraded to BBB, realising a promotion for three consecutive years; CDP climate change rating upgraded to B- level, achieving management level for the first time
-  Conducted climate change risk analysis and research, and integrated climate change risk into the enterprise risk management
-  Organised ESG trainings for Directors and employees to improve their ESG capacity
-  Engaged in stakeholder communication, responded to investors' inquiries on ESG, and participated in sustainability forums

ESG Governance Structure

In response to the Hong Kong Stock Exchange's "Making inroads into good Corporate Governance and ESG management", as well as the SASAC's guidance of driving state-owned enterprises holding listed companies to take the lead in ESG., Kunlun Energy has continuously optimised its workflow and management system. We have established the Sustainability Committee responsible for evaluating sustainable development and ESG work, assessing risks and opportunities, providing guidance for sustainable development and ESG visions, goals and strategies, and implementation of relevant work. The ESG reporting working group takes over the ESG work from the Sustainability Committee and implement ESG policy to various departments and affiliated units. The ESG reporting working group cooperates with various levels of work to achieve full coverage of ESG actions from the Board to various departments.



COMMUNICATION WITH STAKEHOLDERS

Kunlun Energy has established various accessible communication channels to maintain high-frequency and high-quality communication with all stakeholders. We are committed to listening to stakeholders' demands and continuously improving our sustainable development efforts to better meet their expectations.

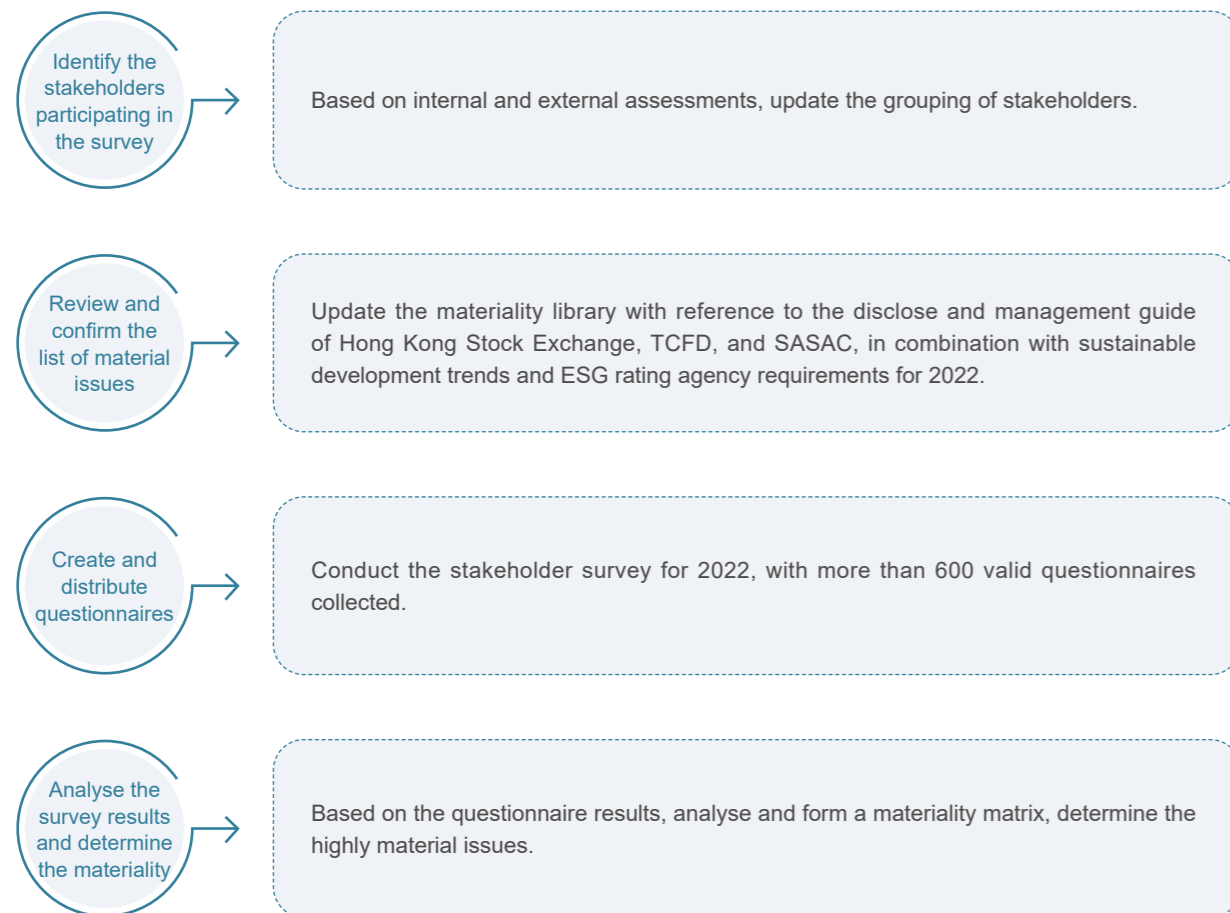
Stakeholders	Focus issues	Communication and responses
 Customers	<ul style="list-style-type: none"> Customers' health and safety Integrity and compliance Safe production Product and service quality improvement Stable clean energy supply 	<ul style="list-style-type: none"> Further strengthen users security checks and awareness promotion Strict adherence to national regulations on compliance management and safe production Organise customer satisfaction surveys Set reasonable sales prices Ensure a stable supply of energy
 Governmental and regulatory authorities	<ul style="list-style-type: none"> Stable energy supply Compliance with regulatory requirements Community service and local development 	<ul style="list-style-type: none"> Communicate with relevant authorities to enhance cooperation Participate in government agency meetings and forums Ensure stable supply of resources Carry out community welfare and volunteer services
 Suppliers	<ul style="list-style-type: none"> Safe production Risk control Fair and transparent procurement Win-win cooperation 	<ul style="list-style-type: none"> Hold a quarterly meeting to address to resource supply Strengthen the communication and collaboration with upstream and downstream Conduct on-site inspection and communication with suppliers Centralised procurement of bulk materials through public bidding
 Employees	<ul style="list-style-type: none"> Healthy and safe workplace Employee well-being Sustainable development of the Company Legal employment and protection of employees' rights 	<ul style="list-style-type: none"> Conduct employee health and occupational safety check-ups Regularly hold staff representative meetings Establish trade union organisations at all levels Set up complaint and feedback mailboxes Employ according to the law and protect workers' rights Develop multi-level, multi-angle and full-coverage training programmes
 General public	<ul style="list-style-type: none"> Safe production GHG emissions management Stable energy supply Protection of local ecological environment Community welfare and local development 	<ul style="list-style-type: none"> Active visits and conversations in local communities Carry out project environmental assessments Enhance information disclosure Set emission reduction targets and roadmap Strictly implement the "Three Simultaneities" management procedures for safety, environmental protection and occupational health Carry out community welfare and volunteer services
 Shareholders and investors	<ul style="list-style-type: none"> Integrity and compliance Product and service quality Information security management Corporate risk management Corporate governance 	<ul style="list-style-type: none"> Organised 2 performance disclosure conferences with the participation of 152 institutions, 185 investors, and analysts; communicated with 112 investors on the Company's performance highlights, business operations, and development strategies after the conference Participated in 17 securities firms' online investment summits and held 27 online roadshows with a total of 230 attendees Established a regular communication mechanism, with 68 one-on-one meetings and 299 receptions for capital market daily communication Actively respond to ESG-related inquiries from ESG rating agencies and investors

MATERIALITY ASSESSMENT

Kunlun Energy actively maintains close communication with stakeholders, conducts assessments on issues of concern from various groups, and gradually improves the analysis of the impact of ESG issues on the Company's finances. This year, Kunlun Energy conducted materiality assessment from both qualitative and quantitative perspectives based on changes in the external environment. According to the assessment results of the material issues, the Company has continuously optimised its internal management and improved its disclosure responses.

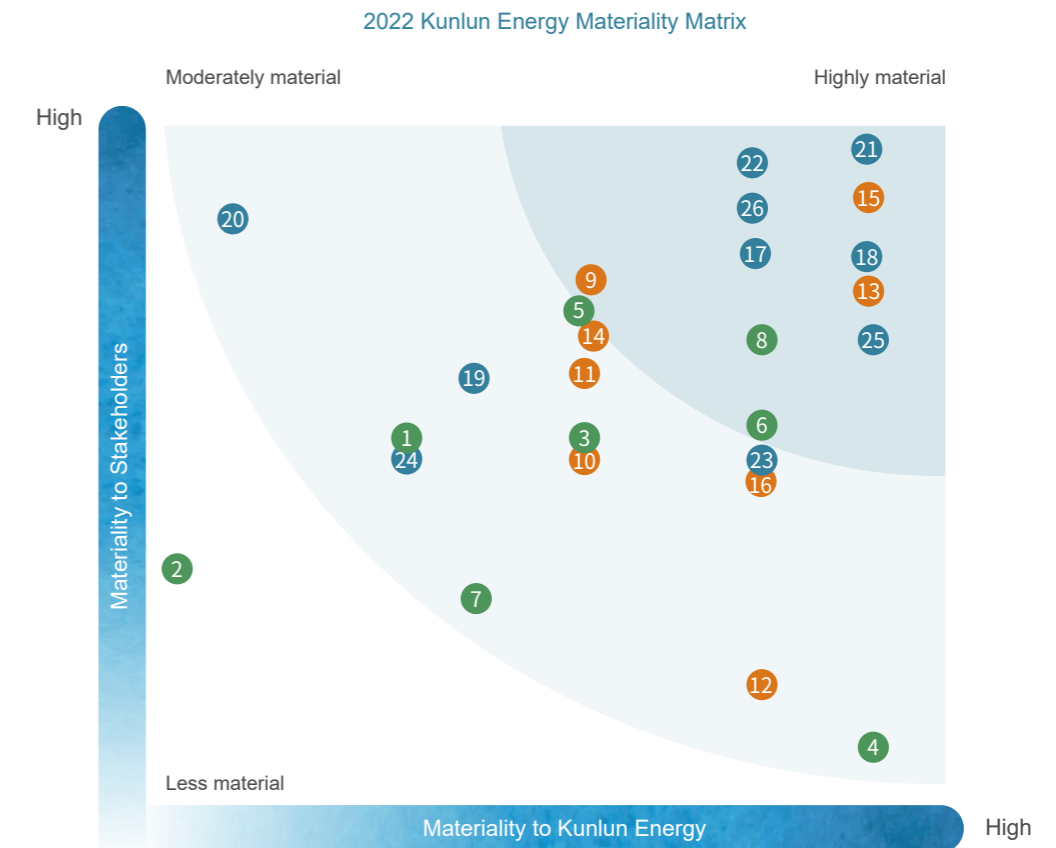
Materiality Assessment Process

In 2022, Kunlun Energy re-evaluated and redefined its stakeholder categories. Based on two dimensions - "degree of influence by Kunlun Energy" and "degree of influence on Kunlun Energy" - six stakeholder groups were identified as crucial: customers, government and regulatory authorities, suppliers, employees, the general public, and shareholders and investors. Kunlun Energy continues to address stakeholders' concerns through targeted and continuous action plans based on the issues that are important to each stakeholder group.



Materiality Matrix

This year, Kunlun Energy has identified 26 sustainable development issues, categorised into three domains of environment, employees and society, and operation. Based on the results of the 2022 stakeholder survey, a materiality matrix was established based on the two dimensions of "Materiality to Kunlun Energy" and "Materiality to stakeholders".



- | Environmental issues | Employee and social issues | Operational issues |
|--|---|---|
| 1 Climate risk management | 9 Legal employment and protection of labour rights | 17 Sustainable and stable development |
| 2 Ecological environment and biodiversity conservation | 10 Employee satisfaction | 18 Integrity and compliance |
| 3 Resource efficiency | 11 Training and development of talents | 19 Anti-corruption |
| 4 Pollution management | 12 Employee welfare | 20 Privacy protection and information security management |
| 5 GHG emission management | 13 Safeguard the health and safety of employees and customers | 21 Safe production |
| 6 Renewable energy use | 14 Social welfare and local development | 22 Improving product and service quality |
| 7 Waste management | 15 Stable clean energy supply | 23 Innovation and digital transformation |
| 8 Energy efficiency | 16 Sustainable supply chain management | 24 Intellectual property protection |
| | | 25 Corporate governance |
| | | 26 Risk control |

COMPLIANCE AND RISK MANAGEMENT

Kunlun Energy sticks to the business philosophy of operating with integrity and compliance, continuously improving its compliance management system to enhance compliance operation and cultivate a compliance culture. The Company has established a sound code of conduct for employees' compliance behaviour, and constructed a platform for reporting violations together with the 956100 customer service system. We also conduct regular compliance promotion and training to strictly prevent potential illegal and non-compliant risks. Meanwhile, as the business environment and competition methods continue to evolve, we continue to improve compliance management mechanisms and protection measures in all areas of our operations and establish a sound compliance risk management framework.

Compliance Management

Kunlun Energy strictly follows the "Company Law of the People's Republic of China", the "Civil Code of the People's Republic of China", the "Anti-Monopoly Law of the People's Republic of China", the "Price Law of the People's Republic of China", as well as related laws and regulations of the Hong Kong Special Administrative Region. The Company regularly revises and releases a compliance obligation checklist, revises internal systems such as the "Compliance Management Measures", in accordance with the updates of legal regulations and latest management requirements. We also conduct rolling annual compliance risk reviews, and promptly implements risk control measures through dissemination and publicity.

In 2022, the Company actively promoted the "Compliance Management Reinforcement Year" campaign, improving 662 policies and 201 workflows, and carrying out compliance risk point investigation and rectification. We also formulated a compliance responsibility checklist, in order to promote implementation and enhance workflow improvement. At the same time, we aim to deepen the culture of compliance by conducting a number of training and activities including compliance thematic learning seminars, legal columns, and speech competitions, thus promoting the compliance awareness among all staff.



Compliance Management Reinforcement Year work deployment meeting



Participants in Compliance Knowledge Quiz

21,000

men-times

Anti-corruption Management

With the philosophy of "fairness in power, integrity in profession" in mind, Kunlun Energy actively creates a corporate atmosphere of integrity and righteousness. The Company firmly opposes and prohibits corruption, bribery, extortion, fraud, money laundering, and other illegal practices. We have established an anti-corruption working leadership group, which is headed by the Chairman. The anti-corruption working leadership group is responsible for analysing and judging

the situation of anti-corruption work, arranging key tasks, studying and handling major issues, and improving of the anti-corruption work system. In 2022, the Company has further improved the supervision system, and promoted coordination among various types of supervision. We have revised and implemented rules for investigating illegal investment, and have established internal mechanisms for handling violations, as well as standardised the investigation, filing, and trial procedures for corruption and related violations. During the Reporting Period, there were no legal cases regarding corrupt practices brought against Kunlun Energy or its employees.

In addition, Kunlun Energy has integrated anti-corruption requirements into its supplier qualification and evaluation process to strengthen the procurement practice. During the qualification management process, the Company requires suppliers to conduct compliance audits and sign a "Supplier Qualification Commitment" that includes provisions for clean business practices and other relevant regulations. Furthermore, an annual anti-corruption supervision and evaluation is conducted for all incoming suppliers, and those who are found to be dishonest or in violation of regulations are placed on a blacklist to prevent corruption risks in the procurement process.

Whistleblower policy

Kunlun Energy has established accessible and diverse reporting channels, and has published a "Whistleblower Policy"² on the Company's official website. The policy clearly defines the reportable behaviours, confidentiality measures, reporting procedures, and investigation procedures, thus to effectively protect the legal rights and interests of employees, Directors, consultants, shareholders, customers, and suppliers.

Upon receiving a report, the Company will immediately conduct a comprehensive investigation and provide timely feedback to the reporter. Anyone found to be involved in corruption will be handed over to the relevant regulatory agencies. As stipulated in the "Whistleblower Policy", the Company is committed to protecting the reporting person's identity with strict confidentiality. A reporting person is assured that making the report will not personally disadvantage him/her by dismissal, demotion, suspension, harassment, discrimination or bias.

Anti-corruption training

Kunlun Energy actively carries out business ethics education and training activities, including seminars, warning videos watching, thematic lectures, online courses, and learning materials distribution. The aim is to continuously enhance the integrity awareness of Directors, employees, and suppliers, and effectively prevent corrupt behaviour in management, procurement, bidding, and other aspects. In 2022, the Company organised over 30 warning education sessions at the Company level, and the affiliated units also carried out education and training hierarchically. In addition, for suppliers and contractors, the Company provides anti-corruption training materials and promotes business ethics after they have obtained the supplier qualifications, building a trustworthy and transparent business cooperation environment.



Anti-corruption training coverage

100%



Number of anti-corruption training session

609

Anti-monopoly

Kunlun Energy is making further efforts to prevent and control the risks of anti-monopoly. The Company issued the "Anti-Monopoly Compliance Manual" in 2022 to clarify anti-monopoly management norms. Meanwhile, we have established a sound mechanism for anti-monopoly risks management. We organise affiliated units to conduct self-inspections and self-assessments, and strengthen supervision of anti-monopoly compliance management. In addition, the Company regularly conducts promotional training based on updates to laws and regulations such as the "Anti-Monopoly Law of the People's Republic of China" to continuously improve awareness of anti-monopoly compliance among employees.

² See "Whistleblower Policy" for more details: http://media-kunlunenergy.todayir.com/20221230130526431979744_tc.pdf

Internal Control and Risk Management

Kunlun Energy continued to promote its internal control and risk management system. The Board is responsible for ensuring the effectiveness of the Company's internal monitoring system, and an internal audit department has been established to monitor internal governance and supervise the Company's risk management and internal control system.

Every year, the Company organises its departments and affiliated units to conduct a significant risk assessment. In 2022, 25 major risks were identified through scoring and comprehensive evaluation, including ESG-related risks such as safety accidents risk and resource supply risk. Kunlun Energy has established risk management strategies and solutions for significant risks, and formulated an annual risk management report, which was deliberated and reviewed by the Internal Control and Risk Management Committee and issued with the signature of CEO.

Furthermore, to prevent and resolve major operating risks, the Company continues to carry out special risk investigations and implements a mechanism for "collecting quarterly, following up monthly, and reporting monthly". Each department promptly follows up and handles risk events, reduces and eliminates risks, shares information, and implements remediation, to ensure the early warning for risk events. The Company also actively fosters a risk culture, and held an internal control and risk management network training course in 2022, with a total of 716 employees obtaining the internal control and risk management qualification certificate. The Company has been rated as an "outstanding" enterprise for its internal control operations by PetroChina for five consecutive years.

Information Security and Privacy Protection

Information security management

Kunlun Energy strictly abides "Data Security Law of the People's Republic of China" and the "Personal Information Protection Law of the People's Republic of China", and continuously improves the information security protection system management work. The Company has established a leading group for cybersecurity and digitalisation, whose responsibilities include formulating strategies, reviewing the digitalisation plans, coordinating in the process of cybersecurity and digitalisation development, reviewing and assessing the implementation output.

During the Reporting Period, Kunlun Energy formulated a cybersecurity safeguarding plan to protect cybersecurity through measures including cybersecurity checks, cyber asset sorting, cybersecurity risk management, cybersecurity education, and cybersecurity protection measures. There was no information leakage or cybersecurity incidents that affected the Company in 2022.

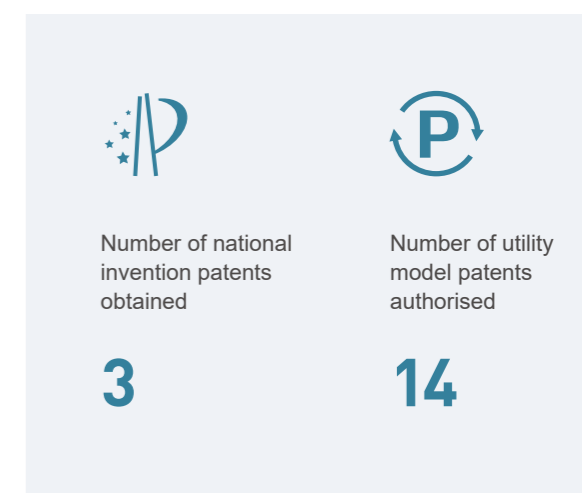
Customer privacy protection

Kunlun Energy places emphasis on protecting customer privacy. We include confidentiality clauses or separate confidentiality agreements containing special terms in contracts or agreements with our customers. And technical measures are implemented in customer information systems to restrict the export of customer information. The Company has established an internal privacy protection system. We also provide information security training to employees, to clarify the confidentiality policies, working procedures, and risk response measures to enhance employees' awareness of privacy protection. In 2022, the Company did not receive any complaints regarding the infringement of customer privacy.

Intellectual Property Protection

The Company strictly abides the "Patent Law of the People's Republic of China", "Copyright Law of the People's Republic of China" and other related laws and regulations. We have formulated the "Management Measures for Science and Technology of Kunlun Energy" to regulate the application and ownership of intellectual property. We strictly implement management regulations related to patents, computer software copyrights and other aspects.

Kunlun Energy encourages its affiliated units to share innovative achievements and improve technology management and production capabilities, while grasping the market dynamics and innovation trends to further explore the patent's potential. In 2022, the Company obtained 3 national invention patents and was authorised for 14 utility model patents.



02

ENSURING QUALITY FOR A TRUSTWORTHY COMPANY

Kunlun Energy practices the philosophy of “people focus, quality foremost, safety first, environmental protection priority”. We implement safety production and quality control for products and services, so as to ensure safe and reliable products supply for customers. Kunlun Energy attaches great importance to customer satisfaction management and gradually optimises the service quality at each stage to provide customers with more efficient and convenient services. In addition, Kunlun Energy continuously enhances the sustainable management of the supply chain, strengthens management and supervision of suppliers, and strictly prevents and controls the compliance risk, environmental protection risk, and safety risk along the supply chain. We are committed to cooperating with our business partners to establish a transparent and harmonious business environment.

✦ FEATURE: REMARKABLE ACHIEVEMENTS IN SAFETY GOVERNANCE

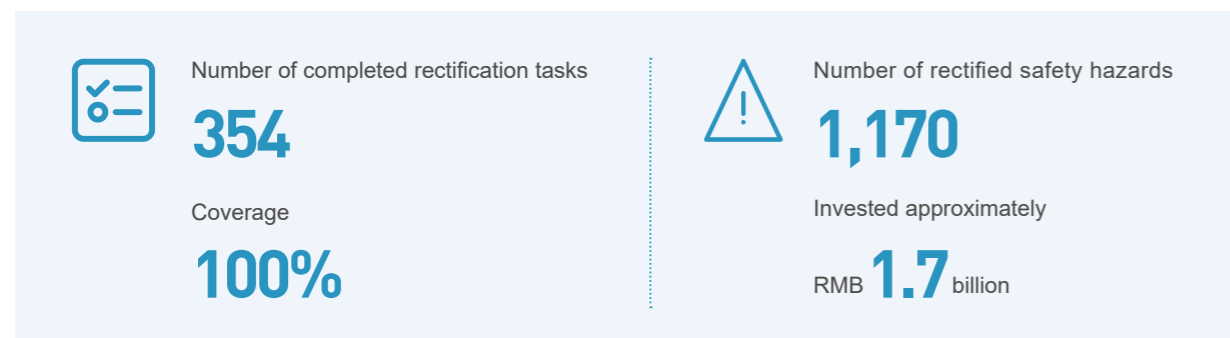
- QUALITY MANAGEMENT
- CUSTOMER SERVICES MANAGEMENT
- SUPPLY CHAIN MANAGEMENT



FEATURE REMARKABLE ACHIEVEMENTS IN SAFETY GOVERNANCE

To address challenges of safety production in the urban gas industry, Kunlun Energy has thoroughly implemented the three-year special rectification action for safety production, taking actions in the treatment of hazardous chemicals, and investigation and rectification of urban gas safety. We also completed the "Fifteen Stringent Measures" and the "Hundred Days of Action". Through the dedicated work of three years, the Company has inspected and rectified various safety risk hazards, making significant progress in addressing the pressing issues and resulted in an overall governance enhancement.

Through the three-year special rectification action for safety production, we improved our safety concept, and further promoted the safety production responsibility system to solved a large number of safety hazards. The safety production management is also becoming more intelligent. As a result, our efficiency of safety production management and risk control capabilities have been greatly enhanced.



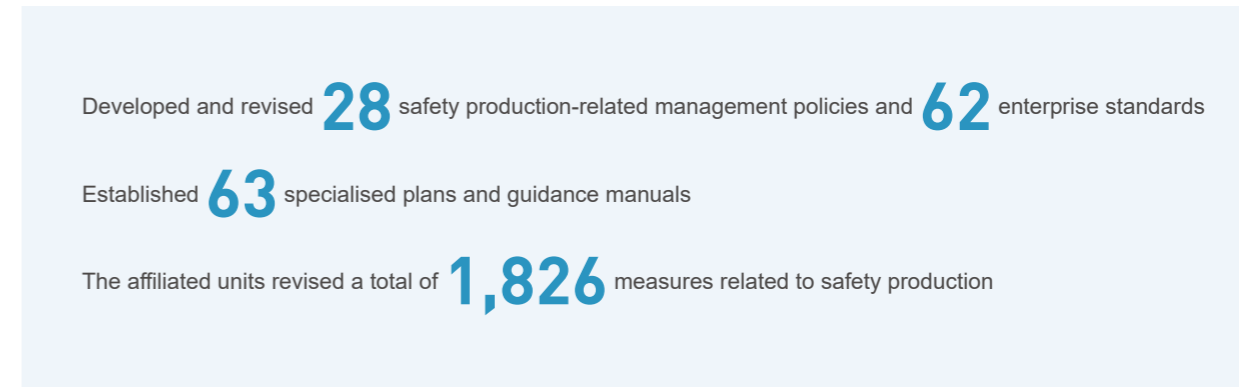
Improving Mechanisms to Fulfil Responsibilities

To better manage the safety actions, Kunlun Energy has established a leadership team and a working group led by senior management. Eight working mechanisms have been put in place, including coordination, reward-punishment mechanism etc. The Company also places strong emphasis on performance evaluation and accountability, to ensure strict management and implementation of responsibility regarding safety work.

Kunlun Energy continuously strengthens the safety responsibility management by signing a safety responsibility agreement with affiliated units of different levels, with quantitative targets and indicators broken down at each level. We have also established "Management Measures of Safety Production and Environmental Protection Responsibility" and "Safety Production Score Management Measures for All Staff", to continuously improve accountability mechanisms. In addition, we conducted safety performance evaluations, and took the safety responsibility and capabilities into the daily assessment and supervision, promoting employees' responsible awareness. The Company's approach to safety production is evolving from a collective responsibility to individual accountability. Employees are now expected to not only be aware of their responsibilities, but also to diligently fulfill them and be held responsible for any failures.



Safety conference

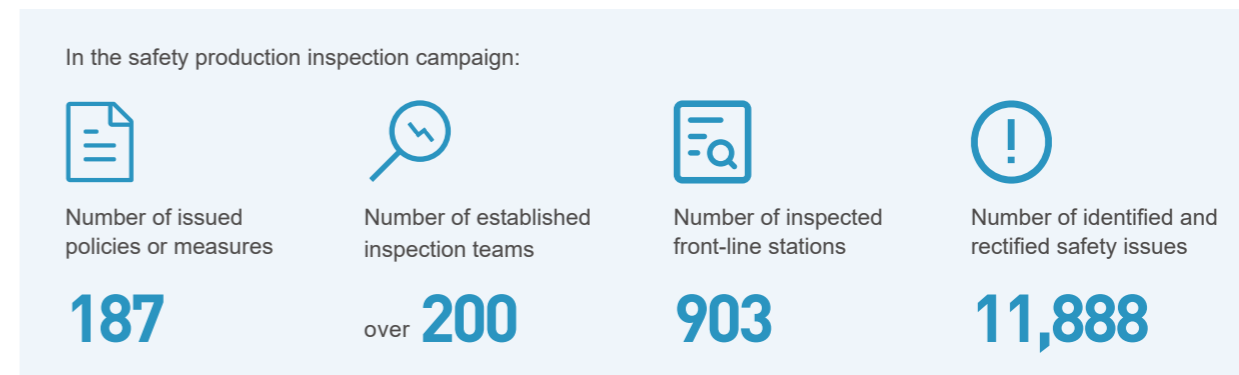


Indicators	Unit	2022 Target	2022 Achievement
Number of fatalities in production safety accidents	Person	0	✓
Number of general Class A accidents (or above) ³	Case	0	✓
Number of incidents of violations (from government, superiors)	-	0	✓

Enhancing Risk Management

Kunlun Energy is taking a proactive approach to manage safety production. The Company has strengthened safety risk management and established a dual prevention mechanism, aiming at eliminating safety hazards in an all-round and the whole process. The Company has conducted hazard identification and risk assessment, covering all equipment, pipelines, and operations, and came up with a production safety risk control plan. To facilitate a more differentiate and accurate risk management, we formulated the "Risk Grading Evaluation Criteria for Safety Production" for the affiliated units, to evaluate, classify and supervise safety production risks. The Company also conducts ongoing and dynamic investigation and control of safety hazards, establishes potential safety hazards lists, and strictly implements safety hazard control plans.

To ensure the enforcement of hazard control, the Company regularly conducts supervisory inspections on its affiliated units and dispatches monitoring personnel to provide on-site assistance and guidance to provide precise work instructions. Additionally, the Company conducts regular emergency drills and safety training activities to enhance employee safety awareness and abilities.

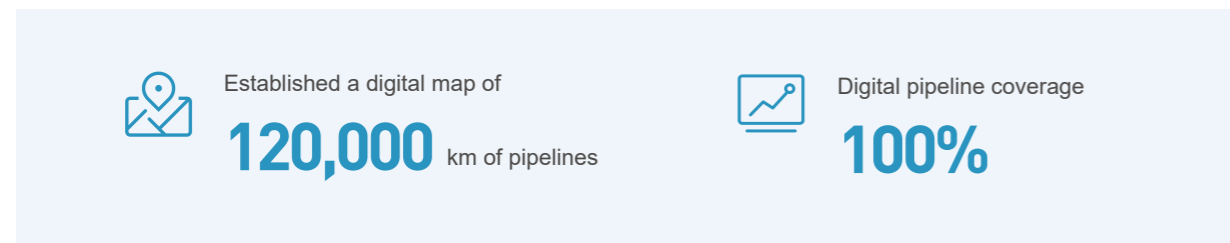


³ Class A accidents refer to accidents that cause one or more of the following occurrences: up to three deaths, three to ten severe injuries, more than ten minor injuries, or direct economic losses of between RMB 1 million to 10 million.

In addition, Kunlun Energy is exploring the possibility of empowering safety production with digital platforms. We launched the production management system to meet the practical needs of production, safety, and emergency management. We also integrated various standards and requirements into the platform, and completed a digital pipeline map of 120,000 kilometers. This enables a real-time risk monitoring, timely warning and disposal, to effectively reduce and control pipeline leakage risks. In addition, we are actively promoting the upgrade of safety monitoring system and the connection among different platforms, to make safety data collection more accurate. These endeavors have expedited the realisation of comprehensive safety monitoring coverage, ensuring timely identification, evaluation, and elimination of potential safety hazards.



Digital map of pipelines



Safety assessment inspection



Safety knowledge competition

Case Using AI system to prevent potential hazards

In August 2022, Kunlun Energy's AI intelligent monitoring system detected a potential fire near the pipelines at the gas station located in Wuhu, Anhui. The Company quickly sent a rescue team and prevented the fire from spreading and causing further damage. After extinguishing the fire, the rescue team used AI monitoring playback and on-site investigations to determine the cause of the fire and continued monitoring and inspection along the pipeline. The system provided a smart eye to protect the pipelines, making a positive contribution to local economic development and social stability.



Safety inspection patrol



Safety inspection patrol

Indicators	Unit	2021	2022
Equipment availability rate	%	>99	>99
Length of pipeline with internal inspection	Kilometre	806	886
Number of residential users inspected	10,000 households	826	1,078
Number of non-residential users inspected	10,000 households	12.2	14.5
Number of video inspections at major stations	-	13,226	17,000
Monitoring coverage of important production operations	%	100	100
Percentage of reported emergency issues	%	100	100

Fruitful results in Special Rectification

Kunlun Energy has carried out targeted remediation in key fields such as urban gas, hazardous chemicals, and fire safety to effectively improve the safety capabilities.



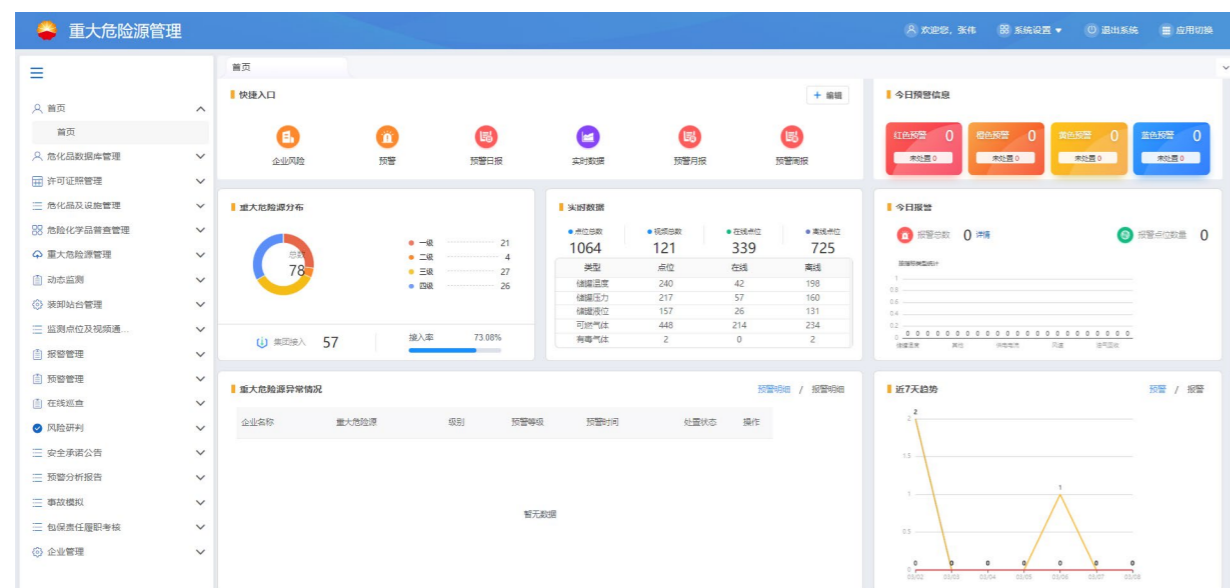
Comprehensive inspections and rectifications have been carried out in six aspects: gas pipeline facilities, gas user terminals, liquefied petroleum gas, gas engineering, gas operations, and gas emergency systems.

- Renovated **228.95** km of old pipelines
- Rectified **538.35** km of ineffective pipelines
- Renovated **1,027** sealed spaces
- Rectified **6,785** pieces of equipment and facility hazards
- Conducted safety inspections for **12** million+ households, reaching **100%** coverage
- Completed combustible gas alarm hazards rectification for **11,696** non-residential users



Special rectifications were carried out in fields of large oil and gas storage bases, old equipment, LNG factories and LPG storage and distribution warehouses, hazardous chemicals transportation, and oil and gas long-distance pipelines, including:

- Promoted the application of hazardous chemical oil and gas leakage monitoring and warning system, hazardous chemical vehicle management system, etc.
- All major hazardous chemical sources and **108** hazardous chemical transportation vehicles are **100%** connected to the vehicle management system.
- The Jiangsu and Jingtang LNG terminal and other large oil and gas storage bases have improved four systems including lightning warning system, independent safety instrument system etc.



Management platform for major hazardous chemical



- Promoted the fire emergency assessment in **8** key units, addressed **25** potential hazards, with an investment of RMB **23.6275** million.



- Conducted an inspection on the satellite positioning system, and intelligent video monitoring and alarm system of the "Two passengers and one danger"⁴ vehicles. We have completed the installation of these systems for all **73** passenger vehicles, **2,154** production and business vehicles, and **108** self-owned hazardous chemical transportation vehicles, with all vehicles connected into our vehicle management system.



Gas pipeline renovation project in Linfen, Shanxi Province

Addressed the gas pipeline pressure problems for residents and received their appreciation banner

⁴ "Two passengers and one danger" refers to the road-specialised vehicles engaged in tourism, scheduled passenger buses with three or more classes, and the transportation of dangerous chemicals, fireworks, civilian explosives.

QUALITY MANAGEMENT

Kunlun Energy is committed to providing customers with high-quality, reliable and safe products and services. We continuously improve our quality, health, safety and environment (QHSE) management system, strictly control quality and safety risks in operation, and effectively promote QHSE audit supervision. We implement a comprehensive responsibility management system to continuously improve the Company's quality and safety management.

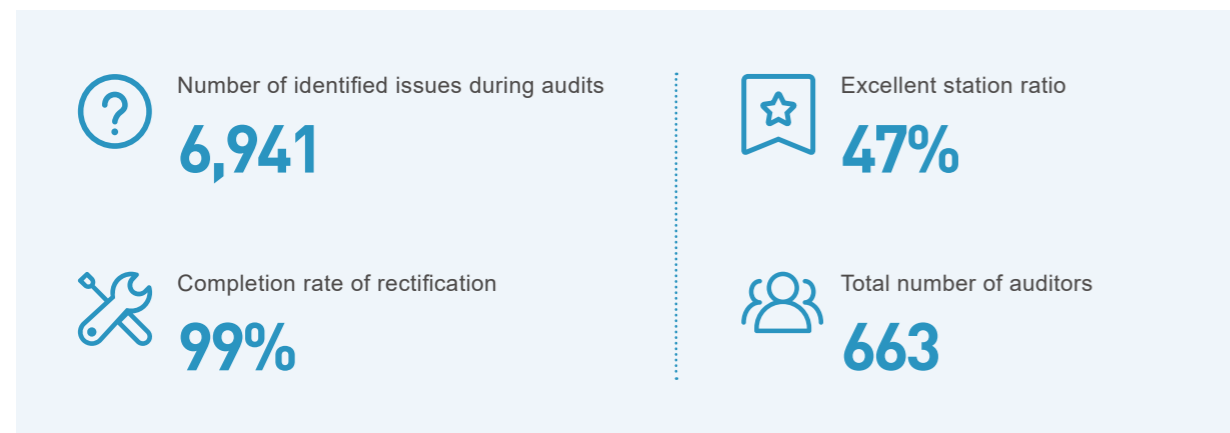
QHSE Management System

Kunlun Energy strictly abides by the "Law of the People's Republic of China on Production Safety", the "Law of the People's Republic of China on Special Equipment Safety", the "Regulations on the Safety Management of Hazardous Chemicals", the "Measures for the Management of Production Safety Accident Emergency Response Plans" and the "Product Quality Law of the People's Republic of China". The Company has established a QHSE management system, with the QHSE Committee serving as the highest decision-making body responsible for QHSE management. At the same time, there are four QHSE monitoring centres covering the entire country. These centres are responsible for conducting supervision and inspections on various levels of units, projects, and stations.

In terms of institutional development, Kunlun Energy has established "Management Measures of Production Safety", the "Management Measures of Safety and Environmental Protection Responsibility System", the "Management Measures of Occupational Health", the "Quality Management Measures" and the "Management Measures of Quality Accident", to ensure the enforcement of QHSE work. In 2022, we have revised and improved 15 policies, including the "Administrative Measures for Safety Supervision" and "Scoring Management Measures of Safe Production", to further complete QHSE management system.

In order to strengthen QHSE management and responsibilities, Kunlun Energy has formulated a list of QHSE duties for the Company's management and affiliated units. All employees are required to sign a responsibility statement with safety and environmental indicators, which are connected to their payment. We continuously practice the employee responsibility mechanism, which includes remuneration incentives, safety production scoring, safety production leadership contracting, and accountability mechanisms to ensure the fulfillment of safety and environmental responsibility.

The Company has been enhancing its QHSE system audit, rectifying 6,941 issues identified during audits in 2022, with a coverage of 99%. In address these issues, we required affiliated units to develop improvement plans to remediate weakness. We have also provided guidance to affiliated units on internal audits, empowering the audit team. In 2022, 89 employees passed the auditors qualification assessment, increasing the total number of auditors of the Company to 663. Additionally, we have made steady progress in standardising HSE at the front-line level, achieving an excellent station ratio of 47% in 2022.



Enhancing Product Quality Management

As a responsible natural gas product supplier, Kunlun Energy places quality as its top priority and continuously improves quality assurance system. The Company strengthens the quality standards, and revised 10 regulations in 2022, including the "Quality Management Measures" and "Management Measures of QHSE Management System Audit", with a focus on the quality management of core business. Kunlun Energy also continues to develop and certify the ISO 9001 Quality Management System and conducts inspections and quantifiable audits to ensure the effective operation of the quality management system.

In the daily operations, the Company strictly controls the quality of natural gas products across different stages, including procurement, sales, storage, transportation, and processing. During the procurement and sales processes, we establish quality standards and inspection methods in the procurement contracts, and conduct inspections on the products received or sold to ensure traceability of quality. Inspections shall also be carried out when our product entering or leaving the storage. In the transportation process, we clearly define quality standards and requirements in the contracts signed with the carriers to ensure strict control of natural gas quality throughout the process. In 2022, a total of 2,770 gas quality sampling tests were conducted by our in-house testing facilities and external testing agencies. We achieved 100% implementation for the inspection plan and 100% qualification for all the test samples, fully met the quality target in 2022.



Kunlun Energy Quality Management System Certification



In addition, we organised "Quality Month" and QC teams activities, and conducted research on LPG dedicated sampling technology and LNG low-temperature sampling technology, to further enhance our overall quality management capabilities.

Indicators	Unit	2022 Target	2022 Achievement
Execution rate for the gas quality inspection plans	%	100	✓
Pass rate for the gas quality sample in the test	%	100	✓

CUSTOMER SERVICES MANAGEMENT

Guided by the customer-centric concept, Kunlun Energy continuously enhances service quality and is dedicated to providing customers with convenient and safe gas services. Additionally, we have established smooth and efficient communication channels with our customers to listen to their feedback, so as to enhance our service capabilities and product quality, boosting and ultimately promote overall customer satisfaction.

Deepening Customer Service

To improve the management system of customer service quality, Kunlun Energy has released the “Guidelines for Standardised Service Business Processes for Natural Gas Customers” in 2022. These guidelines define 51 customer service processes and 16 key indicators which are used to monitor and measure service quality. We also provided trainings to service personnel, enabling them to better understand the guidelines and establish a solid foundation for standardised and unified customer service management.

The Company is committed to providing customers with more convenient and professional services. During the Reporting Period, we actively promoted our end-to-end customer service by appointing customer managers and implementing a “first inquiry accountable” system that effectively strengthened our service personnel's sense of responsibility. We also adopted a “one-on-one service, full-process assistance” approach to provide timely and proactive door-to-door services, to minimise customers' efforts during the reporting and installation process.

Furthermore, we constructed a digital platform for customer service and established a natural gas retail system to cover the entire business processes, including customer enrollment, meter reading, recharge, transfer, cancellation, safety inspection, maintenance, and customer service. The system helps to standardise business workflows and enhance service efficiency. Moreover, the system has extended multiple service channels including online payment, bank collection, and self-service payment, to facilitate more convenient and efficient gas usage for our clients.

Case Expanding payment channels to help users achieve 24/7 gas self-recharge

Since 2022, Kunlun Energy has been expanding the gas payment channels for customers in Yunnan, setting up 29 self-service gas payment machines in 29 gas stations across the province to achieve 24-hour gas self-recharge, which significantly improved the user experience. Since early 2022, the gas payment machines have helped 2,291 users in Yunnan to complete self-service payments, with a cumulative recharge of over 2,878 transactions and a recharge amount of over RMB 1 million.



Number of self-service gas payment machines established in Yunnan

29



Number of recharge transactions

over 2,878



Total recharge amount

over RMB 1 million

Safeguarding Customers' Safety

The safe and stable operation of the gas pipeline network is crucial to thousands of households. Kunlun Energy puts customer safety first and serves the community's security and stable gas supply through practical actions. The Company carries out gas safety inspections for users throughout the country and continuously promotes the construction and renovation of gas safety facilities, including the renovation of older gas pipelines, valve pipes and meters, and installation of gas alarms, to effectively eliminate various gas safety hazards and safeguard residents' safety of using gas.



Number of residential users inspected

10,779,100 households



Number of non-residential users inspected

144,600 households

Case Promoting valve pipe and meter renovation - upgraded safety benefits the people

Kunlun Energy is promoting the valve pipe and meter renovation project for residential users in Jilin City, providing free gas facility upgrades to eliminate safety hazards at the user end. To ensure the smooth completion of the renovation task, Kunlun Energy sought assistance and support from the local city government. At the same time, professional training was offered to front-line personnel to improve their practical skills. In 2022, all renovation tasks were successfully completed, ensuring safe gas use for more than 150,000 residential users.

In addition, the Company continues to promote the concept and knowledge of gas usage safety to society, improving users' awareness of gas safety. In 2022, we continued to strengthen the "Five Entering"⁵ safety promotion, delivering safety concepts to communities, enterprises, households, schools, and rural areas. We also deepened the society's awareness of gas safety through engaging activities including “Open Day” and media publicity, to cultivate a safety culture in the society.



Gas safety publicity in community during “Safe Production Month”



Gas safety promotion activities in schools



Gas safety promotion activities at underground stations

⁵ "Five Entering": Gas safety promotion enters communities, enterprises, households, schools, and rural areas.

Case "Hand in Hand, Gas Safety into Campus" lecture

In June 2022, Kunlun Energy visited Danfeng Primary School in Shixing County and held a lecture with the theme of "Hand in Hand, Gas Safety into Campus". Kunlun Energy's animated video "A Wonderful Journey of 1 Cubic metre Gas" as well as interesting comics were presented to introduce gas safety knowledge and precautions to the students. The activity enhanced the students and teachers' mindset of proper gas usage and protection.



"Hand in Hand, Gas Safety into Campus" lecture

Enhancing Customer Communication

Kunlun Energy focuses on customers' need and continuously expands communication channels to better listen to customers' expectation, thus improve its product quality and service. The Company has established a customer complaint handling mechanism, where customers' complaints are assessed by our customer service staff and transferred to relevant departments for resolution in a timely manner. Upon completion of complaint handling, we conduct customer follow-up to ensure that the complaint is properly resolved and provide a channel for further feedback. This year, Kunlun Energy launched a pilot customer service hotline, where operators receive complaints and transfer them to relevant departments within designated time frames. Hotline operators also conduct follow-up calls on the resolution of the complaints, achieving a closed-loop management system for customer complaints.

In 2022, we conducted a comprehensive retail customer satisfaction survey across entire company. This survey covered all 31 subsidiaries involved in terminal urban gas business, with a total coverage of 13.19 million customers. The overall customer satisfaction rate was 99%.



Customer satisfaction survey covered

31 subsidiaries



Number of customers involved in the survey

13.19 million



Overall customer satisfaction rate

99%

Indicators	Unit	2021	2022
Total number of customers	10,000 households	1,384.6	1,471.3
Customer satisfaction rate	%	99	99
Number of customer complaints on products and services	-	2,286	2,157
Resolution rate of customer complaint	%	100	100

SUPPLY CHAIN MANAGEMENT

As an industry leader, Kunlun Energy delivers sustainable concept to its supply chain partners, encouraging them to fulfill environmental and social responsibility. We aim to build a more compliant, efficient, and environmentally friendly supply chain together with our partners. The Company continuously improves supplier management regulations, practices green and responsible procurement, while strengthening supplier monitoring and evaluation, to effectively prevent environmental and social risks in the supply chain.

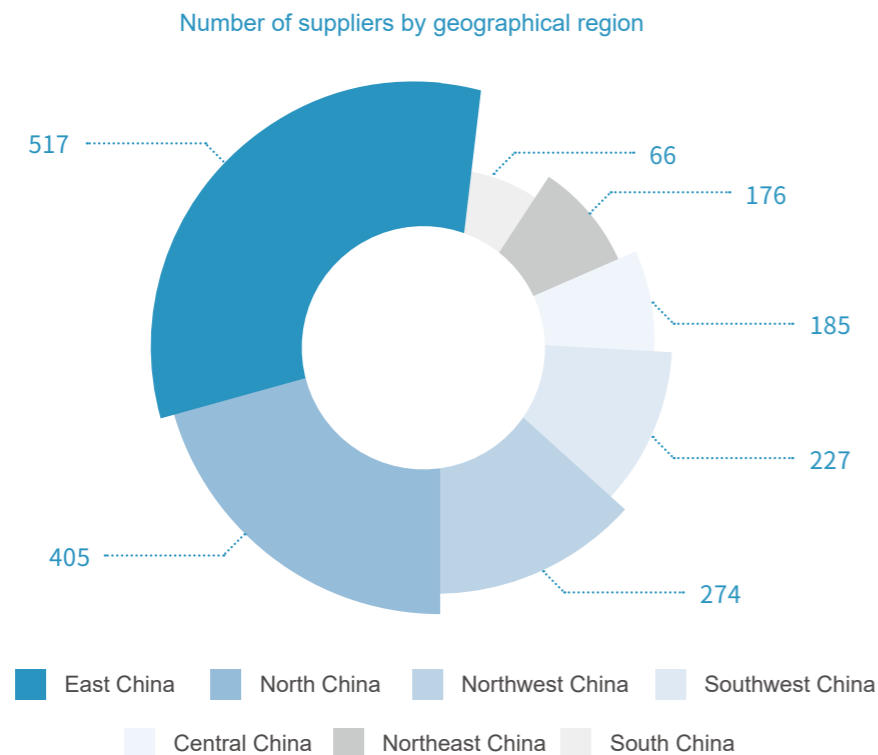
Supplier Qualification Management

Kunlun Energy strictly adheres to the "Bidding Law of the People's Republic of China", and has formulated supplier qualification and bidding management systems including the "Management Protocol for Market Access", the "Administrative Measures for bidding", and the "Management Protocol for Material Procurement". In 2022, the Company issued the "Notice on Further Standardising Tendering Business Management and Implementation" and the "Compilation of Tendering Management Materials", while also promoted the use of 202 tendering standard documents, to further standardise the tendering business management and implementation.

At the supplier qualification stage, the Company rigorously implement the "Management Protocol for Market Access" and conducts qualification evaluation, which covers ESG-related evaluation criteria including compliance, quality, occupational health, safety, environmental management, and business ethics. For suppliers with serious violations of laws and regulations, seeking benefits by improper means such as bribery, or conducting serious dishonesty announced on the official websites of national authorities, the annual evaluation results will be unqualified and removed out of the supplier pool.

Kunlun Energy advocates for business integrity and compliance, and strictly assesses supplier corruption and non-compliance issues in accordance with the "Management Protocol for Market Access". We review supplier qualifications and arrange on-site inspections to verify the suppliers' compliance. For suppliers involved in corruption or violation of regulations, their access qualifications will be cancelled and they will be added to a blacklist. We also require suppliers to establish anti-corruption policies and conduct compliance audits, which are also integrated into our evaluation. 100% of our suppliers have signed the "Supplier Qualification Commitment", which includes anti-corruption and professional ethics. Kunlun Energy regularly revises its internal management policies in accordance with national regulations and supplier annual anti-corruption assessments, to ensure timely and effective monitoring of business ethics.

During this Reporting Period, Kunlun Energy employed a total of 1,850 suppliers and implemented relevant supervisory and management measures for 100% of the suppliers.



Supplier Supervision Management

Based on a unified and rigorous compliance framework, Kunlun Energy has developed specific management and assessment requirements for suppliers depending on the nature of their services. The company continuously carries out supplier supervision and management to ensure effective prevention and resolution of various supply chain risks, as well as to enhance coordination and control of the supply chain.

For material suppliers, Kunlun Energy implements the “Implementation Guidelines for Material Supplier Management” and conducts annual evaluation covering health, safety, environmental protection, compliance and other ESG aspects. And material suppliers who fail to pass the annual evaluation, will be removed in an exit procedure to prevent relevant risks. In order to enhance management efficiency, the Company implements graded management of material suppliers and formulates different assessment methods based on supplier grades. Furthermore, the Company continuously promotes the digital procurement platform among all the business, which enables online check for the suppliers’ certifications on quality, occupational health, environmental protection. The platform also has an automatic function to check the expiration deadlines for suppliers’ various certificates, qualifications, and licenses, thus significantly improves the efficiency of supplier auditing and supervision.

For engineering contractors, the Company has been continuously implementing standardised management, and strengthened the supervision of contractors from access, use, evaluation to operation. This requires contractors to sign a commitment letter alongside the contract, and those engaging in subcontracting, illegal subcontracts, or attachment behaviours will be removed from our contractor pool. We continued to enforce the contractor “blacklist” system, with two contractors expelled and warning letters sent to 23 contractors based on the previous year’s evaluation results. These measures aim to foster contractors’ sense of responsibility and ensure the smooth progress of our construction projects. Moreover, we conduct regular supervision and inspections of sites, urging corrective measures to be implemented. We hold responsible units and individuals accountable for quality control and management, environmental compliance, anti-corruption, and other types of risks. To enrich our inspection methods and expand our inspection scope, we innovated our supervision procedures by utilising “Smart Construction Sites” technology and conducting “Cloud Supervision”. This year, the Company conducted 312 routine inspections, achieving a 100% coverage for all ongoing construction projects.

For inspection and maintenance service contractors, the Company has issued the “Implementation Guidelines for the Annual Evaluation of Inspection and Maintenance Contractors of Kunlun Energy”, which outlines specific requirements and qualifications for various inspection and maintenance services and defines standards for selecting, using, and evaluating these contractors. In 2022, we evaluated all the contractors who provide services for pipelines, associated facilities and equipment, and related auxiliary systems.

Responsible Procurement

The Company is committed to achieving positive impact in both economic and environmental areas in the procurement practices and actively promotes its green procurement initiatives. In 2022, we issued a “Notice on Promoting Green Procurement” which prioritised the use of green technologies, processes, and products that are energy-efficient, environmentally friendly, low-carbon, or recyclable. We have also incorporated environmental indicators and low-carbon performance in supplier evaluations and required suppliers to make commitments to environmental protection, resource conservation, and social responsibility, calling for joint responsibility from the supply chain.

Kunlun Energy has been enhancing the cultivation and development of the procurement personnel’s professional competence. This year, an online training class for material procurement and bidding management was held. Through online check-in, online face-to-face Q&A, and online exams, the supplier management system was thoroughly introduced to the personnel, and their operational procurement skills were strengthened. The training also increased their awareness of legal compliance and improved their job capability.



03

EMBRACING A GREEN, LOW-CARBON FUTURE

Currently, the Earth's ecology and environmental governance are facing severe challenges, attracting the concerns on climate change and environmental protection from countries around the world. Faced with such pressing climate situation, Kunlun Energy shoulders its environmental responsibility, further accelerates the pace of green development strategy, and promotes joint decrease of carbon emissions and pollution. We take proactive actions to address climate risks, seize the opportunities of green transformation, striving to achieve a balance between sustainable economic development and environmental friendliness.

- 🌿 FEATURE: ACCELERATING CLIMATE CHANGE ACTION TOWARDS LOW-CARBON TRANSITION
- ENVIRONMENTAL PROTECTION MANAGEMENT
- POLLUTION PREVENTION AND CONTROL
- RESOURCE UTILISATION AND ECOLOGICAL CONSERVATION



FEATURE

ACCELERATING CLIMATE CHANGE ACTION TOWARDS LOW-CARBON TRANSITION

The severity of climate change is increasing, accompanied by a rise in the frequency of extreme weather events and climate-related risks. The 27th session of the Conference of Parties to the United Nations Framework Convention on Climate Change (referred to as "COP27") is calling on global enterprises to take stronger actions to address the climate crisis. The Chinese government has gradually constructed the "1+N" policy system of carbon peaking and carbon neutrality, while focusing on low-carbon transformation in the energy sector. As a participant and contributor to global climate governance, Kunlun Energy attaches great importance to climate risk and target management. We incorporate climate factors into our strategic planning and take active climate action, to improve our capacity for climate risk management and advance dual carbon actions.

The Company referred to the recommendations of the Task Force on Climate-related Financial Disclosures (referred to as "TCFD") and improved climate-related disclosure in four dimensions: governance, strategy, risk management, and metrics and targets. We will continuously enhance our resilience against climate challenges and steadily advance towards a green, low-carbon and sustainable future.

Climate Governance

The impacts of climate change have attracted the attention around the globe. Based on the consideration of global convention - the "United Nations Framework Convention on Climate Change" "Paris Agreement", as well as national policies of "Responding to Climate Change: China's Policies and Actions" and the "Action Plan for Carbon Dioxide Peaking Before 2030", we have incorporated energy conservation, carbon reduction and other climate-related issues into our development plans and green strategy.

As the highest governing body for climate governance, the Board of Kunlun Energy is fully responsible for the Company's dual carbon strategy planning, targets setting and management, as well as climate change risk management. In 2022, the Board conducted a materiality assessment of climate-related issues, including climate risk management, GHG emissions management, renewable energy use, and energy efficiency. The Board also listens to progress reports on related topics and provides guidance on the Company's low-carbon development. Additionally, the Board delegated authority to the Sustainability Committee for climate management work, including guiding and overseeing the implementation of carbon reduction and climate risk management measures.

To comprehensively enhance the company's awareness and management capabilities of climate-related issues, Kunlun Energy conducted ESG training activities during the Reporting Period, targeting the Directors, management, and employees. The training covered topics such as interpreting climate change trends, analysis of climate policies, and management of climate risks, among others, to promote the Company's overall climate governance capabilities.

Climate Risk Management

In 2022, Kunlun Energy has integrated climate risks into its risk management procedures. Through methods of literature review, trend analysis, and expert interviews, the Company conducted a thorough analysis of climate risks and opportunities and established a climate risk library. Additionally, the Company re-examined the current risk list, revising risk descriptions from a climate change perspective. Climate-related risks have been fully included in our risk scoring, evaluation, and management processes.

In order to better identify climate change risks and opportunities, we referred to the emission scenarios of RCP8.5⁶ in the Intergovernmental Panel on Climate Change (referred to as "IPCC") scientific assessment report⁷ and the 2050 net-zero emissions scenario (referred to as "NEZ")⁸ from the International Energy Agency (referred to as "IEA"). Based on the selected scenarios and our business characteristics, we evaluated the potential impacts of physical and transition risks and climate opportunities on our business.

Climate Risk

Physical risks

Risk type	Risk description	Potential financial impact	Impact period ⁹	Value chain
Acute risk	Extreme weather events	<ul style="list-style-type: none"> Loss of fixed assets Increase in operational expenses in production, transportation, etc. Loss of human capital 	<ul style="list-style-type: none"> Short Medium 	<ul style="list-style-type: none"> Production Operation Transportation
	Rising sea levels	<ul style="list-style-type: none"> The rising sea levels resulting from climate change may increase the risk of damage to facilities in coastal areas and drive up the maintenance costs of facility equipment. 	<ul style="list-style-type: none"> Medium Long 	<ul style="list-style-type: none"> Production Operation
Chronic risks	Rising temperature	<ul style="list-style-type: none"> Increased temperature may raise the possibility of drought, fires, and other disasters, influencing gas production and leading to higher electricity and other operational costs; changing the demand pattern of the natural gas market, and affecting natural gas sales. Extreme heat may pose chronic health risk to employees. 	<ul style="list-style-type: none"> Medium Long 	<ul style="list-style-type: none"> Production Operation Sale
			<ul style="list-style-type: none"> Decrease in sales revenue Increase in energy costs Loss of human capital 	

⁶ The representative concentration pathway (RCP) references from the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), which describing different levels of greenhouse gases and other radiative forcings that might occur in the future. The RCP8.5 scenario simulates global average warming of 5°C by 2100.

⁷ Reference source: The Sixth Assessment Report of the Intergovernmental Panel on Climate Change.

⁸ Reference source: "Global Energy and Climate Model" issued by International Energy Agency.

⁹ This Report defines short-term as 0-1 year, medium-term as 2-10 years, and long-term as 10 years or more.

Transition risks

Risk type	Risk description	Potential financial impact	Impact period	Value chain
Policy and legal risks	Energy transition Balancing business development under the requirement of the dual carbon goals may pose challenges to Kunlun Energy. During energy transition process, the construction, investment, and management of clean energy projects need large-scale investment.	<ul style="list-style-type: none"> Increase in investment expenditure Increase in technology investment 	<ul style="list-style-type: none"> Short Medium Long 	<ul style="list-style-type: none"> Operation Investment
	Environmental compliance Increasingly stringent regulatory requirements for environmental inspections and disclosure could lead to higher compliance costs.	<ul style="list-style-type: none"> Increase in compliance costs 	<ul style="list-style-type: none"> Short Medium 	<ul style="list-style-type: none"> Production Operation
	Carbon pricing Participation in the Chinese carbon market requires companies to adopt carbon verification as a prerequisite, which could potentially increase their operational costs. Over the long term, the carbon market could serve as a critical tool in achieving China's dual carbon goals, with fluctuations in carbon prices potentially leading to increased costs for carbon reduction.	<ul style="list-style-type: none"> Increase in operating and management costs 	<ul style="list-style-type: none"> Medium Long 	<ul style="list-style-type: none"> Operation
Technology risk	Renewable energy As the Company work to meet its carbon reduction targets, it may incur additional expenses related to retrofitting facilities for energy efficiency, introducing new technologies and talent, and conducting research and development on low-carbon technology, leading to an increase in overall operating costs.	<ul style="list-style-type: none"> Increase in technology investment Increase in operating and management costs 	<ul style="list-style-type: none"> Short Medium 	<ul style="list-style-type: none"> Production Operation Investment
	Digital technology In the trend of digital transformation, digital technology is an essential means of empowering low-carbon development. The exploration and development of digital technology will bring additional investment and manpower costs.	<ul style="list-style-type: none"> Increase in investment expenditure Increase in technology investment Increase in operating and management costs 	<ul style="list-style-type: none"> Short Medium Long 	<ul style="list-style-type: none"> Production Operation
Market risk	The renewable energy technology is rapidly advancing and has the potential to replace traditional fossil energy in the industry. Carbon-neutral natural gas and other low-carbon products are being actively promoted. Traditional natural gas may gradually lose its market advantage.	<ul style="list-style-type: none"> Decrease in sales revenue 	<ul style="list-style-type: none"> Long 	<ul style="list-style-type: none"> Sale
Reputation risk	As public awareness of low-carbon practices increases, any environmental events (failing to meet carbon emission targets, emitting heavy pollutants, etc.) could result in negative public opinions and damage the Company's brand image, which may further lead to a reduction in investment and a drop in consumer demand.	<ul style="list-style-type: none"> Decrease in operating revenue Increase in financing costs 	<ul style="list-style-type: none"> Medium Long 	<ul style="list-style-type: none"> Operation Financing

Climate Opportunity

Climate-related opportunities	Opportunities description	Potential financial impact	Impact period	Value chain
Energy efficiency	Application of energy-saving technologies and equipment The application and development of energy-saving equipment and technologies could help improve energy efficiency in operations, thereby reducing operating costs.	<ul style="list-style-type: none"> Decrease in production & operating costs 	<ul style="list-style-type: none"> Short Medium 	<ul style="list-style-type: none"> Production Operation
	Energy management The Company could improve its management efficiency by strengthening energy management system and using digital platform to monitor carbon emissions and energy usage, thereby reducing energy loss and manpower cost.	<ul style="list-style-type: none"> Decrease in energy management costs 	<ul style="list-style-type: none"> Short Medium 	<ul style="list-style-type: none"> Production Operation
	Clean energy By developing clean energy and procuring green electricity, the Company could reduce its carbon emissions and lower energy procurement costs.	<ul style="list-style-type: none"> Decrease in energy costs 	<ul style="list-style-type: none"> Short Medium Long 	<ul style="list-style-type: none"> Production Operation
Products and services	Natural gas business development Natural gas, as a relatively clean energy source, has tremendous potential in the short to mid-term energy market as China works towards achieving its dual carbon goals.	<ul style="list-style-type: none"> Decrease in production & operating costs 	<ul style="list-style-type: none"> Short Medium 	<ul style="list-style-type: none"> Sale
Markets	Integrated energy layout Based on its business advantages, the Company could promote the multi-energy integration on the supply sides and create an integrated energy services model, which has the potential to drive new business development and create investment opportunities.	<ul style="list-style-type: none"> Increase in operating revenue Increase in financing 	<ul style="list-style-type: none"> Medium Long 	<ul style="list-style-type: none"> Sale Investment Financing



Climate Strategy

Addressing climate change risks

Kunlun Energy has been continuously strengthening climate governance and formulating strategies, so as to mitigate and adapt to physical and transitional risks associated with climate change, enhancing the Company's resilience towards such impacts.

In response to physical climate risks, we have developed emergency plans and an internal response mechanism to ensure the safety and stability of our gas operations. Our site selection and planning process incorporates climate factors and we conduct feasibility assessments and purchase insurance for our assets. During our daily operation, we inspect the maintenance of natural gas pipelines and other facilities and equipment regularly, to ensure safe and stable production. We are also highly concerned about the well-being of our employees in extreme heat and other intense climate conditions. We conduct regular occupational health checks for our employees, provide personal protective equipment for them, and arrange reasonable work schedules to ensure their safety under extreme weather. Additionally, we organise trainings and emergency drills to improve our front-line staff's ability to respond to heavy rain, floods, high temperature and other extreme weather events.



Equipment maintenance under cold wave weather



Enhancing inspection during adverse weather conditions

Case Ensuring stable natural gas operation during the flood season

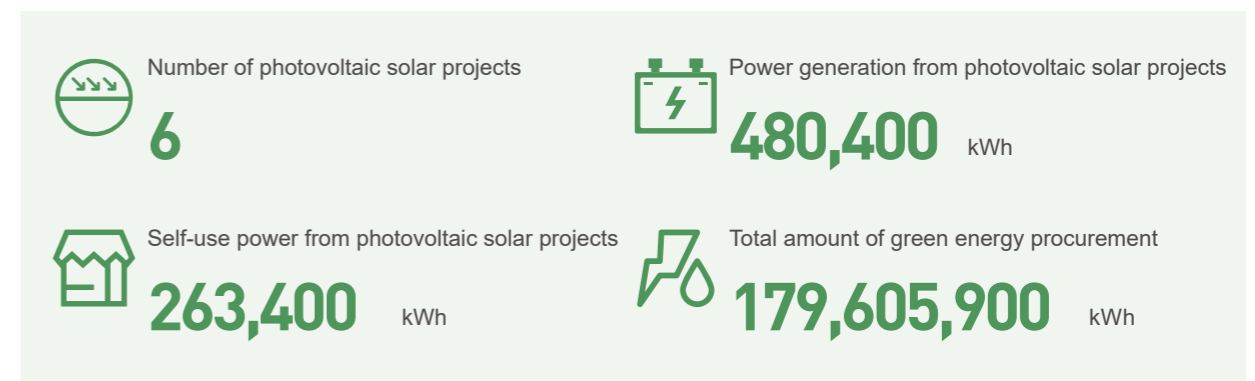
In order to ensure the stable and safe operation of natural gas business in the flood season, Kunlun Energy issued a notice on "Disaster Prevention and Mitigation Measures". The Company made arrangements for inspections of all stations, equipment screening, flood-control materials allocation, and flood season duty. Through these measures, the natural gas business of the Company was not affected by rainfall in 2022, and all aspects of production and operations were carried out smoothly and orderly.

Furthermore, to mitigate the transition risks associated with climate change policies, technologies, and other aspects, Kunlun Energy has taken proactive measures to plan and implement its transformation strategy. The Company released the "Action Plan Towards Carbon Peaking and Carbon Neutrality (Version 1.0)" consisting of three major action plans, namely "energy conservation and emission reduction, quality enhancement and efficiency improvement", "low-carbon transformation of energy structure", and "build a green corporate brand". The Company continues to upgrade energy-saving technology, promote technological innovation and intelligent control, and optimise our internal energy management system to improve energy management and production efficiency. Simultaneously, we actively promote multi-energy integration on the supply-side and plan for the development for gas power, wind power, and photovoltaic. We strive to explore new development models for the multi-energy integration, turning risks into opportunities, and driving high-quality development of the Company.

Seizing climate change opportunities

In the face of climate change, Kunlun Energy actively seize the opportunities of low-carbon development. In 2022, the Company has planned for the development of new energy business, and promoted the integration of gas power, new energy and other integrated energy projects. During the Reporting Period, the Company actively deployed a batch of new energy and integrated energy projects, including photovoltaic power and wind power projects, pressure differential power generation projects, LNG cold utilisation projects and integrated energy projects. The Company also optimised its project approval process to accelerate the implementation of photovoltaic power and other projects, and multiple projects in Jiangsu and Shanghai have been completed and

By the end of 2022, the Company's 6 photovoltaic power generation projects have been completed, with a total power generation of 480,400 kWh and self-use amount of 263,400 kWh. Meanwhile, we have been gradually exploring participation in power trading, procuring 179,605,900 kWh hydroelectric power from electricity market in 2022



Case The Kunlun Energy Shanghai CNG station rooftop photovoltaic project has successfully connected to the grid and started generating electricity

In December 2022, the Kunlun Energy Baihe CNG station rooftop distributed photovoltaic power project was successfully connected to the grid for electricity generation. The project employs the "self-use and excess power to the grid" mode, with a designed capacity of 108.9 kilowatts. The project helps the Company reduce carbon emissions and increase efficiency, achieving benefits for both power generation and consumption. It is expected to generate an average of 100,000 kWh photovoltaic power annually, equivalent to saving 40 tonnes of standard coal and reducing 99.7 tonnes of CO₂.



The rooftop photovoltaic project at the Kunlun Energy Shanghai CNG station

To ensure the orderly development and construction of new energy projects, Kunlun Energy revised its wind power, photovoltaic power, and distributed energy development guidebooks in 2022, and issued the “New Energy Projects Production and Operation Management Focus Area” to guide the Company’s departments and units to develop new projects in compliance with laws and regulations, and to continuously improve the new energy system construction.

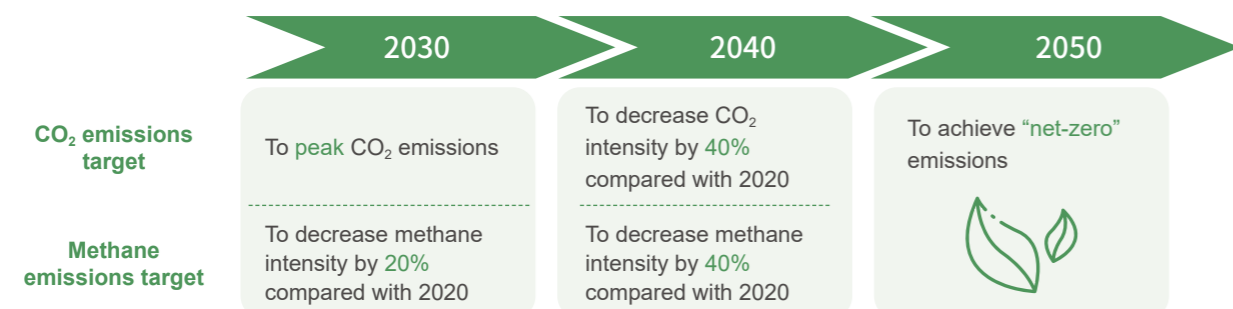
In addition, the Company actively conducts various research on new energy issues, including the project of the “Hydrogen Production Technology and Comprehensive Utilisation of Hydrogen Energy in the Chemical Chain of Low-Carbon Natural Gas” and “Kunlun Energy Carbon Emission Management and Carbon Market Trading Research”, which provide good guidance and support for the development of new energy business. At the same time, the Company regularly organises new energy business training. In 2022, a total of six related seminars and training sessions were held, with more than 1,130 participants, playing a positive role in promoting new energy project development.



New energy business conference

Climate Targets and Indicators

Kunlun Energy actively responds to China’s carbon peaking and carbon neutrality targets, consciously undertakes its responsibilities to reduce emission by setting carbon emission reduction targets of different stages. The Company has released the “Action Plan Towards Carbon Peaking and Carbon Neutrality (Version 1.0)”, which outlines the overall goals and action plans for carbon emissions reduction. We have also developed specific measures, broken down the climate indicators, as well as strengthened supervision and assessment, to ensure effective implementation of our carbon emissions reduction actions.



In 2022, the Company commenced the construction of “zero carbon emission stations”, and designated Tai’an and Huanggang plants as demonstration sites. We conducted clean production audits, established clean production and methane reduction plans. Moving forward, we will leverage the experience gained from the demonstration sites to further advance the development of zero-carbon projects, and continuously explore opportunities for carbon reduction throughout our production and operations processes.

To avoid methane discharge during the gas production process, we constantly optimise natural gas transportation processes and establish mechanisms for pipeline leak detection and repair, while incorporating them into daily inspections. We also utilise handheld terminals and vehicle-mounted detection systems to detect and repair pipeline leaks, in order to ensure the availability of our equipment and facilities, and reduce the level of leakage risk. Furthermore, we recover and utilise the BOG generated by our process system to reduce methane emissions. In 2022, we fully achieved our annual CO₂ and methane emissions reduction targets.

Indicators	Unit	2022 Control target	Emissions equivalents in 2022
CO ₂	10,000 Tonnes	160.00	155.68
Methane	10,000 Tonnes	1.10	0.71

In terms of carbon emissions data, the Company has established the “Management Measures of Greenhouse Gas Emissions Statistics”, continuously refines greenhouse gas emissions data management, and establishes a greenhouse gas emissions verification list. Based on this, we have conducted thorough investigations into the current state of carbon emissions from major equipment and facilities. We have then developed comprehensive action plans and measures to rigorously monitor and control greenhouse gas emissions.”

Indicators	Unit	2021	2022
Total GHG emissions ¹⁰	Tonne CO ₂ -e	1,467,679	1,556,814
GHG emissions intensity	Tonne CO ₂ -e/ 10,000 cubic metres	0.349	0.346
Direct GHG emissions (Scope 1)	Tonne CO ₂ -e	480,112	460,708
Direct GHG emissions intensity (Scope 1)	Tonne CO ₂ -e/ 10,000 cubic metres	0.11	0.10
Indirect GHG emissions (Scope 2)	Tonne CO ₂ -e	987,566	1,096,106
Indirect GHG emissions intensity (Scope 2)	Tonne CO ₂ -e/ 10,000 cubic metres	0.24	0.24
Methane emissions ¹¹	Tonne	8,578	7,091
Reduced BOG emissions by optimising process measures and process control	100 million cubic metres	5.5	6.0
Greenery coverage percentage in plants	%	14.4	14.7
Number of trees planted in plants	-	92,013	97,919

¹⁰ The calculation of GHG emissions is based on the emission factors in the “Methodology and Reporting Guidelines for Accounting for Greenhouse Gas Emissions from Oil and Gas Producers in China (Trial)”.

¹¹ Including methane emissions from gas station process.



ENVIRONMENTAL PROTECTION MANAGEMENT

Kunlun Energy regards green development as one of its critical strategies and continuously improves the environmental management system to implement the responsibility for ecological environment protection. We strictly follow the laws and regulations including the “Environmental Protection Law of the People’s Republic of China”, the “Atmospheric Pollution Prevention and Control Law of the People’s Republic of China”, the “Water Pollution Prevention and Control Law of the People’s Republic of China”, the “Law of the People’s Republic of China on the Prevention and Control of Environment Pollution Caused by Solid Wastes”, the “Law of the People’s Republic of China on Prevention and Control of Pollution from Environmental Noise”, and the “Water and Soil Conservation Law of the People’s Republic of China”. We also continue to improve our internal environmental management mechanisms and implement environmental protection work.

Environmental Management System

The Company’s QHSE Committee serves as the leadership and decision-making body for environmental management, responsible for overseeing the Company’s environmental protection. To ensure effective implementation and accountability for environmental protection, we have established a responsibility system with a decomposed implementation plan. Each year, the Board members, senior management, and business leaders sign the “Safety and Environmental Protection Responsibility Statement”, which includes assessment indicators including the compliance rate for air pollutants emissions and the amount of GHG emissions. The achievements of these indicators are linked to performance evaluations for relevant personnel. Meanwhile, we reinforce operational process management through various forms of environmental review, inspection, and specialised supervision, to ensure the effective operation of the environmental management system

The Company has established and obtained certification for the GB/T24001 (ISO 14001) environmental management system. We regularly revise our internal environmental protection regulations based on updates of laws, regulations and our business status. In 2022, we revised the “Management Measures of Safety and Environmental Protection Responsibility System” and “Management Measures of Environmental Incident”, and released the “Management Measures of Pollutant Discharge Permit”, continuously improving the Company’s environmental protection system.

Environmental Management Practice

Kunlun Energy practices the concept of ecological civilisation and actively conducts various ecological environment protection measures to integrate green development into its business activities.



We continued to carry out the investigation and management of hidden hazards in ecological environment protection, established a list of hidden dangers and implement hierarchical management. We also developed rectification plans and measures, and rectified a total of 113 hidden dangers in 2022.



We carried out green enterprise establishment. In 2022, all 43 affiliated units have pass green enterprise certification of Kunlun Energy.



We completed Environmental protection assistance and supervision for 17 affiliated units and rectified 143 issues.



We conducted 690 training sessions at all levels, with a total of 12,000 participants. The training themes included green enterprise construction, hidden danger investigation, sewage discharge permit management, solid waste management, “Three Simultaneities” of environmental protection¹², and greenhouse gas control.

POLLUTION PREVENTION AND CONTROL

Upholding the philosophy of “Lucid waters and lush mountains are invaluable assets”, Kunlun Energy implements strict measures to control and eliminate the impacts of air pollution, wastewater and solid waste on the environment in our operation. We strive to improve our pollution prevention and control capabilities to achieve a balance between economic development and environmental protection.

Waste Gas Management

Our process waste gas mainly comes from inspection, maintenance, discharge of gas dissipation, flare burning, boiler or heating furnace combustion, etc. The escaped or combusted gas is methane. In 2022, Kunlun Energy carried out an investigation of emissions sources and came up with a list of pollution sources and a detection plan. The Company promoted the recycling of process waste gas, through optimisation of operating conditions, technical adjustment, low-nitrogen upgrade and other measures to reduce fuel gas consumption and waste gas dissipation. We used gas pipe network detection vehicles to carry out regular gas pipeline leakage detection, taking internal anti-corrosion and other measures to reduce leakage emissions for the aging pipelines. We also took surveillance equipment at flare stacks to allow real-time monitoring of flares.

Indicators	Unit	2022 Targets	Emissions in 2022
SO ₂	Tonnes	38.00	18.17
NO _x	Tonnes	900.00	452.14
Methane	Tonnes	1.10	0.71

¹² The term “Three Simultaneity of Environmental Protection” refers to the requirement that environmental protection facilities in construction projects must be designed, constructed, and put into operation at the same time as the main project.

Wastewater Management

The wastewater discharged by Kunlun Energy includes the production and domestic wastewater. Production wastewater was treated by local qualified organisations, who would conduct centralised treatment or adopt environmentally friendly process equipment to reach regulatory standards before discharge, and ensure the legal compliance. For domestic wastewater, the Company has installed an integrated domestic sewage treatment device with a domestic cesspool, after which the water will be discharged through the municipal pipeline network to make sure the compliance with regulatory standard. For wastewater that generated under accident conditions, the Company has established environmental protection facilities in accordance with the national standards to avoid uncontrolled wastewater discharge.

Industrial wastewater discharge compliance rate

2022 Target 2022 Achievement

100% 

Indicators	Unit	2021	2022
Industrial wastewater discharge	10,000 Tonnes	35	35
Industrial wastewater recycled	10,000 Tonnes	7	6
Domestic wastewater discharge	10,000 Tonnes	81	84
Domestic wastewater recycled	10,000 Tonnes	1.6	1.9

Solid Waste Management

Hazardous wastes of Kunlun Energy mainly contain molecular sieves, filter elements, compressor lubricating waste oil, generator/air compressor oil, waste hydraulic oil, waste dyes and coatings, waste charge batteries of generators, as well as mainboards of waste refuelling and liquid-filling machines. To hazardous wastes properly, we transfer them to qualified organisations for compliant disposal.

Non-hazardous waste is classified into production and construction waste, mainly including inorganic wastewater and sludge in the production process, waste steel pipes generated during inspection and maintenance, slag generated during construction, water stable layer solid waste and other waste that cannot be backfilled, which are all treated in accordance with the relevant provisions.

Waste disposal rate

2022 Target 2022 Achievement

100% 

Indicators	Unit	2021	2022
Non-hazardous solid waste discharge - production ¹³	Tonnes	10	25
Non-hazardous solid waste intensity - production	Tonnes/100 million cubic metres	0.02	0.06
Non-hazardous solid waste discharge - construction ¹⁴	Tonnes	11,481	29,126
Non-hazardous solid waste intensity - construction	Tonnes/100 million cubic metres	27.34	64.74
Hazardous solid waste discharge ¹⁵	Tonnes	379	454
Hazardous solid waste intensity	Tonnes/100 million cubic metres	0.90	1.01

Noise Management

We strictly control noise pollution in the engineering projects. During the environmental impact assessment stage, the Company conducts a strict evaluation of the impact of noise pollution, proposes prevention and control measures. The noise control measures proposed in the environmental impact assessment are integrated in the designing and strictly implemented during the construction and operation. After the project is put into operation, the noise control facilities would be put into operation simultaneously with the main project, and noise monitoring is carried out every year according to the relevant standards. Noise control has been incorporated into our ecological environment hazard investigation, and rectification measures would be taken upon identifying problems.

RESOURCE UTILISATION AND ECOLOGICAL CONSERVATION

Kunlun Energy has implemented the national policies on energy conservation and ecological environment protection, striving to reach balance between development and conservation while prioritising resource conservation. The Company has established various policies including the “Energy and Water Conservation Management Measures of Kunlun Energy” and the “Energy and Water Conservation Statistic Management Regulation of Kunlun Energy”. We also set up a leading group on energy and water conservation, and established a dedicated office and position for energy and water conservation management, which is responsible for coordinating and implementing resources management. Energy-saving and water conservation targets have been integrated in the performance evaluations of the Company’s management and related personnel.

In 2022, the Company implemented various investment and renovation projects for energy and water conservation, resulting in a saving of 2,300 tonnes of standard coal in energy and 8,000 cubic metres of water, fully achieving the annual energy-saving and water conservation targets.

Indicators	Unit	2022 Targets	2022 Achievements
Energy saving	10,000 tonnes of standard coal	0.11	0.23
Water saving	10,000 cubic metres	0.5	0.8

¹³ The discharge of non-hazardous solid waste from production has increased in 2022 due to new projects, longer operational hours at some plants, and the phasing out of gas meters.

¹⁴ The increase in non-hazardous solid waste from construction is attributed to the urban gas hazard rectification project, with the majority of the waste being utilised for backfilling.

¹⁵ In 2022, our plants have a disposal cycle for hazardous waste, resulting in an increase in hazardous waste discharge compared to previous years.

Energy Management

To implement the action plan of “energy conservation and emission reduction, quality enhancement and efficiency improvement”, the Company actively takes measures to optimise energy management and improve energy efficiency. Based on our energy usage in production, we have established a 5-level energy consumption standard for our natural gas and LPG business, which covers the equipment and facilities in our gas plants, to strengthen tracking and analysis of energy consumption and enhance online forecasting and warning of major energy indicators. In addition, we carried out energy consumption audits this year, and disposed equipment with high energy consumption. We have also developed equipment replacement plans for the next year, gradually expanding the application of energy-saving equipment.

Indicators		Unit	2021	2022
Total energy consumption		MWh	2,609,795.62	2,832,199.58
Energy consumption intensity		MWh/RMB 10,000 of added value	1.28	1.17
Direct energy consumption	Gasoline	Tonnes	3,916	3,753
	Diesel	Tonnes	495	498
	Natural gas	10,000 cubic metres	9,458	101,67
	LPG	Tonnes	148	112
Total direct energy consumption		MWh	1,079,495.78	1,153,658.64
Direct energy consumption intensity		MWh/RMB 10,000 of added value	0.53	0.48
Indirect energy consumption	Purchased electricity	MWh	1,530,299.84	167,666.8
	Purchased heat ¹⁶	MWh	-	1,872.95
Total indirect energy consumption		MWh	1,530,299.84	1,678,540.95
Indirect energy consumption intensity		MWh/RMB 10,000 of added value	0.75	0.69

Water Management

Kunlun Energy places great emphasis on water conservation management and implements various water-saving measures. The Company has established a sound water intake and conservation process and continually strengthened water resource management and supervision. The Company's total water consumption in 2022 was 4.815 million cubic metres, the vast majority of which was supplied by municipal water, with a small amount of groundwater (self-drilling wells). Kunlun Energy obtained a water collection permit issued by the authorities for groundwater collection and carried out water quality testing in accordance with the law to ensure that water collection and consumption would not affect local areas. During the Reporting Period, there was no issues with access to water or damage to the local ecological environment.

¹⁶ In 2022, we expanded the scope of energy data to include the measurement of purchased heat.

Indicators	Unit	2021	2022
Total water consumption	10,000 cubic metres	480.5	481.5
Water consumption intensity	Tonnes/RMB 10,000 of added value	2.35	2.03

Ecological Environment and Biodiversity Protection

Kunlun Energy adheres to the principle of balancing ecological protection and restoration while striving to achieve harmonious coexistence between the Company's business development and the natural environment. Following relevant national laws and regulations, the Company implements environmental impact assessment, environmental protection facilities "Three Simultaneities", ecological supervision, soil and water conservation supervision, environmental protection acceptance upon completion, post-environmental impact assessment and environmental protection management and inspection for construction projects, and ensures that the work is in strict accordance with the environmental impact assessment approval.

The Company has strict construction regulations regarding biodiversity protection, land resource use, and restoration of vegetation. Prior to construction, we carefully inspect the rare animals and plants in the construction area, and consider the protection of these species into project planning. To minimise our impact on the land and its inhabitants during construction, we create designated construction access and carefully plan the land use for construction vehicles and material storage. We also have strict management for construction personnel to reduce impacts on various animals, plants and land resources. After the completion of construction, we restore the land and vegetation by promptly removing waste, backfilling soil and planting greenery. We also educate our operational personnel on the protection of land resources and biodiversity. Additionally, we conduct continuous monitoring of the local environment and carry out rescue operations as necessary to protect local organisms.

Case Vegetation conservation measures for Shizuishan Natural Gas Phase II Source Project

To minimise vegetation damage caused by pipeline construction, Shizuishan Natural Gas Phase II Source Project has taken a series of measures throughout the design, construction and post-construction phase to protect the trees and vegetation.

Design

We communicated with the municipal department and carried out over **10** rounds of scheme selection.

Construction

We didn't cut any trees and protected over **800** trees with a diameter at breast height of 10-20 cm. We utilised designated access for entry and exit, reducing the impact on the **7,228** square metres of greenery.

Post-construction

We utilised reverse filling to restore the original vegetation, and installed drip irrigation facilities to ensure timely watering of trees and greenery.



Installing drip irrigation facilities to ensure timely watering of trees

04

FOSTERING PROSPERITY AND HARMONY FOR ALL

Following the principle of win-win cooperation and mutual benefit, Kunlun Energy is committed to creating greater value for all stakeholders. We are dedicated to the well-being of society by ensuring energy security and stability, fulfilling our responsibilities as a corporate citizen. Additionally, we aim to foster an equal and inclusive work culture, prioritise safety and comfort for all employees, and promotes mutual growth between our employees and the Company, contributing to sustainable development of the society.

 FEATURE: EMPOWERING AN EFFICIENT ENERGY SYSTEM WITH DIGITAL INTELLIGENCE

- DELIVERING SOCIAL VALUE
- PROTECTING LABOUR RIGHTS
- FOCUSING ON TALENTS DEVELOPMENT
- SAFEGUARDING OCCUPATIONAL HEALTH

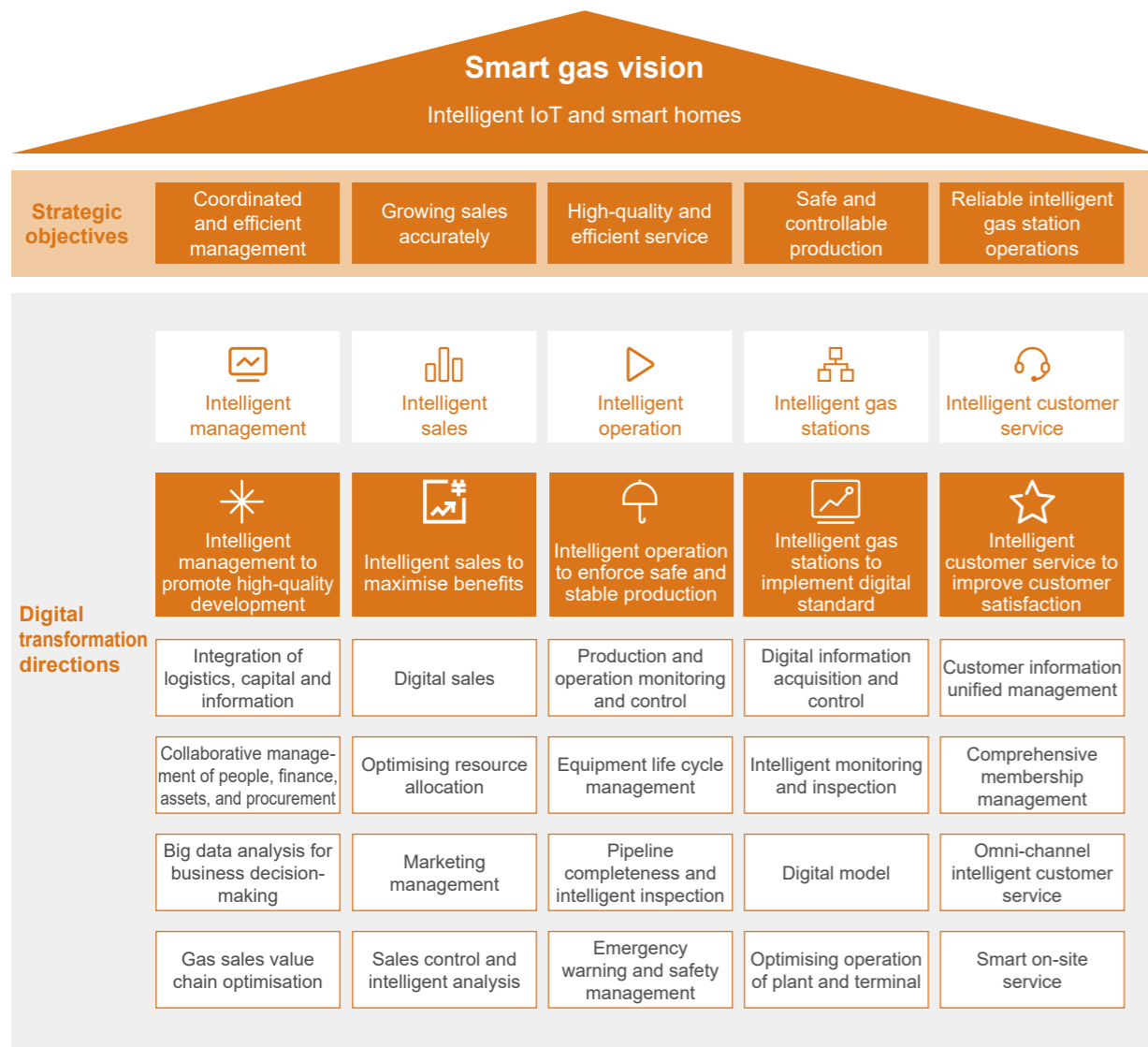


FEATURE

EMPOWERING AN EFFICIENT ENERGY SYSTEM WITH DIGITAL INTELLIGENCE

With the development of digital transformation, Kunlun Energy strives to seize the digital opportunity, actively promotes the integration of Internet, big data, and artificial intelligence with its business. Leveraging its industry advantage, Kunlun Energy proactively embraces new technologies and empowers the modernisation of gas infrastructure with digital tools. We strive to build a clean, low-carbon, safe and efficient modern energy system to provide millions of households with safer, more efficient, and convenient gas.

Kunlun Energy continues to optimise its top design for digital transformation. Our strategic objectives encompass multiple aspects, including efficient management, sales growth, high-quality customer service, safe and stable production, and reliable intelligent gas station operations. The Company advances digital transformation along five intelligent directions, including intelligent management, intelligent sales, intelligent operation, intelligent gas stations, and intelligent customer service. We are pursuing the idea of "smart internet of things (IoT), smart homes" to build a smart gas system and achieve our goal of becoming an internationally renowned and China's first-class integrated green energy provider.



Smart Operations Ensuring Stable Production

Kunlun Energy is dedicated to integrating digital technology and operational management to better provide cities with safe and stable energy. We have developed a comprehensive production management system with multiple functions, including production operation, safety monitoring, equipment management, availability management, and emergency management. The production management system enables us to inspect and mitigate risks in high-consequence areas, enclosed spaces, valve chambers, and other hazardous locations. The system also assists to monitor system operations in real-time, provide intelligent analysis with timely warnings. It is accessible and convenient at all times to ensure safe production.



The production management system of Kunlun Energy

Case Completing overall digital pipeline network mapping

Kunlun Energy applied the BeiDou high-precision positioning technology to create its digital pipeline maps. The Company systematically sorted out the data from its subsidiary branch and gas network, and integrated them into the production management system. By 2022, the Company completed the digital mapping work, with all of its 120,000 kilometres of pipelines connected to the production management system. This system has established a solid foundation for precise risk prevention and control, efficient inspection and patrol, and rapid emergency response, thereby elevated the Company's risk management to a new level.



After the launch of the production management system, the Company has continuously upgraded it and promoted its application. In 2022, we issued the "Work Plan for Promoting the Application of the Production Management System" and conducted 13 system application training sessions to educate relevant departments and stations to use the system. We aim to enhance our digital management and control capabilities to promote a comprehensive improvement for our gas station in the production efficiency and safety management.

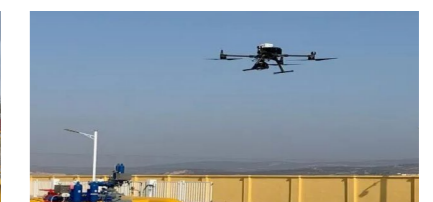
In addition, Kunlun Energy is actively promoting smart station construction and exploring the automation, digitisation, and intelligent transformation of pipeline stations, refilling stations, LPG storage stations, LNG plants, and LNG terminal. In 2022, the Company expanded its smart unmanned stations, incorporating AI intelligent recognition equipment, robot patrols, drone inspections, and other advanced technologies to improve station management and emergency response capabilities.



Intelligent inspection robot



Intelligent broadcasting robot



Drone inspections

Case Unmanned gas stations ensuring efficient and safe production

Kunlun Energy has implemented an “unmanned mode” for its newly built stations in Jiangsu, taking the lead in achieving natural gas flow monitoring and measurement. Based on the current functions of automatic control, remote switching, and emergency shutdown functionality, the station also added unmanned station video monitoring and gas leak alarm systems, to ensure comprehensive safety coverage and better safeguard production and operation.

In 2022, Kunlun Energy explored the integration of business scenarios with internal systems and technology platforms. We developed digital transformation pilot project and promoted the application of digital scenarios in Shandong province.

Case Kunlun Energy's Shandong digital transformation pilot

Kunlun Energy has been conducting digital transformation pilot in Shandong province. To address major business difficulties such as resource allocation, digital control of pipelines and stations, and urban gas customer security management, as well as to meet the operational requirement, the system designed 16 scenarios five digital transformation directions. Currently, 8 of these scenarios have been successfully put into operations.

The achievements of Shandong digital transformation pilot:



User safety management

We installed intelligent alarms, smart shut-off valves/electromagnetic valves, and ultrasonic intelligent gas meters on the user end to provide real-time gas safety monitoring and automatic response to emergencies.



Digital pipeline

We constructed a pipeline digital map to display a three-dimensions pipelines outside of the stations, and applied pipeline overpressure/underpressure prediction and gas leakage analysis in this system.



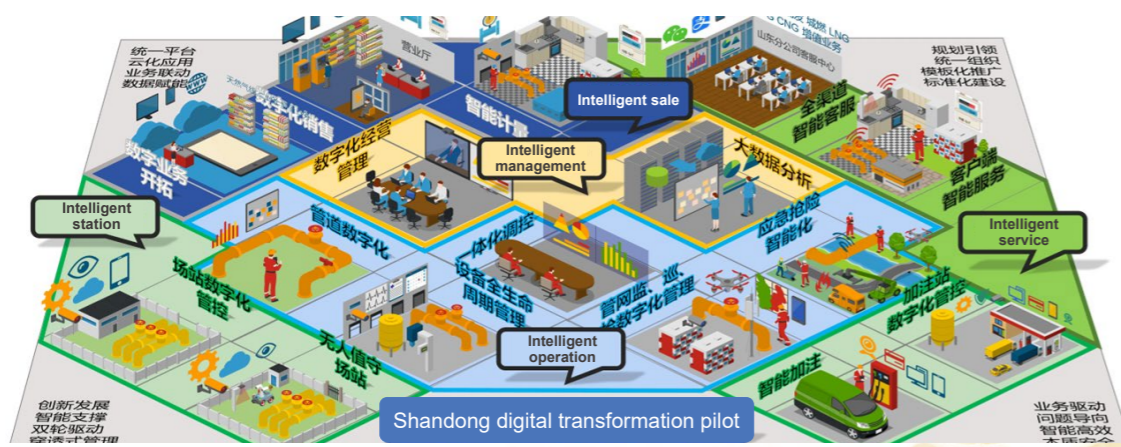
Intelligent monitoring and inspection

Our digital system is capable of intelligent inspection and automatic warning by applying AI recognition has for 24/7 real-time monitoring of high-consequence areas¹⁷ with automatic warning.



Intelligent station construction

Multiple stations, including Cangzi Line and Jinjie, have realised digital twinning and visualisation of stations, intelligent control of production, intelligent diagnosis of equipment, and unmanned operation.



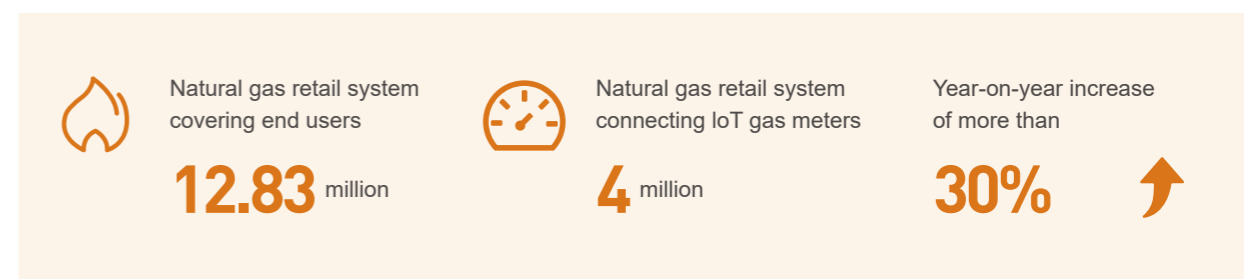
Kunlun Energy digital transformation pilot

¹⁷ High consequence area refers to an area where a pipeline leak may have a significant adverse impact on the public and the environment.

Intelligent Services Benefit Thousands of Families

To offer customers safer and more convenient gas services, Kunlun Energy explores innovative digital sales models by establishing natural gas sales operation management systems and electronic sales systems. Through the information integration across the entire natural gas industry chain, the system could realise digital monitoring for the sales process, providing data support for resource allocation and business decisions.

At the same time, we continued to promote the natural gas retail system, which is integrated with the customer service platform to create a comprehensive membership service system, providing customers with more convenient and efficient products and services. By the end of 2022, the natural gas retail system has covered 12.83 million end users, connecting over 4 million IoT gas meters, with a year-on-year increase of more than 30%. In this way, we further strengthens our capacity to support end sales and provide excellent customer service.



We are also exploring smart service centre models, accelerating the development of integrated energy services and expanding value-added services. We strive to make full use of offline experience stores and other forms to enhance interaction with our customers and further improve their service experience.

Case The launch of “Kunlun Huixiang” offline experience store

In 2022, Kunlun Energy officially launch its first “Kunlun Huixiang” offline experience store. By integrating the platform’s functions with the gas business, we created an “Internet + energy + lifestyle” ecosystem to provide citizens with more intelligent, diverse, and thoughtful services.



The launch of “Kunlun Huixiang”



A service personnel is introducing gas stove to a customer

DELIVERING SOCIAL VALUE

Kunlun Energy takes its responsibility as a corporate citizen. We support national strategies and contribute to regional development and rural revitalisation. The Company shoulders its duty for safeguarding national energy security and dedicates to create more value for customers and the public, promoting the harmonious development of society.

Supporting National Strategy

Kunlun Energy is fulfilling its mission to ensure national energy security, and implementing strategic, growth-oriented, and value-oriented projects. The Company adheres to the bottom line of "ensuring people's livelihoods, safeguarding contracts, and protecting key areas" and balances supply guarantee responsibilities and business efficiency. We promptly assess and respond to complex situations, fulfill our political responsibility of ensuring supply and safeguard the well-being of the society, and comprehensively enhance the value of the industrial chain.

Facing the severe cold wave in 2022, Kunlun Energy implemented various measures, including optimising energy supply plans and strengthening overall coordination, to ensure safe production during this period. Moreover, our front-line employees continued to work in challenging condition, inspecting equipment to identify potential hazards. We consistently strengthened safety monitoring to ensure safety production and the stable supply of natural gas, safeguarding the warmth of thousands of families.



Pipeline inspection



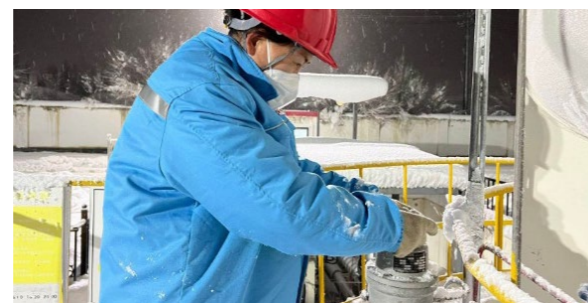
Safety inspection patrol



Front-lines employees on duty

Case Adequate gas supply to confront severe weather

In November 2022, a severe cold wave struck the Tacheng region of Xinjiang, causing the LNG transport trucks being stranded in Mayitas. Kunlun Energy quickly responded by adjusting its natural gas supply plan, closely monitoring the latest road conditions in real-time for improved coordination, and deploying emergency personnel and repair facilities on standby. As soon as the road conditions improved, we promptly sent our 6 gas supply vehicles to the Tacheng area, ensuring adequate gas supply for local residents.



Our employee conducted an equipment inspection in Tacheng City

Kunlun Energy actively supports the national rural revitalisation strategy by leveraging its business advantages and providing more accessible gas services to rural towns and villages through "gasification of towns and villages". This contributes to ensuring energy supply and improving people's livelihoods. The Company also implements the "Consumption Assistance and Empowerment Action", encouraging employees and affiliated companies to increase their purchasing of consumption assistance products in aided counties, thus to promote the development of rural revitalisation.



Kunlun Energy carried out tree planting and poverty alleviation visits in Xinmiao Village, Hubei province



Total amount of consumption assistance

RMB **13.5** million

Case Providing rural residents with access to natural gas

Nancai Township in Suqian City, Jiangsu Province, had a high demand for gas services among local residents. After understanding the needs, Kunlun Energy proactively communicated with the township government to expedite procedural approvals, and started facilities construction quickly. Through these efforts, natural gas services were successfully provided to over 2,000 households in the area, including local communities, primary schools, and kindergartens.



Receiving an appreciation banner from residents of Nancai Township, Suqian City

The Company continues to demonstrate its dual carbon impact and participated the activity of "Plant a Tree for Carbon Neutrality", carrying out tree planting, environmental donations, and plant adoption. In 2022, we donated RMB 510,000, planted 11,193 trees, and provided care for additional 92,501 trees in this activity.



A group photo of "Plant a Tree for Carbon Neutrality" activity

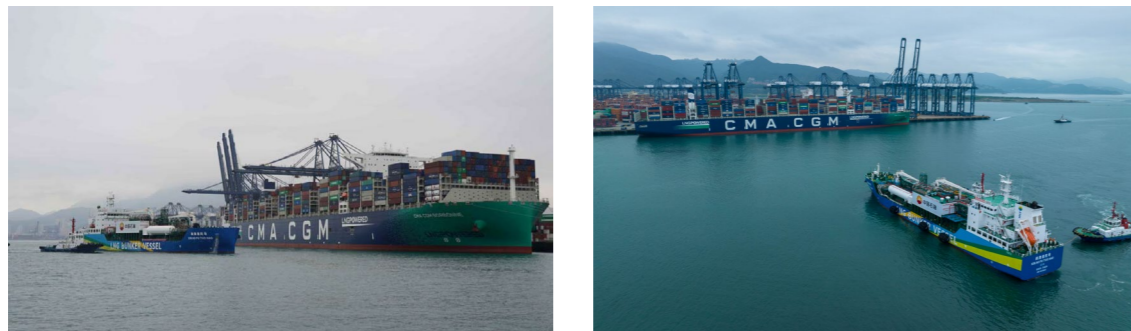
Tree planting donation	Number of planted trees	Number of trees received special care
RMB 510,000	11,193	92,501

Collaborating to Promote Industry Development

Kunlun Energy actively pursues development opportunities and collaborates with the government, enterprises, and media to achieve mutually beneficial growth. We engage in extensive business dealings with local governments and industry partners in Guangdong, Shanxi, Jilin, and other regions, working together to promote economic development and local well-being.

Case Completing first-ever “ship-to-ship” LNG refueling operation and accelerating the green development of the Greater Bay Area

In November 2022, Kunlun Energy successfully completing the first-ever “ship-to-ship” LNG refueling operation at sea at the Yantian Port in Shenzhen. As a clean energy source, LNG offers distinct advantages in the shipping industry and plays a crucial role in achieving green transformation. As a key member of the natural gas “production, supply, storage and sales” system in the Guangdong-Hong Kong-Macau Greater Bay Area, Kunlun Energy has maintained long-standing and beneficial relationship with the Shenzhen government. The “ship-to-ship” LNG refueling service will further support the green development of the Greater Bay Area.



“Ship-to-ship” LNG refueling operation at sea

We actively stay up-to-date with industry trends and engage in industry discussions to share our experience and innovative achievements. We also contribute to the formulation of national, industry, and organisational standards, promoting the standardised development in the urban gas industry. In 2022, we collaborated in formulation of 8 national standards, 4 of which have been published, as well as 3 industry standards and 11 organisational standards, with 3 already published. Additionally, we actively participated in ESG forums and related discussions. Through these platforms, we shared our experience and insights into sustainable development trends, providing valuable ESG practice references for other industry enterprises.



Co-organised the 2022 annual conference for the Intelligent Gas Committee of China Urban Gas Association

Number of formulated national standards
8

Number of formulated industry standards
3

Number of formulated organisational standards
11

Kunlun Energy aims to engage with stakeholders through more direct and vivid communication channels. In 2022, the Company launched a series of “Open Day” events across 25 provinces, presenting our achievements in business management, cultural development, safety and environmental protection, service enhancement, market efficiency. We also utilised animation videos and other creative forms of media and provide a better understanding of our safety and health culture.

Case “Open Day” event promoting public understanding of the gas industry

In 2022, Kunlun Energy successfully hosted its fifth annual “Open Day” event. The activity was carried out in many regions, both online and offline, and was accompanied by live coverage on site. The event provided the audiences from 25 provinces with the entire process of natural gas production, transportation, and distribution, while showcasing business innovations and safety concepts to enhance public’s understanding of the gas industry. The “Open Day” received widespread coverage from almost 160 domestic media outlets, garnering an online reach of over 30 million individuals.



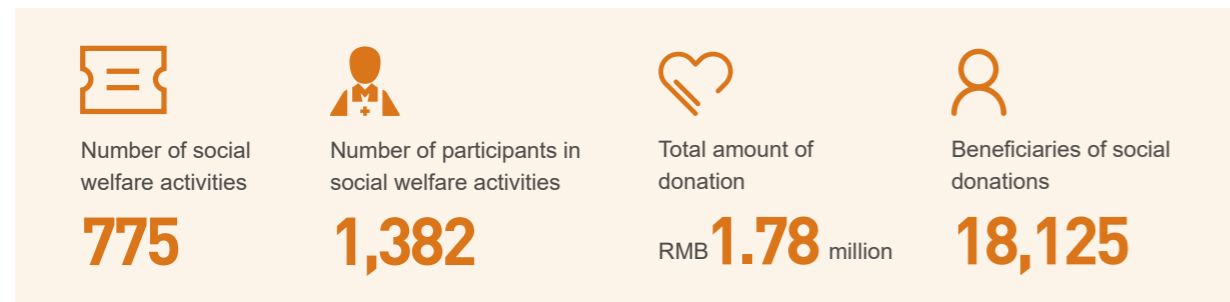
Posters of the “Open Day” event



The animated video “A Safety Journey of Natural Gas”

Social Welfare Services

Kunlun Energy upholds its corporate philosophy of "dedicating energy, creating harmony" to undertake its social responsibility to support the development of China and overseas communities. The Company has formulated "Donation Management Measures" and carries out various public welfare activities in an orderly manner. In 2022, we conducted 14 public welfare projects in the fields of industry, education, medical care, and anti-epidemic across 7 provinces/autonomous regions/municipalities, 17 cities/districts, and 18 counties. In 2022, a total of 1,382 employee volunteers participated in the service, and our total investment amounted to RMB 1.78 million, benefiting 18,125 people.



Sanitation volunteer services



Caring activity at rehabilitation centres



Overnight delivery of supplies



Donating medical supplies to Hong Kong



Educational support for schools



Donating supplies to Wuhan's medical centre

Case Thailand project facilitating local development

Kunlun Energy's Thailand project is dedicated to promoting local economic development and social progress. The project created employment opportunities for the local community, and our employees actively participated in education supporting, sanitation improvement, and other social welfare activities. We also assisted in public facilities construction and donated educational supplies to local schools. These contributions have won highly praised and recognition from the local community.



Installing football fence for local schools



Donating electric fans and chairs to local schools

Case Volunteer service for high school entrance exam

In June 2022, Kunlun Energy organised volunteering activity at various middle and high school examination centres. Our volunteers provided free escort services for students through setting up escort stations, "stop on demand" service and one-on-one contact. Additionally, we set up "service desk" and "cooling area" where we distributed free items including mineral water, stationery, masks, and other supplies to the students, parents, and on-site personnel, conveying positive energy with love.



Qilun volunteers assisting in middle and high school entrance exam

PROTECTING LABOUR RIGHTS

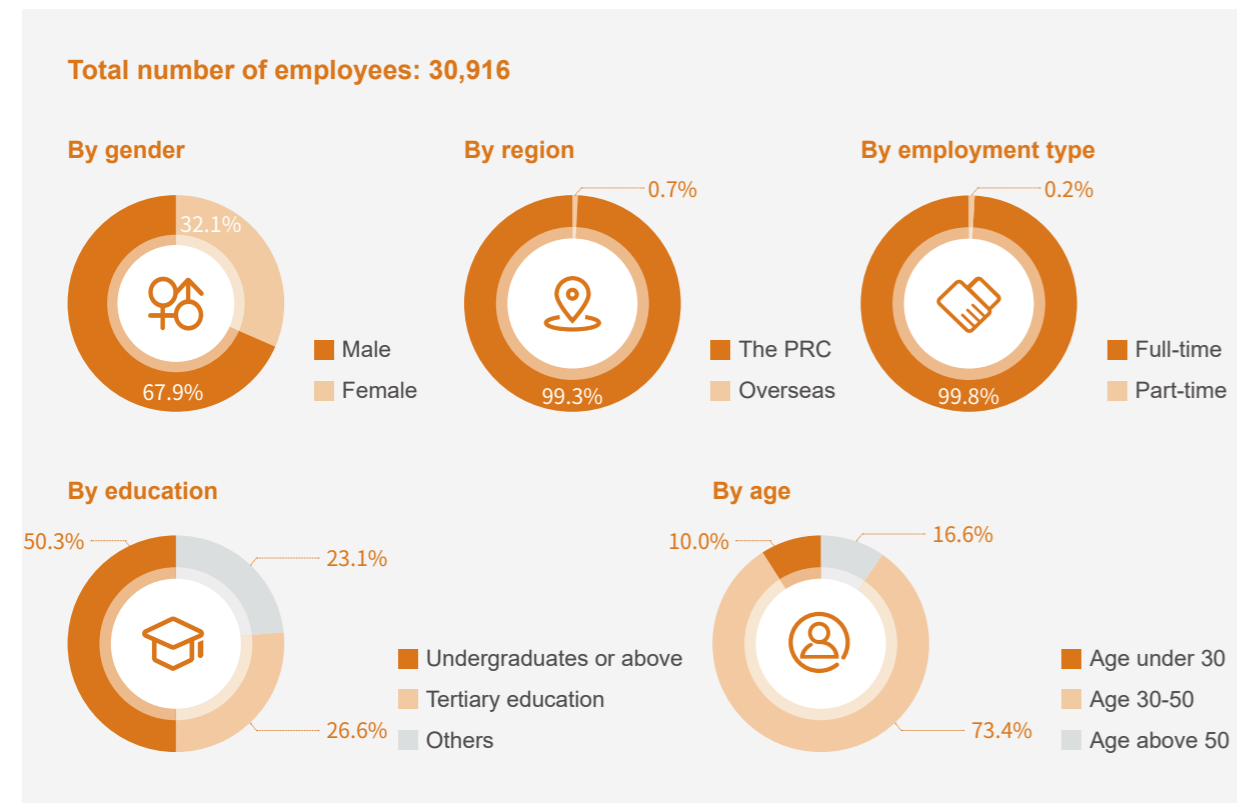
Kunlun Energy values its employees as its crucial asset and is dedicated to creating an equal, inclusive, and friendly work environment. We are committed to protecting our employees' rights and interests, improving our welfare system, so as to enhance the employees' sense of satisfaction and belonging.

Legal and Equal Employment

The Company strictly abides by the "Labour Law of the People's Republic of China", the "Labour Contract Law of the People's Republic of China" and other relevant laws and regulations. We have also formulated the "Labour Contract Management Measures" and "Staff Turnover Management Measures", to ensure employment without discrimination and to protect the lawful rights and interests of our employees. We follow the principles of "transparency, equality, competition, and merit" in our recruitment process and advocate an equal, diverse and non-discriminatory employment environment. The Company addresses in the "Employee Code of Conduct" that, any form of discrimination, violence and disrespect of employees is prohibited, which covers: prohibition of discrimination in respect of nationality, gender, age, ethnicity, race, religious belief and education; prohibition of discrimination against employees with mental and physical disability.

At the same time, we strictly follow labour standards and prohibit any form of illegal employment, including the use of child labour or forced labour. We have established a handling and self-investigation mechanism for child labour employment. If any instances of child labour are found, we will promptly investigate and handle such violations in accordance with regulations. During the Reporting Period, no incidents of child labour or forced labour were found in the Company.

We advocate for gender diversity and firmly protect the lawful rights and interests of our female employees. We strictly implement the regulations on maternity and nursing leave for female employees and provide equal opportunities for their career development. As the end of the Reporting Period, female employees hold 14.5% of the Company's management positions.



Democratic Participation

Kunlun Energy encourages its employees to participate in democratic communication. We have established various communication channels, including the discipline inspection mailbox and suggestions collection system, to ensure that employees' opinions and feedback are conveyed to relevant departments. We also organise the employee representative conference and surveys to listen to their concern and proactively address any issues, safeguarding employees' right to participate, be informed, express themselves, and supervise.

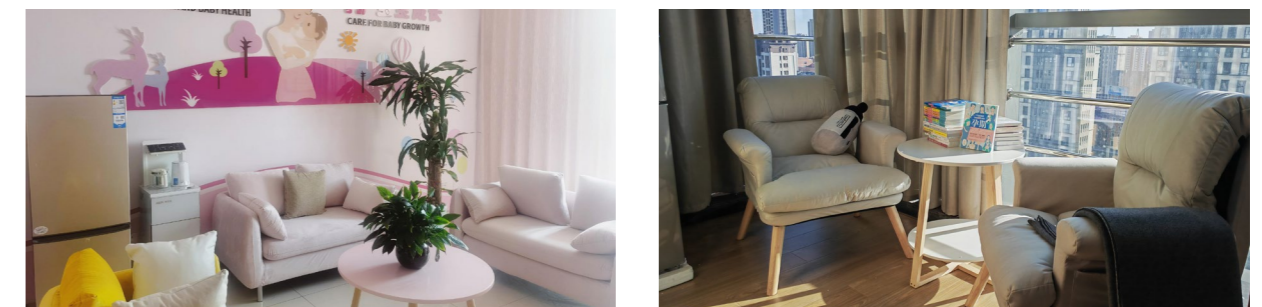
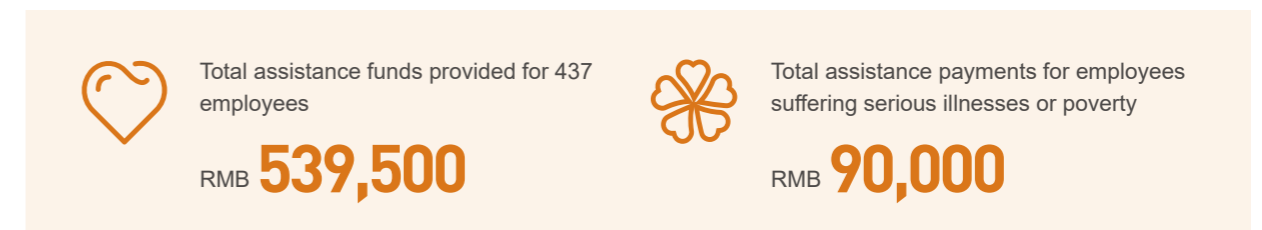
We actively gather opinions from relevant departments, frontline units, and select employees when developing new policies or project. For major decisions or policies that impact our employee, we convene the employees' representative conference to ensure our employees' interests are taken into account.

Furthermore, the Company has established the trade union and encourages its employees to become members. The trade union's members have right to involve in the Company's management process, and share feedback and contribute ideas through suggestions and surveys. The trade union also serves as a safeguard for members' legitimate rights and interests. As the end of the Reporting Period, the Company trade union had 23,261 members.

Employees Welfare and Caring

Kunlun Energy holds the concept of "people-oriented", and takes great care of the physical and mental well-being of employees. We are committed to fostering a warm and inclusive environment in the workplace, continuously increasing our employees' sense of contentment and belonging. We provide a competitive remuneration and welfare system for employees, implementing the "Salary Management Measures", the "Employee Leave Management Measures" and the "Enterprise Annuity Implementation Measures". The Company fully protects employees' entitlement of "five social insurance and one housing fund", paid holidays, and labour insurance products, and offers multiple welfare guarantees, including enterprise annuity, supplementary medical insurance, and critical illness protection to employees.

The Company also pays attention to the needs of special groups and provides assistance to employees in difficulties. We have established a specific ledger to assist those facing hardships, with a total of RMB 539,500 in assistance funds provided to 437 employees in need in 2022. Additionally, we offered special assistance payments of RMB 90,000 to employees suffering serious illnesses or poverty. We also place great emphasis on the needs of female employees in the workplace, and established "Mom's Rooms" for nursing purposes, providing comfortable conditions for female employees to breastfeed and care for their children during special periods.



"Mom's Room" for nursing

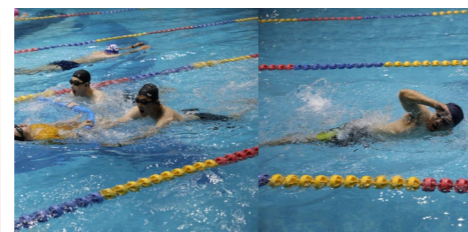
To alleviate work-related stress and promote employees' happiness, we organised a variety of cultural and sports activities, including calligraphy, painting, football, flower arrangement, and hiking. We also established a staff library to enrich our employees' spiritual lives.



The children's artwork from the employees' art competition (in 2022, employees' children also engaged in this competition)



Flower arrangement activity on the International Women's Day



Swimming competition

Case Staff library promoting the culture of reading

Kunlun Energy has launched a staff library project and employee reading programme to provide better reading resources and encourage reading among employees. In 2022, the Company has completed the 192 staff library construction and will achieve full coverage at all levels by 2024.

Number of staff library
192



The staff library provides better reading resources for employees

FOCUSING ON TALENTS DEVELOPMENT

Talent Team Building

Kunlun Energy has implemented Talent-driven Enterprise strategy and formulated the "14th Five-Year Plan for Human Resources" and the "Action Plan for Talent-driven Enterprise", specifying the goals and tasks of talent team building. We continue to optimise recruitment mechanisms, improve the efficiency of human resource allocation, and increase the introduction of high-level talents. Among all the new graduate hires in 2022, 75% are college graduates with master's degrees, and 58% are "double first-class" university graduates, providing talent support for the Company's high-quality development.

Talent Development Channel

Kunlun Energy has established a comprehensive promotion system to provide a clear development path for its employees. In accordance with the "Three-year Action Plan for State-owned Enterprise Reform", the Company has implemented position management reform across its headquarter and three-level units, supported by relevant management systems for compensation and performance evaluation. The comprehensive position management system has opened up clear promotional channels for our employees, ultimately boosting their motivation and overall work performance. In addition, the Company continues to deepen the term system and contractual management for senior management, as well as the career manager system, to further enhance the compliance and management capacity of the management team.

In terms of performance evaluation and assessment, the Company has developed specific assessment plans for employees at different levels, implementing key performance indicators (KPI) assessment, 360-degree performance evaluation, and goal setting (GS) assessments. The assessment results are also linked to promotion and compensation, increasing employee internal motivation and driving the Company's growth and development.

Case Compensation system reform

In 2022, Kunlun Energy issued the "Managerial Member Compensation Management Measures (Trial)" which implement an "advance monthly payment, combined with annual and term assessment" system for the annual salary of managerial members (including Directors and senior management). A clawback mechanism has also been established. The annual performance evaluation of managerial members would directly result in adjustments or clawbacks to their annual salary.

Clawback mechanism

The compensation of managerial members is based on annual performance evaluation, and if it is lower than the settlement level, it will be paid in full in one lump sum. However, if the annual salary already paid out exceeded the payout level, overpayments must be clawed back.

ESG-linked pay mechanism

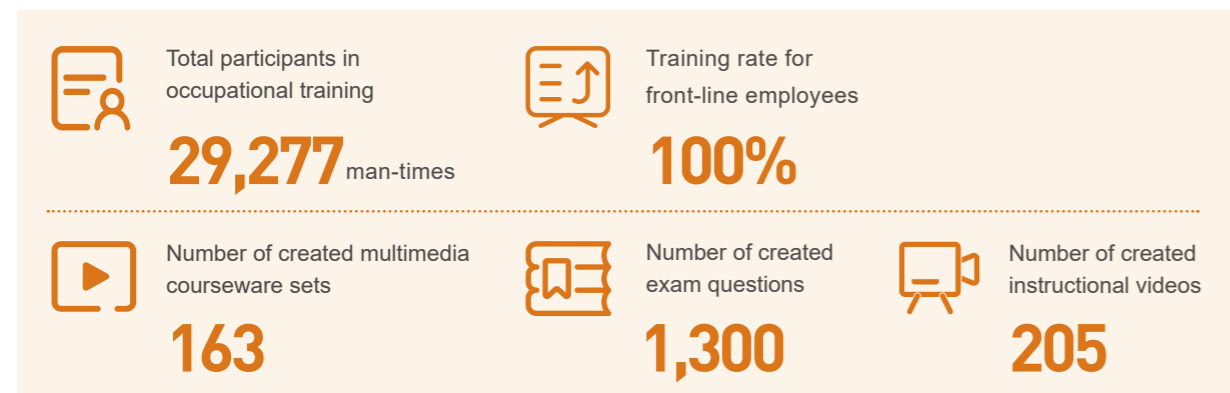
The annual salary of managerial members is linked to their performance, with higher scores resulting in higher payouts. The evaluation indicators cover ESG factors, including energy and water consumption, emissions control, carbon emissions intensity, safety and environmental responsibility accidents (including contractors), etc. If the ESG indicators do not meet the annual target, up to the entire performance-based annual salary (about 60% of total compensation) may be deducted.

Improving Training System

Kunlun Energy provides its employees with a comprehensive training system, and has developed targeted training programmes for different types of talents. In 2022, the Company formulated the “Implementation Measures for Technical Position List”, the “Administrative Measures for Technical Experts” and the “Administrative Measures for High-Skilled Talents”, and continues to improve talent management, rewarding policies and other supporting systems.

Talent Type	Training Programme	Talent Development Measures
Young talent	“Kunpeng Programme”	“Kunpeng Programme for Young Management Personnel Training”
Technical talent	“Kunyu Programme”	“Implementation Measures for Technical Position List” “Implementation Plan of Technical Position List” “Administrative Measures for Technical Experts”
High-skilled talent	“Rainbow Programme”	“Work Plan for Building a Skilled Talent Team-the ‘Rainbow Plan’” “Administrative Measures for High-Skilled Talents” “Administrative Measures for Skills Innovation Studios”

During the Reporting Period, we organised a wide range of occupational training and competition through multiple channels, including CNPC E-learning, training institutions and cooperation with colleges and universities. In 2022, we conducted 89 training sessions (including offline-to-online conversion), with a total of 29,277 training man-times, achieving a 100% training rate for front-line employees. Moreover, we continued to improve our training resources and developed our own training courses, creating 163 multimedia courseware sets, 1,300 exam questions and 205 instructional videos. We also established cooperative training mechanisms with external organisations and fully utilised external resources, thereby enhancing the development of our talent pool.



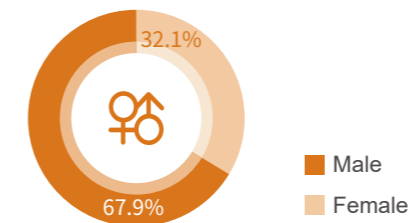
Pipeline technical skills competition



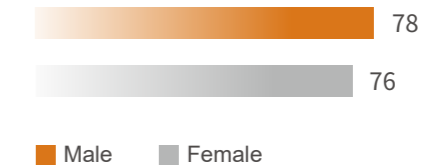
Sales and production innovation competition team

Total number of employees trained in 2022: 25,455 person

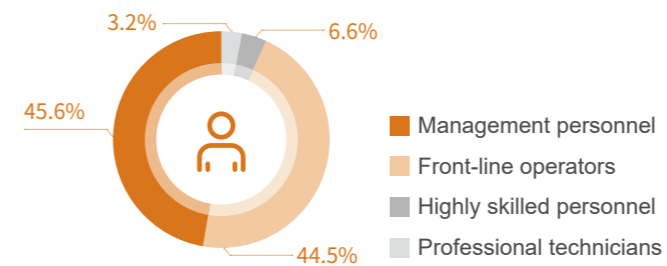
Percentage of employees trained by gender (%)



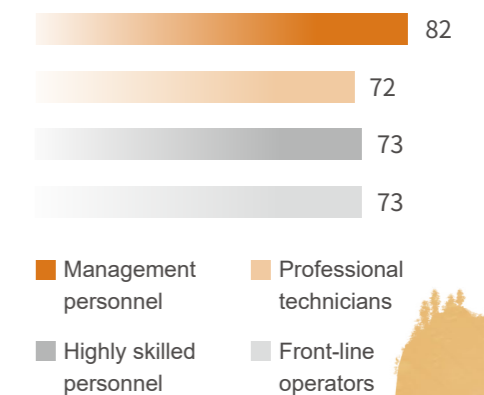
Average training hours by gender (Hour)



Percentage of employees trained by employee type (%)



Average training hours by employee type (Hour)



SAFEGUARDING OCCUPATIONAL HEALTH

Kunlun Energy provides its employees with physical and mental health care and safety protection. Based on the principle of "prevention first and treatment combined", we have gradually transitioned from a focus on occupational disease prevention to comprehensive occupational healthcare. Our goal is to create a healthy and positive work environment for our employees, promoting their well-being and happiness.

Health Management System

Kunlun Energy strictly abides by the "Law of the People's Republic of China on the Prevention and Treatment of Occupational Diseases", the "Regulation on Work-Related Injury Assurance", the "Convention concerning Occupational Safety and Health and the Working Environment" and other laws and regulations related to occupational health. The Company continuously improves its occupational health management system and has developed a series of policies, including the "Administrative Measures for the Detection of Occupational Hazards in the Workplace", the "Administrative Measures for Occupational Health Monitoring", and the "Three Simultaneities' Management Rules for Occupational Disease Protection Facilities for Construction Projects". Our health and safety management system has passed the GB/T28001 (OHSAS 18001) certification. The QHSE Committee of the Company takes a leading role in overseeing health management work, and all our affiliated units are required to establish a comprehensive occupational health responsibility system in accordance with the "Law of the Prevention and Control of Occupational Diseases".

In response to the outline for the "Healthy China 2030" initiative, we have developed the healthy goals and tracked their implementation across each department and subsidiary. Our "Health Escort" project provides comprehensive health services through 9 specific measures for our employees and their families, including organising activities for cardiovascular and cerebrovascular health and oral health, providing precise medical insurance for employees suffering from significant diseases, increasing supplementary medical insurance, opening express medical channels for employees, optimising employee physical examination, employee psychological counselling, and health lectures. The project has successfully enhanced the overall well-beings of our employees.

Health Target By 2030

- Employees' occupational health check coverage will reach **100%**.
- The detection coverage of occupational disease hazards in the workplace will reach **100%**.
- The risk of occupational diseases and chronic diseases such as obesity, hypertension, diabetes, and hypercholesterolemia will continue to decrease, and employees' health management will reach the advanced level among the global peers.

In 2022, we made continuous efforts to promote the creation of Healthy Enterprise. We assisted affiliated units to improve their health management system, create a healthier work environment, and foster a culture of health. By the end 2022, 20 of our affiliated units have successfully completed the Healthy Enterprise creation.

Occupational Health Protection

The company strictly adheres to national health management laws and regulations, as well as various occupational health system requirements. We conduct regular occupational disease risk assessments and investigations of the workplace, achieving 100% for the coverage of occupational hazards detection. We continuously improve our work environment and minimise potential occupational hazards. We provide protective materials to our employees and distributed labour protection equipment to 1,200 people in 2022. Furthermore, we conducted regular occupational health checks for employees, following our occupational health examination plan. In 2022, we conducted occupational health check for 7,320 employees, completing 100% of our plan.



We are actively promoting the shift from a focus on occupational disease prevention to comprehensive occupational healthcare. In 2022, we further expanded the coverage of employee medical insurance and established additional critical illness insurance and supplementary medical insurance, providing solid medical security for our employees. In the future, we plan to establish a negative list and specific evaluation mechanism for key position to enhance occupational disease prevention and health intervention.

Physical and Mental Health Care

The Company has been committed to improving employees' health. We actively foster a corporate health culture and promote the health concept among all staff. Since the launch of the "Health Escort" project in 2021, we have been providing comprehensive health services to our employees, promoting their physical and mental well-beings.

To ensure medical well-being of our employees, we have established a smooth medical treatment in Beijing, which aims to solve the problems of difficult appointment registration, limited hospital beds, insufficient information, and other issues for the Company's employees and their immediate family members who are suffering from severe illnesses. In 2022, more than 200 people benefited from this service with a 100% satisfaction rate. We have also provided online medical consultation service to assist employees and their families who are unable to undergo medical treatment in Beijing.

During the pandemic's work from home period, we arranged for external experts to deliver lectures on endocrine disorders, home fitness, and dietary precautions, in order to provide our employees with health guidance and increase their health knowledge. In addition, we distributed cold and fever medication to employees when supplies were limited, and assisted our employees to access medical resources including ambulances, blood, oxygen, and hospital assistance, ensuring the health and safety of all staff.



Online medical consultation service

FUTURE OUTLOOK

In the unprecedented great changes, geopolitical factors continue to have an impact, the global energy landscape is constantly evolving, and the carbon neutrality trend is surging forward. The domestic and international macro situation will become even more complex and variable, and uncertainty will become the norm. Looking to the future, Kunlun Energy will focus on high-quality and sustainable development, firmly grasp the development opportunities of the new era, strive to open up new prospects in the changing situation, turn crisis into opportunities, and continuously contribute to the sustainable development of the economy, society, and environment while focusing on its main business and serving national strategies.

Kunlun Energy will continue to promote the modernisation of the governance system and governance capabilities, and constantly enhance the reform and development momentum and vitality of the Company. We will consolidate and expand the results of the "Three-year Action Plan for State-owned Enterprise Reform", improve sustainable development governance, and implement the supervision and

management functions of the Board and the Sustainable Committee in ESG. At the same time, we will actively conduct stakeholder communication, fully respond to investors and ESG rating agencies, and continuously improve the level of ESG information disclosure. We will benchmark against leading companies in the industry to promote the deep integration of ESG and corporate governance and enhance ESG management.

We will resolutely strengthen the safety production, and continuously ensure the safety and stability of natural gas production and operation through persistent efforts. We will firmly implement the concept of safe development, promote the QHSE management system to upgrade, and deepen safety responsibility assessment. At the same time, we will strengthen the "list-based" management of operational risks and safety hazards, carry out risk and hazard investigation and treatment, and promote the establishment of Healthy Enterprises to realise the continuous improvement of health and safety performance. We will also make every effort to promote the application of safety production management systems, digital maps for pipeline networks, and other technologies, fully leverage the power of "digital security," and promote the safety management to a new level.

Kunlun Energy is committed to promoting a solid and sustainable green and low-carbon transformation and upgrading, while actively cultivating new market space and sales models. We are determined to implement the "Action Plan for Carbon Peak and Carbon Neutrality", which involves deepening energy conservation and emission reduction, improving quality and efficiency, and striving to build a green corporate brand. Furthermore, we will accelerate the integrated layout of comprehensive energy and fully develop emerging business growth poles. Our focus will be on accelerating the layout of new energy projects such as gas, wind, and photovoltaics, and promoting the value chain through the extension of the industry chain. To mitigate climate risks, we will deepen our climate risk management work, continuously enhance our resilience to climate risks, and strengthen the level and quality of climate information disclosure.

We always adhere to a highly responsible attitude and promote mutual benefits and win-win cooperation with stakeholders such as shareholders, employees, customers, and the public. We will keep pace with policies, actively respond to changes in consumer

behaviour, and expand value based on customer needs. Moreover, we will firmly grasp the trend of energy transformation and development and accelerate the comprehensive upgrading of our business structure, service capabilities, management models, and governance methods to improve shareholder returns and customer satisfaction. Furthermore, we will deepen the implementation of the Talent-driven Enterprise programme, strengthen job management, safeguard employee health in all aspects, and effectively enhance employee happiness and sense of belonging. Lastly, we will support social welfare, implement the rural revitalisation strategy, ensure stable energy supply to improve people's livelihoods and promote the well-being of the people.

In 2023, we will strive forward with determination and courage, constantly working to ensure national energy security, promote social and economic development, and advance ecological civilisation construction. We will join hands with all the stakeholders of society to achieve win-win cooperation and a brighter future, and continue to write a new chapter as an internationally renowned and China's first-class integrated green energy provider.



APPENDIX

THIRD-PARTY COMMENT

I am honored to serve as an external commentator for the "2022 Environment, Social and Governance Report" of Kunlun Energy Co., Ltd. By reading this report, I am delighted to see the efforts that the company has made in the areas of environment, society, and governance, which also fills me with confidence in the company's sustainable development. This report presents comprehensive information on Kunlun Energy's practices and performance in fulfilling its environmental, social, and governance responsibilities, and it has several highlights in the following areas.

Kunlun Energy has established a comprehensive ESG target system, fully demonstrating the company's governance achievements. This report highlights Kunlun Energy's outstanding performance in ESG governance. The ESG target system described at the beginning of the report showcases Kunlun Energy's commitment and determination, with these goals closely related to the company's sustainable development and in line with the SDGs, demonstrating the company's leadership in governance. At the same time, the report discloses the company's achievements in board governance, compensation system, risk management, anti-corruption management, and other areas, reflecting the company's good governance level and fully responding to the concerns of capital markets, shareholders, and investors on governance issues.

The disclosure of indicators is comprehensive, meeting the requirements of multiple information disclosures standards. From the indicator disclosure in the text and appendix of the report, it can be seen that Kunlun Energy has established a relatively mature ESG indicator system. The report discloses over a hundred indicators, including compliance indicators required by regulations, indicators that capital markets and rating agencies are more concerned about, and indicators with corporate characteristics, with good balance and continuity. Comprehensive indicator disclosure can help the company better meet the increasingly stringent requirements for information disclosure, while enhancing the transparency and credibility of the report.

The report highlights the outstanding features and characteristics of the company. The structure of this report is clear and concise, with a beautiful layout and rich graphics. The design adopts a landscape painting style, which is eye-catching. The beginning of the report is carefully designed to showcase the ESG performance highlights, allowing readers to easily understand the company's outstanding performance in ESG for the 2022 fiscal year. At the same time, the report specifically sets up topics on safety, low-carbon, and technology in different chapters, addressing ESG issues that the company highly values, and showcasing responsible actions and achievements that are unique to the company.

After reading the report, I am delighted to see that Kunlun Energy is constantly enhancing its ESG management and performance from multiple angles, and is actively promoting sustainable social development through tangible actions. I am looking forward to Kunlun Energy's continued efforts in strengthening its ESG management and information disclosure, and implementing its commitment and vision for sustainable development, to create even greater value for stakeholders in the future.

Dr. Chao Ho Wah

The Hong Kong Independent Non-Executive Director Association
Chairman of ESG & Sustainable Investment Committee

RESPONSIBILITY PERFORMANCE TABLE

Economic Performances

Indicator Category	Indicators	Unit	2021	2022
Economic Performance	Sales revenue	RMB100 million	1,385.5	1,719.4
	Total assets	RMB100 million	1,325.8	1,388.9
	Sales volume of natural gas	100 million cubic metres	420.0	449.9
	Annual sales volume of LPG	10,000 tonnes	598.6	561.6
	Number of users	10,000 households	1,384.6	1,471.3

Environmental Performances

Indicator Category	Indicators	Unit	2021	2022
Emissions	Emissions of SO ₂	Tonne	40.8	18.2
	Emissions of NO _x	Tonne	980	452
	Amount of recycled associated gas in oil field	100 million cubic metres	2.10	3.47
	Discharged amount of industrial wastewater	10,000 tonnes	35	35
	Recycled amount of industrial wastewater	10,000 tonnes	7	6
	Discharged amount of domestic wastewater	10,000 tonnes	81	84
	Recycled amount of domestic wastewater	10,000 tonnes	1.6	1.9
	Non-hazardous solid waste discharge - production ¹⁸	Tonne	10	25
	Non-hazardous solid waste intensity - production	Tonne/100 million cubic metres	0.02	0.06
	Non-hazardous solid waste discharge - construction ¹⁹	Tonne	11,481	29,126
	Non-hazardous solid waste intensity - construction	Tonne/100 million cubic metres	27.34	64.74
	Hazardous solid waste discharge ²⁰	Tonne	379	454
	Hazardous solid waste discharge intensity	Tonnes/100 million cubic metres	0.90	1.01

¹⁷ The increase in solid waste emissions in the production sector is related to the addition of new projects and an increase in operating time for some plants, as well as phasing out gas meters.

¹⁸ The reason for the increase in solid waste from construction is related to the urban gas hazard management construction carried out in 2022, and the main addition is the backfilling of soil.

¹⁹ In 2022, the Company had a higher disposal volume of hazardous waste due to some disposal cycles, which is higher than previous years.

Indicator Category	Indicators	Unit	2021	2022
Climate Change	Direct GHG emissions (Scope 1)	Tonne CO ₂ -e	480,112	460,708
	Indirect GHG emissions (Scope 2)	Tonne CO ₂ -e	987,566	1,096,106
	Methane emissions	Tonne	8,578	7,091
	Reduced BOG emissions by optimising process measures and process control	Tonne	5.5	6.0
	Total GHG emissions	Tonne CO ₂ -e	1,467,679	1,556,814
	GHG emissions intensity	Tonne CO ₂ -e/10,000 cubic metres	0.349	0.346
	Greenery coverage percentage in plants	%	14.4	14.7
	Number of trees planted in plants	-	92,013	97,919
Resource Use	Total amount of water consumption	10,000 cubic metres	480.5	481.5
	Water consumption intensity	Tonne/RMB10,000 of added value	2.35	2.03
	Total amount of energy conservation	10,000 tonnes of standard coal	0.25	0.23
	Total value of energy conservation	RMB10,000	859.85	955.10
	Total amount of water conservation	10,000 cubic metres	0.90	0.80
	Total value of water conservation	RMB10,000	1.94	2.20
Energy Use	Total energy consumption	MWh	2,609,795.62	2,832,199.58
	Energy consumption intensity	MWh/RMB10,000 of added value	1.28	1.17
	Gasoline consumption	Tonne	3,916	3,753
	Diesel consumption	Tonne	495	498
	Natural gas consumption	10,000 cubic metres	9,458	10,167
	Liquefied petroleum gas consumption	Tonne	148	112
	Total direct energy consumption	MWh	1,079,495.78	1,153,658.64
	Direct energy consumption intensity	MWh/RMB10,000 of added value	0.53	0.48
	Purchased electricity	MWh	1,530,299.84	167,666.80
	Purchased thermal energy	MWh	-	1,872.95
	Total indirect energy consumption	MWh	1,530,299.84	1,678,540.95
	Indirect energy consumption intensity	MWh/RMB 10,000 of added value	0.75	0.69

Social Performances

Indicator Category	Indicators	Unit	2021	2022
Anti-corruption	Number of concluded legal cases regarding corrupt practices brought against the Company during the reporting period	Case	0	0
	Number of concluded legal cases regarding corrupt practices brought against the Company's employees during the reporting period	Case	0	0
	Coverage of anti-corruption training	%	100	100
	Number of sessions for employees participating in anti-corruption training	-	-	609
Production Safety	Number of work-related fatalities ²¹	-	0	0
	Number of lost days due to work injuries during this reporting period ²²	Day	287	48
	Total Lost Worktime Rate (TLWR) due to work injuries during the Reporting Period ²³	-	29.9	5.1
	Number of general Class A accidents (or above)	-	0	0
	Safety promotion information desks set up	-	746	882
	Accident case education	-	1,637	1,754
	Participates in watching warning videos	Man-time	26,486	30,377
	Press releases	Piece	301	1,314
	Safety skills competition	Session	192	59
	Safety knowledge lectures	Session	1,821	455
	Number of employees participated in safety training	Man-time	138,110	157,857
	Emergency drills held by the Company	-	1,018	20,288
Participates in the emergency drills	Man-time	11,765	146,680	
Total hours of safety-related training	Hour	92,259	88,518	
Products Quality	Equipment availability rate	%	>99	>99
	Length of pipeline with internal inspection conducted	Kilometre	806	886
	City gas pipeline availability coverage rate	%	100	100
	Branch pipeline availability coverage rate	%	100	100
	Branch pipeline high impact zone identification rate	%	100	100
Branch pipeline flood prevention and geological hazard protection coverage rate	%	100	100	

²¹ The number and ratio of work-related fatalities was 0 in 2020.

²² The standard for determining occupational injuries follows the "Regulations on Work-related Injury Insurance".

²³ Total lost working rate (TLWR) represents the lost time injury rate per million man-hours worked. The calculation formula is: Lost time working rate (TLWR) = Total lost working time / Actual total working hours × 10⁶.

Indicator Category	Indicators	Unit	2021	2022
Products Quality	Number of residential users inspected	10,000 households	826	1,078
	Coverage of safety inspection for residential users	%	90	86
	Number of non-residential users inspected	10,000 households	12.2	14.46
	Coverage of safety inspection for residential users	%	100	100
	Number of video inspections at major stations	-	13,226	17,000
	Monitoring coverage of important production operations	%	100	100
	Percentage of reported emergency issues	%	100	100
Supplier Management	Total number of suppliers	-	1,814	1,850
	Number of material suppliers	-	1,132	1,073
	Number of services contractors	-	481	582
	Number of engineering contractors	-	201	195
Customer Service	Number of customer complaints on products and services	-	2,286	2,157
	Resolution rate of customer complaints	%	100	100
	Customer satisfaction rate	%	99	99
Employment	Total number of customers	10,000 households	1,384.5	1,471.7
	Total number of employees	Person	33,284	30,916
	By gender - male	%	67.7	67.9
	By gender - female	%	32.3	32.1
	By region - PRC	%	99.3	99.3
	By region - oversea	%	0.7	0.7
	By employment type - full-time	%	99.7	99.8
	By employment type - part-time	%	0.3	0.2
	By education - undergraduates or above	%	48.7	50.3
	By education - tertiary education	%	27.5	26.7
By education - others	%	23.8	23.1	

Indicator Category	Indicators	Unit	2021	2022
Employment	By age - under 30	%	17.5	10.0
	Proportion by age - age 30-50	%	68.0	73.4
	Proportion by age - above 50	%	14.5	16.6
	Number of newly hired employees	Person	—	110
	Number of employees with disabilities	Person	—	114
	Employee turnover rate	%	1.9	2.8
	By gender - male	%	1.9	2.8
	By gender - female	%	2.0	2.9
	By region - China	%	1.8	2.9
	By region - oversea	%	9.1	0.0
Occupation Health	By age - under 30	%	2.2	5.6
	By age - age 30-50	%	2.0	2.6
	By age - above 50	%	0.9	2.4
	Coverage of occupational health check	%	100	100
	Qualified rate of occupational health check	%	100	100
Employees' Training	Coverge of occupational health hazard inspection	%	100	100
	Qualified rate of occupational site hazard inspection	%	100	100
	Front-line staff training ratio	%	100	100
	Training projects at Company level	-	43	25
	Employee training at Company level	Man-time	6,931	2,730
	Training courses at PetroChina level	Session	88	64
	Employees trained at PetroChina level	Man-time	716	26,547 ²⁴
	Total number of employees trained	-	27,208	25,455
	Total number of employees trained by gender - male	-	18,145	17,279
	Total number of employees trained by gender - female	-	9,063	8,176
Percentage of employees trained by gender - male	%	66.7	67.9	

²⁴ Among all the trainings, 6 sessions were supported by the CNPC E-learning Platform, with a total of 25,718 man-time participated.

Indicator Category	Indicators	Unit	2021	2022
Employees' Training	Percentage of employees trained by gender - female	%	33.3	32.1
	Average training hours by gender - male	Hour	98	78
	Average training hours by gender - female	Hour	95	76
	Total number of employees trained by employee type - management personnel	-	11,405	11,611
	Total number of employees trained by employee type - professional technicians	-	1,133	825
	Total number of employees trained by employee type - highly skilled personnel	-	1,670	1,685
	Total number of employees trained by employee type - front-line operators	-	13,000	11,334
	Percentage of employees trained by employee type - management personnel	%	41.9	45.6
	Percentage of employees trained by employee type - professional technicians	%	4.2	3.2
	Percentage of employees trained by employee type - highly skilled personnel	%	6.1	6.6
	Percentage of employees trained by employee type - front-line operators	%	47.8	44.5
	Average training hours by employee type - management personnel	Hour	101	82
	Average training hours by employee type - professional technicians	Hour	91	72
Average training hours by employee type - highly skilled personnel	Hour	96	73	
Average training hours by employee type – front-line operators	Hour	94	73	
Community Investments	Number of social welfare activities	Hour	—	775
	Number of participants in social welfare activities	-	2,134	1,382
	Total amount of donation	RMB10,000	156	178
	Total amount of consumption assistance	RMB10,000	1,032	1,350
	Total number of beneficiaries	-	—	18,152

INDEX OF THE ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORTING GUIDE ISSUED BY THE HONG KONG STOCK EXCHANGE

A. Environment

General Disclosure & KPI	Indicator description	Corresponding disclosed chapter or explanation	
Aspect A1: Emissions			
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste.	Environmental Protection Management	
KPI	A1.1	The types of emissions and respective emissions data.	Responsibility Performance Table
	A1.2	Direct (Scope 1) and energy indirect (Scope 2) greenhouse gas emissions (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	Responsibility Performance Table
	A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility)	Responsibility Performance Table
	A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	Responsibility Performance Table
	A1.5	Description of emission target (s) set and steps taken to achieve them.	Pollution Prevention and Control
	A1.6	Description of how hazardous and non-hazardous wastes are handled, and a description of reduction target (s) set and steps taken to achieve them.	Pollution Prevention and Control
Aspect A2: Use of Resources			
General Disclosure	Policies on the efficient use of resources, including energy, water and other raw materials.	Resource Utilisation and Ecological Conservation	
KPI	A2.1	Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (kWh in '000s) and intensity (e.g. per unit of production volume, per facility).	Responsibility Performance Table
	A2.2	Water consumption in total and intensity (e.g. per unit of production volume, per facility).	Responsibility Performance Table
	A2.3	Description of energy use efficiency target (s) set and steps taken to achieve them.	Resource Utilisation and Ecological Conservation
	A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency target (s) set and steps taken to achieve them.	Resource Utilisation and Ecological Conservation
	A2.5	Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced.	The Company's business rarely involves product packaging, therefore the KPI is not applicable.

General Disclosure & KPI		Indicator description	Corresponding disclosed chapter or explanation
Aspect A3: The Environmental and Natural Resources			
General Disclosure	Policies on minimising the issuer's significant impact on the environment and natural resources.		Pollution Prevention and Control
KPI	A3.1	Policies on minimising the issuer's significant impacts on the environment and natural resources.	Pollution Prevention and Control
Aspect A4: Climate Change			
General Disclosure	Policies on identification and mitigation of significant climate-related issues which have impacted, and those which may impact, the issuer.		Accelerating Climate Change Action Towards Low-Carbon Transition
KPI	A4.1	Description of the significant climate-related issues which have impacted, and those which may impact, the issuer, and the actions taken to manage them.	Accelerating Climate Change Action Towards Low-Carbon Transition

B. Social

General Disclosure & KPI		Indicator description	Corresponding disclosed chapter or explanation
Aspect B1: Employment			
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, antidiscrimination, and other benefits and welfare relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare.		Protecting Labour Right
Key Performance Indicators	B1.1	Total workforce by gender, employment type (for example, full- or part-time), age group and geographical region.	Responsibility Performance Table
	B1.2	Employee turnover rate by gender, age group and geographical region.	Responsibility Performance Table
Aspect B2: Health and Safety			
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards.		Quality Management Safeguarding Occupational Health
Key Performance Indicators	B2.1	Number and rate of work-related fatalities occurred in each of the past three years including the reporting year.	Remarkable Achievements in Safety Governance
	B2.2	Lost days due to work injury.	Responsibility Performance Table
	B2.3	Description of occupational health and safety measures adopted, how they are implemented and monitored.	Remarkable Achievements in Safety Governance Safeguarding Occupational Health

General Disclosure & KPI		Indicator description	Corresponding disclosed chapter or explanation
Aspect B3: Development and Training			
General Disclosure	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.		Focusing on Talents Development
KPI	B3.1	The percentage of employees trained by gender and employee category (e.g. senior management, middle management).	Responsibility Performance Table
	B3.2	The average training hours completed per employee by gender and employee category.	Responsibility Performance Table
Aspect B4: Labour Standards			
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child and forced labour.		Protecting Labour Right
KPI	B4.1	Description of measures to review employment practices to avoid child and forced labour.	Protecting Labour Right
	B4.2	Description of steps taken to eliminate such practices when discovered.	Protecting Labour Right
Aspect B5: Supply Chain Management			
General Disclosure	Policies on managing environmental and social risks of the supply chain.		Supply Chain Management
KPI	B5.1	Number of suppliers by geographical region.	Supply Chain Management
	B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, and how they are implemented and monitored.	Supply Chain Management
	B5.3	Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored.	Supply Chain Management
	B5.4	Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.	Supply Chain Management
Aspect B6: Product Responsibility			
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress.		Quality Management
KPI	B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	The Company's business rarely involves recalls of products, therefore the KPI is not applicable.
	B6.2	Number of products and service related complaints received and how they are dealt with.	Customer Services Management
	B6.3	Description of practices relating to observing and protecting intellectual property rights.	Compliance and Risk Management
	B6.4	Description of quality assurance process and recall procedures.	Quality Management
	B6.5	Description of consumer data protection and privacy policies, how they are implemented and monitored.	Compliance and Risk Management

General Disclosure & KPI	Indicator description	Corresponding disclosed chapter or explanation
Aspect B7: Anti-corruption		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to bribery, extortion, fraud and money laundering.	Compliance and Risk Management
KPI	B7.1 Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases.	Responsibility Performance Table
	B7.2 Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored.	Compliance and Risk Management
	B7.3 Description of anti-corruption training provided to directors and staff.	Compliance and Risk Management
Aspect B8: Community Investment		
General Disclosure	Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests.	Delivering Social Value
KPI	B8.1 Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport).	Delivering Social Value
	B8.2 Resources contributed (e.g. money or time) to the focus area.	Delivering Social Value

INDEX OF TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

Aspect	Recommended disclosures	Corresponding disclosed chapter
Governance	Describe the board's oversight of climate-related risks and opportunities.	Climate Governance
	Describe management's role in assessing and managing climate-related risks and opportunities.	Climate Governance
Strategy	Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	Climate Risk Management
	Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	Climate Risk Management
	Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	Climate Risk Management Climate Strategy
Risk Management	Describe the organization's processes for identifying and assessing climate-related risks.	Climate Risk Management
	Describe the organization's processes for managing climate-related risks.	Climate Risk Management
	Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	Climate Strategy
Metrics and Targets	Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	Climate Risk Management
	Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks	Climate Strategy
	Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	Climate Targets and Indicators

Address: 39/F, 118 Connaught Road West, Hong Kong

Website: <http://www.kunlun.com.hk/>

E-mail: info@kunlun.com.hk