



The Leading Independent  
Coalbed Methane Producer in China

Delivering sustainable shareholder returns

2021

可持續發展報告

Sustainable Development Report

亞美能源控股有限公司  
AAG Energy Holdings Limited

(Incorporated in the Cayman Islands with limited liability)  
(於開曼群島註冊成立的有限公司)

Stock Code 股份代號: 2686

# Contents

## 目錄

About This Report 關於本報告	2
Statement from the Chairman 主席致辭	3
Statement from the Board 董事會聲明	5
About Us 關於我們	6
1. Sustainable Development Management 可持續發展管理	11
1.1 ESG Management ESG管理	11
1.2 Stakeholders Engagement 利益相關方參與	17
1.3 Response to ESG Reporting Principles ESG報告原則回應	19
2. Safe Production and Clean Operations 安全生產 清潔運營	21
2.1 Consolidating the Foundation of Workplace Safety 穩固安全根基	22
2.2 Creating Clean Environment 共創綠色環境	36
3. Stable Operation and Win-Win Cooperation 穩健運營 合作共贏	62
3.1 Consistently Stable Supply of High-Quality Gas 持續高質穩定供氣	62
3.2 Integrity and Compliance 堅守誠信合規	67
3.3 Supporting Suppliers to Grow Together 供應商共同成長	69
4. People-oriented and Harmonious Development 以人為本 和諧發展	71
4.1 Respecting Employees' Rights and Interests 尊重員工權益	71
4.2 Supporting Employee Development 助力員工發展	74
4.3 Employee Care 關愛員工生活	79
5. Benefiting Local Communities 社區關懷	85
5.1 Contributing to Rural Revitalization 助力鄉村振興	86
5.2 Building Community Together 社區共創	87
Index of the HKEX ESG Report Guideline 聯交所ESG指標索引	88
Feedback 讀者意見反饋表	

# About This Report

## 關於本報告

This report is a true reflection of AAG Energy Holdings Limited's ("AAG Energy" or the "Company") active fulfillment of its economic, social and environmental responsibilities to achieve comprehensive, coordinated and sustainable development. The forward-looking statements with respect to business plans and development strategies in this report do not constitute a substantial commitment of the Company to investors.

- **Time Period**

This report covers data from 1 January 2021 to 31 December 2021 with some contents out of this time range.

- **Scope of the Report**

This report includes AAG Energy and its subsidiaries.

- **Data Specifications**

All data was mainly sourced from official documents, statistical and financial reports of the Company, as well as the environmental, social and governance ("ESG") information collected from the Company's statistics, summaries and audits. This report is available in Chinese and English. If there is any conflict or inconsistency between the two versions, the Chinese version shall prevail. Unless otherwise stated, the currency used is the Chinese Yuan ("CNY").

- **References**

This report was prepared based on the "ESG Reporting Guide" in Appendix 27 to the *Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited* ("Stock Exchange"). It also referred to the Sustainability Reporting Standards (GRI standards) issued by the Global Sustainability Standard Board (GSSB).

- **Reporting Specifications**

Throughout this report, AAG Energy Holdings Limited may be referred to as "AAG Energy", the "Company", "we", "us" or "our".

- **Access to the Report**

You can browse this report and dynamic information about sustainable development activities of the Company from the "Sustainable Development" section on the homepage of the AAG Energy website (<http://www.aagenergy.com/en-US/>).

本報告是亞美能源控股有限公司「亞美能源」或「本公司」積極履行經濟、社會和環境責任，實現全面協調可持續發展的真實反映。本報告中所涉及的經營計劃、發展戰略等前瞻性描述不構成公司對投資者的實質承諾。

- **時間範圍**

本報告內容時間界限為2021年1月1日至12月31日，部分內容超出上述範圍。

- **報告範圍**

本報告覆蓋亞美能源及其附屬公司。

- **數據來源**

全部信息數據來自公司的正式文件、統計報告與財務報告，以及經由公司統計、匯總與審核的環境、社會及管治 ("ESG") 信息。報告發佈中、英文版本，如有內容不一致，請以中文版為準。如無特殊說明，貨幣單位均為人民幣「元」。

- **編製依據**

本報告參照香港聯合交易所有限公司（「聯交所」）證券上市規則附錄二十七（「環境、社會及管治報告指引」）進行編寫，並參考全球可持續發展標準委員會（GSSB）發佈的GRI Standards等標準。

- **指代說明**

為便於表述和方便閱讀，亞美能源控股有限公司在報告中的表述分別使用「亞美能源」、「公司」或「我們」。

- **報告獲取**

您可以在亞美能源門戶網站主頁的「可持續發展」欄目瀏覽本報告及公司有關可持續發展活動的動態信息（網址：<http://www.aagenergy.com/zh-CN/>）。

## Statement from the Chairman 主席致辭

In 2021, facing the complex and changing external environment, AAG Energy was actively engaged in the national strategy of “dual-carbon” and embraced the trend of international energy transformation. While expanding business opportunities, we continue to enhance our own sustainable development, set scientific and reasonable environmental targets, actively respond to climate change risks and opportunities, and pay close attention to and respond to the demands of various stakeholders in order to contribute green, efficient, stable and sustainable value to society through our practical actions.

As a leading coal-bed methane (“**CBM**”) exploitation and development enterprise in China, AAG Energy has continued to consolidate its foundation of safety, and has deeply explored a safe, stable, and environment-friendly sustainable development model for the Company under the concept of “lucid waters and lush mountains are invaluable assets”. In 2021, the Company maintained zero record in total recordable accident rate (“**TRIR**”) and lost time injury rate (“**LTIR**”) and zero occupation diseases, and achieved an excellent safety performance with zero LTIR for 7 years and 117 days in a row. We proactively responded to the national strategic goal of “dual carbon”. While we continuously and steadily exporting clean energy, we continue to improve our energy efficiency and environmental management capabilities to fully tap our potential in energy saving. We explore ways to use renewable energy, deeply implement the low-carbon operation strategy, and impulse the environmental protection and low-carbon transformation of the whole value chain.

AAG Energy takes innovation as the important means for its sustainable development. By widely using new technologies and equipment, the Company continues to improve its gas supply capacity and quality, so as to deliver clean energy with high stability and quality for society. In 2021, AAG Energy CBM gross production continued to grow by 26% compared with that of 2020 to reach 1.298 billion cubic meters (45.8 billion cubic feet), including 1.175 billion cubic meters (or 41.5 billion cubic feet) in the Panzhuang concession and 123 million cubic meters (or 4.3 billion cubic feet) in Mabi concession. We fully integrate the concept of life-cycle management and ESG into supplier management, work closely with our suppliers to build a safe and efficient clean energy supply chain, and eventually achieve win-win results in the industry.

2021年，面對複雜多變的外部環境，亞美能源積極投身國家「雙碳」戰略進程，擁抱國際能源轉型趨勢。我們在持續拓展業務機遇的同時，持續提升自身可持續發展水平，設定科學合理的環境目標，積極應對氣候變化風險與機遇，密切關注並響應各利益相關方訴求，以自身實際行動，為社會貢獻綠色、高效、穩定、可持續發展的企業價值。

作為國內領先的煤層氣勘探開發企業，亞美能源持續穩固安全根基，堅守「綠水青山就是金山銀山」的理念，深入探索安全穩定、環境友好的可持續發展企業模式。2021年，亞美能源持續保持總可記錄事故率（「**TRIR**」）、損失工時事故率（「**LTIR**」）、職業病發病率均為零的績效記錄，累計實現7年零117天無損失工時事故的安全業績。我們積極響應國家「雙碳」戰略目標，在持續穩定輸出清潔能源的同時，不斷強化自身能源使用效率與環境管理能力，充分挖掘自身能效潛力，探索可再生能源應用途徑，深入踐行低碳運營戰略，助力全價值鏈的環保低碳轉型。

亞美能源以創新作為企業可持續發展的重要途徑，通過全面的新技術、新設備應用，持續提升自身供氣能力與供氣質量，為社會輸送具備高穩定性與高質量的清潔能源。2021年，亞美能源煤層氣總產量相較2020年繼續增長，同比增長了26%達12.98億立方米（即458億立方英尺），其中包括潘莊區塊的總產量11.75億立方米（即415億立方英尺）和馬必區塊的總產量1.23億立方米（即43億立方英尺）。我們將全生命週期管理與ESG理念充分融入供應商管理，攜手供應商共同打造安全、高效的清潔能源產業供應鏈，實現產業共贏。

## Statement from the Chairman 主席致辭

Employees are the inexhaustible driving force for the sustainable development of the Company. We adhere to the people-oriented concept for employees, establish an equal diversified talent platform, and unblock the development path to help employees fully achieve self-worth and grow with the Company together. We continue to build harmonious and friendly community relations, and take our own practical actions to support the national rural revitalization strategy and create a better community. In 2021, the Company donated and invested RMB10.1 million in total in the community.

A time will come to ride the wind and cleave the waves, and we will set our cloud-like sail to cross the sea which raves. In the future, AAG Energy will always uphold the vision of “inspiring to be the world’s leading, most enduring clean energy company”, actively embrace the development opportunities of the times, build a sustainable benchmark enterprise. The Company will interpret the mission of “To create best value for society, optimized platform for employees and highest return for shareholders.” through assuming its own responsibility.

員工是企业可持續發展的不竭動力，我們堅守以人為本的人才理念，建立平等多元的人才平台，暢通人才發展路徑，幫助員工充分實現自我價值，實現員工與企業共同成長。我們持續打造和諧友好的社區關係，以自身實際行動，助力國家鄉村振興戰略，共創美好社區。2021年，公司公益捐贈額和社區總投入達1,010萬元。

長風破浪會有時，直掛雲帆濟滄海。未來，亞美能源將始終秉持「勵志成為國際領先的永續發展的清潔能源偉大企業」的美好願景，積極擁抱時代發展機遇，打造可持續發展標桿型企業，以自身的責任擔當，詮釋「為社會創造最佳價值，為員工創造最好平台，為股東創造最大利益」的亞美使命。

# Statement from the Board

## 董事會聲明

The board (the “Board”) of directors (the “Directors”) of AAG Energy attaches great importance to the management of sustainable development and recognizes and assumes full responsibilities for ESG strategy and reporting as the highest responsible organization for the Company’s ESG work. The Company’s Board monitors ESG-related matters that may affect the Company’s business or operations, shareholders and other stakeholders, supervises the commitment and performance of key ESG issues, ensures the integration of ESG concepts and corporate strategies and reviews and supervises the setting and completion of AAG Energy’s ESG goals.

The ESG Working Group is established under the Board as the main supervisory body of the Company’s ESG work, consisting of independent non-executive Director, executive Director and senior management of the Company. The ESG Working Group is responsible for monitoring the Company’s ESG performance and the effectiveness of the operation system, reviewing the identification and management of ESG risks or opportunities, taking the management and improvement of material issues as the annual strategic work of sustainable development, and regularly reviewing the achievement.

The Company are committed to fully integrating ESG concepts into its production and operation. By actively listening to and responding to the demands of stakeholders through various channels, we discuss and determine the ESG risks and opportunities to create long-term and stable corporate value and continuously improve the Company’s sustainable development. In 2021, the Company made a comprehensive investigation of the Company’s past environmental data and assessed possible carbon reduction and set environmental targets on greenhouse gases reduction, energy use, waste discharges and other indicators on the basis of the annual workplace safety. The ESG Executive Management Team regularly summarizes the progress and achievement of the targets and reports them to the Board, who shall review and supervise how those targets are formulated and progressed.

This report details the progress and effectiveness of AAG Energy’s ESG work in 2021. After being carefully reviewed by all Directors who make modifications opinions and suggestions, this report was considered and approved at the meeting of the Board in March 2022.

亞美能源董事會高度重視可持續發展管理工作，認可並承擔ESG策略及匯報的全部責任，是公司ESG工作的最高負責機構。公司董事會監察可能影響公司業務或運作、股東與其他利益相關方的ESG相關事宜，監管ESG關鍵議題承諾及表現，確保ESG理念與公司策略的融合，並對亞美能源ESG目標制定及完成進度進行審閱及監督。

董事會下設由獨立非執行董事、執行董事、公司高管組成的ESG工作組，作為公司ESG工作主要監管機構，負責監察公司ESG表現及運行體系有效性，審閱公司ESG風險／機遇的識別與管理工作，將重點議題的管理與提升作為可持續發展年度戰略工作，並定期審閱達成情況。

公司致力於將ESG理念全面融入企業的生產與運營環節，通過多種渠道積極傾聽並回應利益相關方訴求，討論並確定公司在ESG方面的風險與機遇，以創造長期穩定的公司價值，實現公司可持續發展水平的不斷提升。2021年，我們在設置年度安全生產目標的基礎上，全面摸排公司歷史環境數據，評估減排潛力，制定包含溫室氣體、能源使用、廢棄物排放在內的各項環境目標，由公司ESG執行管理組定期匯總目標的推進與達成情況，並上報至董事會，董事會對亞美能源ESG目標制定及完成進度進行審閱及監督。

本報告詳盡披露了亞美能源2021年ESG工作的進展與成效。在經各位董事認真審閱並提出了修改意見和建議的基礎上，本報告於2022年3月經年度董事會議審議通過。

# About Us

## 關於我們

### Company Profile

#### Vision

To be the world's leading, most enduring clean energy company for today and tomorrow.

#### Mission

To create best value for society, optimized platform for employees and highest return for shareholders.

AAG Energy is a leading international energy company in the field of Coal Bed Methane ("CBM") exploitation and production in China. It is committed to developing and optimizing the value of unconventional gas resources to supply clean energy to support the economic and social development of China.

AAG Energy's key operating assets, Panzhuang and Mabi concessions are located in the southwestern part of Qinshui Basin in Shanxi Province, which boasts the largest proved CBM geological reserves among basins in China. AAG Energy's Panzhuang concession, which is in partnership with China United Coalbed Methane Corporation Ltd. ("CUCBM"), is the first Sino-foreign CBM cooperative project with full-scale commercial development and production and also the most commercially advanced Sino-foreign CBM asset in China. The Overall Development Plan for the southern area of the Mabi concession, which is in partnership with China National Petroleum Corporation ("CNPC"), was approved by the National Development and Reform Commission ("NDRC") of China in September 2018. The designed annual production capacity for commercial development is 1 billion cubic meters.

AAG Energy recognizes the importance of clean energy to the country's green development. In the context of the country's goal of achieving carbon neutrality before 2060, it is particularly important to ensure the supply of clean energy. AAG Energy will give full play to its successful experience in the commercialization of CMB, lead an excellent management team to dedicate more clean energy to society, bring better returns to investors, and make greater contributions to environmental protection.

### 公司簡介

#### 願景

勵志成為國際領先的永續發展的清潔能源偉大企業。

#### 使命

為社會創造最高價值，為員工創造最佳平台，為股東創造最大效益。

亞美能源是一家在中國煤層氣勘探開發領域處於領先地位的國際能源公司，致力於非常規天然氣資源的開發及價值優化，為中國經濟社會供應清潔能源。

亞美能源的主要運營資產潘莊及馬必區塊位於山西省沁水盆地西南部，其煤層氣探明地質儲量居中國各盆地之首。亞美能源與中聯煤層氣有限責任公司（「中聯煤」）合作的潘莊區塊是中國首個進入全面商業開發和生產的中外合作煤層氣區塊，同時也是中國商業化程度最高的中外合作煤層氣資產。亞美能源與中國石油天然氣集團有限公司（「中國石油」）合作的馬必區塊南區煤層氣對外合作項目總體開發方案已於2018年9月獲得中華人民共和國國家發展和改革委員會（「國家發改委」）的批復，商業開發年設計產能為10億立方米。

亞美能源認識到清潔能源對國家綠色發展的重要性，在國家2060年實現碳中和目標的背景之下，保障清潔能源供應顯得尤為重要。亞美能源將充分發揮在煤層氣商業化進程中成功的經驗並帶領優秀的管理團隊，為社會奉獻更多的清潔能源，為投資者帶來更優的回報，為環境保護作出更大的貢獻。

## About Us 關於我們

According to reports issued by Netherland Sewell & Associates Inc. (“NSAI”), an independent reserve certification company, AAG Energy’s net 2P natural gas reserve as of the end of 2021 (“2021YE”) was approximately 17.98 billion cubic meters, representing a decrease of 160 million cubic meters of the net 2P reserve from the end of 2020 (“2020YE”). After deducting net gas production for 2021, the net 2P reserves increased by 5%. The net 2P reserve of the Panzhuang concession was 4.19 billion cubic meters, representing a decrease of 17% of the net 2P reserve from 2020YE. After deducting net gas production for 2020, net 2P reserves increased by 0.3%. The net 2P reserve of the Mabi concession was 13.79 billion cubic meters, representing a decrease of 6% of the net 2P reserve from 2020YE. After deducting net gas production for 2020, the net 2P reserve increased by 6%.

### Special: United Together to Combat COVID-19 and Bravely Assuming the Responsibility of Ensuring Energy Supply

Since the outbreak of COVID-19, AAG Energy has been “prioritizing the safety and health of employees”, and has continued to promote pandemic prevention, resumption of work and production, and normalize the pandemic prevention. The Company has been working hard to fight against the virus, providing stable energy for the whole society.

#### Building Pandemic Prevention System

After the outbreak of COVID-19, AAG Energy immediately established a leading group for pandemic prevention, formulated emergency plans for pandemic prevention, and deployed and arranged work tasks. The leading group uniformly led, organized, and carried out pandemic prevention and on-site production and operation, and clearly specified responsibilities, tasks, and specific requirements. At the same time, the Company strengthened joint pandemic prevention and overall deployment and strengthened the guidance and supervision on pandemic prevention of all project departments and the headquarters’ departments.

All functional departments and project departments of the headquarters implement the main responsibility for pandemic prevention. The general manager of the project department and the heads of functional departments at the headquarters are the people immediately responsible for pandemic prevention within their authority, and strictly carry out various prevention measures.

根據獨立儲量認證公司NSAI發佈的報告，截至2021年底亞美能源淨2P天然氣儲量約為179.8億立方米，較2020年底淨2P儲量下降了1.6億立方米，扣除2021年淨產氣量之後，淨2P儲量增長了5%。潘莊區塊貢獻的淨2P儲量為41.9億立方米，較2020年底的淨2P儲量下降了17%，扣除2021年淨產氣量之後，淨2P儲量增長了0.3%；馬必區塊貢獻的淨2P儲量為137.9億立方米，較2020年底的淨2P儲量增長了6%，扣除2021年淨產氣量之後，淨2P儲量增長了6%。

### 專題：萬眾一心抗疫，勇擔保供責任

自新冠肺炎疫情發生以來，亞美能源秉持「把員工的生命安全和身體健康放在首要位置」，持續推進疫情防控、復工復產和常態化疫情防控工作，全力以赴抗擊疫情，為全社會提供穩定的能源供應保障。

#### 防控體系建設

疫情發生後，亞美能源第一時間成立疫情防控領導小組，制定疫情防控應急預案，部署安排工作任務，統一領導、組織、開展疫情防控及現場的生產經營等各項工作，並明確落實職責任務和具體要求。同時，公司加強聯防聯控、統籌調度，強化對各項目部、總部各部門疫情防控工作的指導和督導。

總部各職能部門及各項目部落實防控主體責任，項目部總經理、總部各職能部門部長為本單位疫情防控第一責任人，嚴格落實各項防控措施。



## About Us 關於我們

### Full Coverage of Pandemic Prevention Measures

AAG Energy broke down pandemic prevention measures, fully mobilized and deployed resources to ensure orderly and efficient anti-pandemic work.

- *Real-Time Investigation and Check*  
The Company has established three-level connected procedures for personnel to report their leaving to ensure effective and smooth implementation of work and information statistics. In this way, we efficiently linked departments, the Company and local pandemic prevention authorities and keep in close touch and accurately trace the information of personnel who were about to travel, and take pandemic prevention management and control measures. As of March 15, 2022, the Company has timely and effectively reported 211 personnel information to the local pandemic prevention authorities. At the same time, in order to ensure the Company's businesses steadily went on, the Company has set up a standardized isolation room for personnel who travel to low-risk areas and emergencies. Besides, we also monitored their health status and offered door-to-door meal delivery services under pandemic prevention requirements. We have safely and effectively quarantined about 36 people.

### 防控舉措全覆蓋

亞美能源細化各項疫情防控舉措，全面動員和部署，確保公司防疫工作有序高效開展。

- *實時摸排管理*  
公司建立「外出人員報備」防疫工作三級聯動機制，確保工作落實和信息統計有效、暢通，保障公司內部各部門、公司與屬地防疫部門的緊密高效鏈接，精準掌握外出人員信息，做好各項防疫管控措施。截至2022年3月15日，公司已及時有效向屬地防疫部門上報人員信息約計211次。同時，為保障公司各項業務的穩步推進，公司針對疫情低風險地區外出人員及突發事件等情況下，設有標準化的人員隔離管控室，並嚴格按防疫要求落實人員的健康監測及上門送餐服務，安全有效保障隔離人數約計36人。



Figure: Delivering Meals For Personnel Quarantined  
圖：為隔離人員送餐

## About Us 關於我們

The Company resolutely appointed the guards to manage the entrance and built the first line of defense for pandemic prevention. According to the requirements of pandemic prevention and management measures, we strictly implemented three code verification, negative nucleic acid tests taken in the previous 48 hours and temperature checks for employees who went away, external guests and vehicles, registered and filed information timely and accurately, so as to ensure that there were no loopholes in the first checkpoint of safety control. As of March 15, 2022, the guard has tested and inspected about 768 personnel.

- **Actively Sterilized the Workplace**  
The Company disinfected the workplace to ensure health and personal protection. To manage employees' pandemic prevention, health and safety at work, the Company took many measures such as twice body temperature check, comprehensive sterilization and supervising employees to wear masks properly to ensure the comprehensive implementation of pandemic prevention work.
- **Propagating Pandemic Prevention Ideas**  
The pandemic prevention leading group fully used the matrix of online and offline platforms to comprehensively publicize anti-pandemic knowledge and direct public opinion. Through the public platform such as WeChat, TV, and etc., we posted many work notices and tips to propagate the knowledge of pandemic prevention. Those articles reminded employees to calmly increase protection and use scientific approaches to handle rumors and enhance their ideological identity, awareness and confidence. Those posts also combined pandemic prevention with ideological and political education, guided employees to consolidate their ideals and beliefs to be anti-pandemic propagandists, gathering positive energy to scientifically publicize pandemic prevention.

公司堅決落實門衛管理，築牢疫情防控第一道防線。按照防疫管控措施的相關要求，我們對外出員工、外部客人、出入車輛等進行嚴格的三碼驗證、48小時核酸確認、體溫檢測等管控要求，及時準確做好信息登記及造冊，保障安全防控第一道關卡無疏漏。截至2022年3月15日，門衛核查人員約計768人。

- **積極開展消殺工作**  
公司堅持落實個人防護，健康消殺保障衛生。為保障員工上班期間的防疫衛生安全管理，公司防疫工作通過採取每日全身體溫檢測二次無漏洞、全面消殺無死角、督導科學佩戴口罩等管控措施，切實將防疫工作落實到位。
- **防控思想宣貫**  
公司疫情防控領導小組充分發揮線上線下網絡平台矩陣，全面宣傳疫情防控知識，對員工進行輿情引導。通過「企業微信」公眾平台、電視多媒體平台等，我們發佈多篇工作通知、溫馨提示來宣傳疫情防控知識，提醒員工強防護、不恐慌、信科學、不傳謠，增強員工的思想認同、防護意識和必勝信心，將防疫與思政育人相結合，引導員工堅定理想信念，擔當抗疫宣傳員，共同匯聚疫情科學防控宣傳的正能量。



Figure: Our Official Account Publicized the Anti-Pandemic Awareness  
圖：公司公眾號關於疫情防控意識的宣貫

## About Us 關於我們

- *Establishing Pandemic Prevention Alliance Between Enterprises and Local Communities*

In an active response to the requirements of the local pandemic prevention authorities, the Company strived to build a pandemic prevention alliance between enterprises and local communities for mutual exchange and assistance. The Company set an example in fully implementing local anti-pandemic policies. At the same time, the Company actively raised funds and donated money and materials worth RMB62,000 to support related work in towns and townships where our projects were located.

- 搭建企地聯盟防疫關係

為積極響應屬地防疫部門的管控要求，公司努力搭建互通有無、良好互助的企地聯盟關係。公司不僅以身作責，全力高效配合落實屬地防疫各項政策。同時，公司積極籌款，為嘉峰鎮捐贈防疫物資共計62,000元，以實際行動支持駐地鄉鎮疫情防控工作。

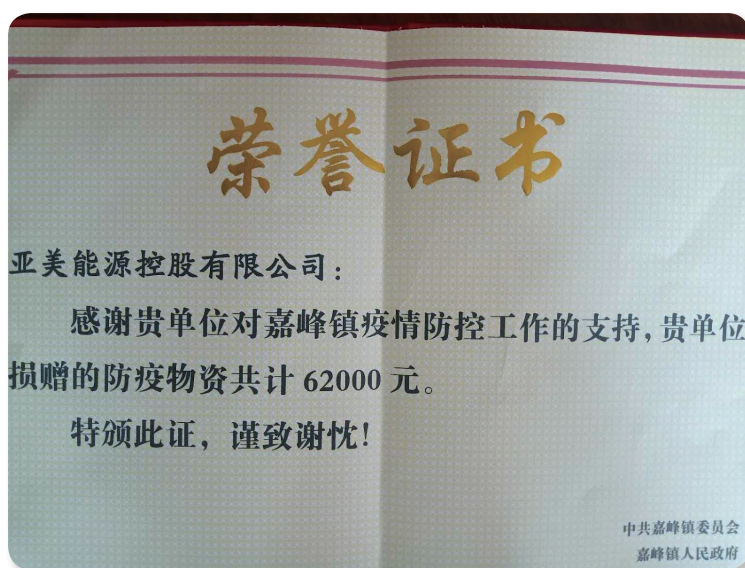


Figure: AAG Energy's Efforts in Pandemic Prevention Was Acknowledged

圖：亞美能源獲疫情防控工作獲肯定

### Normalized Pandemic Prevention and Control

A stable gas supply is an important part of pandemic prevention and also an important guarantee for people's livelihood. Since the outbreak of the pandemic, AAG Energy has actively promoted the development of a normalized pandemic prevention mechanism. In view of the multi-point distributed pandemic in various places, we paid close attention to significant information such as abnormal conditions and shifts of medium-risk and high-risk, timely gave early warning to employees, and made every effort to ensure the continuous operation of production while resolutely implementing the prevention requirements from the Company and local governments. Our effective and normalized pandemic prevention mechanism helped the Company to orderly promote production businesses with the victory in pandemic prevention targets and production objectives, and laid a solid foundation for social security and people's livelihood.

### 常態化防控

穩定的供氣是疫情防控的重要環節，也是民生的重要保障。自疫情爆發以來，亞美能源積極推進常態化疫情防控機制建設，針對各地出現的呈多點散發的聚集性疫情，我們密切關注異常情況及中高風險地區調整通知等信息，及時對員工進行預警提醒，在堅決貫徹公司及地方政府防控要求的同時，全力保障企業生產工作的連續性運營。切實有效的常態化疫情防控機制，幫助公司順利確保各項生產業務的有序推進，實現防控目標與生產目標的雙重勝利，為社會民生保障工作打下堅實基礎。

# 1. Sustainable Development Management

## 可持續發展管理

AAG Energy firmly believes that the concept of sustainable development is the guarantee for the Company's long-term stable development. We continuously improve the Company's ESG governance system, optimize the ESG governance structure, and implement in detail sustainable development functions and division of responsibilities to ensure the effective operation of ESG management system and comprehensively improve the Company's sustainable development performance. We attach great importance to communication with stakeholders, regularly identify and evaluate ESG issues and their importance, and actively responds to the demands of all stakeholders. The Company integrates the ESG concept into every part of its operation, and continuously promotes the sustainable development of the Company and all stakeholders.

### 1.1 ESG Management

The Board of AAG Energy attaches great importance to the management of sustainable development, recognizing and assuming all the responsibilities of ESG strategy and reporting as the highest responsible organization for the Company's ESG work. The Company's Board monitors ESG-related matters that may affect the Company's business or operations, shareholders and other stakeholders, supervises the commitment and performance of key ESG issues, ensures the integration of ESG concepts and corporate strategies and reviews and supervises the setting and completion of AAG Energy's ESG goals.

In 2021, AAG Energy further optimized the ESG management system structure and adjusted the composition of the ESG Working Group. The ESG Working Group is now composed of 8 members, including an independent non-executive Director, an executive Director and several members of the Company's senior management.

亞美能源深信可持續發展是指引公司長期穩定發展的保障，我們不斷優化與完善公司ESG管理體系與治理架構，細化落實可持續發展職能與分工，保障ESG管理體系的切實有效運行，以綜合提升公司可持續發展表現。我們高度重視與利益相關方的交流溝通，定期識別評估自身ESG議題及重要性程度，主動回應各利益相關方訴求，將ESG理念有機融入公司日常運營的每一個環節，持續推進公司和各利益相關方的可持續發展。

### 1.1 ESG 管理

亞美能源董事會高度重視可持續發展管理工作，認可並承擔ESG策略及匯報的全部責任，是公司ESG工作的最高負責機構。公司董事會監察可能影響公司業務或運作、股東與其他利益相關方的ESG相關事宜，監管ESG關鍵議題承諾及表現，確保ESG理念與公司策略的融合，並對亞美能源ESG目標制定及完成進度進行審閱及監督。

2021年，亞美能源進一步優化ESG管理體系架構，調整ESG工作組成員構成，工作組現由8名成員組成，包括一名獨立非執行董事，一名執行董事及數名公司高級管理層成員。

# 1. Sustainable Development Management

## 可持續發展管理

The responsibilities of the ESG Working Group include the following:

1. Reviewing and guiding ESG related policies, regulations, standards and trends, assessing the external and internal influence from ESG work, determining the materiality of ESG related issues of the Company, making the Company's ESG strategies and forming annual ESG working goals and plans;
2. Supervising and monitoring the implementation of the Company's ESG strategies, breaking down annual goals and plans, reviewing the progress of ESG goals and implementing annual reviews;
3. Supervising and monitoring the operation system of the Company's ESG management to ensure its continuous effectiveness and compliance with applicable laws and regulations;
4. Reviewing and approving the Company's annual ESG report;
5. Other matters that the ESG Working Group considers relevant to ESG management or other matters authorized by the Board.

In order to fully implement the ESG work arrangement and deployment by the ESG Working Group of the Board, AAG Energy expects to earnestly follow the ESG guide of the latest ESG guidance consultation of the Stock Exchange, and disclose the annual ESG report as scheduled. To this end, the Company established an ESG Executive Group at the business site, which is composed of four teams: the Executive Management Team, safety and environmental protection team, community contribution team and corporate governance team.

ESG工作組職責包括：

1. 檢視ESG相關政策、法規、標準及趨勢，評估ESG工作對公司內外部的影響，判定公司ESG事宜的重大性，制定公司ESG戰略規劃，及形成年度工作目標與計劃；
2. 監察公司對ESG戰略的執行情況，分解年度目標與計劃，檢討ESG目標達成的進度，實施年度考核；
3. 監察公司ESG運行體系，以確保其持續有效，並符合適用法例及規則之要求；
4. 審閱及核定公司年度環境、社會及管治報告書；
5. 工作組認為與ESG有關的其他事宜或董事會授權的其他事宜。

為全面貫徹董事會ESG工作組對ESG工作的安排部署，認真履行聯交所最新ESG指引意見諮詢文的ESG工作指南，並如期披露年度ESG報告，亞美能源在業務現場成立ESG執行管理組，執行組由四個小組組成：執行管理組、安全環保組、社區貢獻組與企業治理組。

# 1. Sustainable Development Management

## 可持續發展管理

The responsibilities of the ESG Executive Management Team include:

1. Be responsible for the breakdown and implementation of ESG action plans, including but not limited to safety and environmental management plan, community contribution management plan, corporate governance plan and other ESG work plans;
2. Be responsible for supervising the progress of ESG objectives and implementing annual assessments;
3. Be responsible for the entrusted preparation and internal audit of the annual ESG report;
4. Assist the Board in the presentation of the ESG report.

The ESG Executive Management Team has an ESG Executive Office located in the safety and environmental department.

The responsibilities of the ESG Executive Office include:

1. Coordinate the Company's ESG management and promote the implementation of each ESG special working group's tasks;
2. Assist in establishing the Company's ESG management system and promote its implementation;
3. Be responsible for the training, publicity and promotion of ESG related information;
4. Be responsible for comprehensively managing the preparation of ESG report, reviewing and revising the Chinese and English versions of ESG report, and helping the release of ESG report in Chinese and English;
5. Regularly report the progress of the ESG annual work plan and ESG target management to the ESG Executive Management Team.

ESG 執行管理組職責包括：

1. 負責 ESG 行動計劃的分解與實施，包括不限於安全環保管理計劃、社區貢獻管理計劃、公司治理計劃等 ESG 工作計劃；
2. 負責監督 ESG 目標達成的進度，實施年度考核；
3. 負責年度 ESG 報告的委託編製及內部審核；
4. 配合董事會 ESG 報告的匯報。

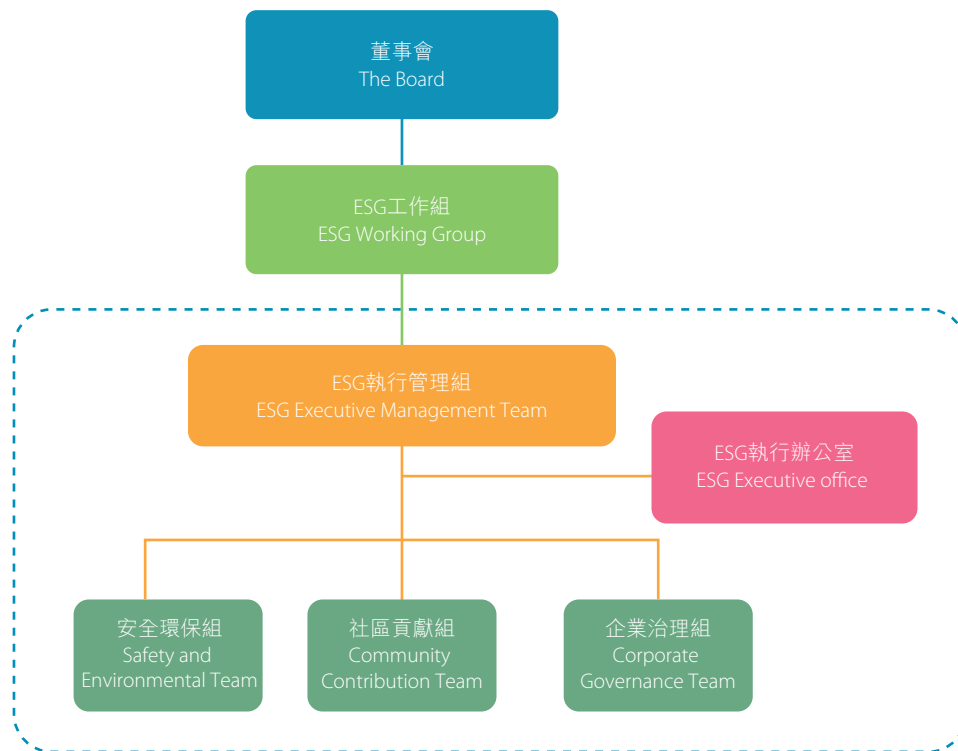
ESG 執行管理組下設 ESG 執行辦公室，辦公室設在安全環保部。

ESG 執行辦公室職責包括：

1. 統籌協調公司 ESG 管理工作，推進落實公司各 ESG 專項工作組工作；
2. 協助建立公司 ESG 管理體系，並推進實施；
3. 負責 ESG 相關信息知識的培訓宣傳推廣工作；
4. 負責統籌管理 ESG 報告的編製工作，審核校訂 ESG 報告中英文版本，配合 ESG 中英文報告發佈工作；
5. 定期向 ESG 執行管理組匯報 ESG 年度工作計劃和 ESG 指標目標管理進展情況。

# 1. Sustainable Development Management

## 可持續發展管理



**Figure: The Structure of AAG Energy ESG Working Group**  
圖：亞美能源 ESG 工作組架構圖

# 1. Sustainable Development Management

## 可持續發展管理

In 2021, AAG Energy carried out a new round of improvement on ESG governance and management, continuously enhanced the Company's sustainable development governance system, optimized the sustainable development governance structure, and broke down and implemented the sustainable development functions and division; Meanwhile, in 2021, the Company systematically sorted out and analyzed the current ESG management, formulated the five-year strategic plan for sustainable development and set ESG environmental targets based on peer practice at home and abroad. The plans and targets defined the GHG emission targets, water use targets and wastewater emission targets, and proposed to further increase the CMB production and sales ratio in remote areas, scale up recycling and reduce venting volume. Furthermore, we seek to increase the construction or utilization of more green energy such as wind power and photovoltaic power generation during project development to further promote ESG management to meet higher requirements of compliance requirements and capital market and improve the Company's ESG performance.

To further standardize and strengthen the Company's ESG management and ensure the implementation of ESG work, AAG Energy continuously integrates ESG management into the business operation, and systematically manages ESG information. Furthermore, the Company continuously collects quarterly ESG information for the Panzhuang project and the Mabi project, regularly manages potential ESG risks and continuously improves the ESG management level.

2021年，亞美能源對ESG管治與管理細節進行了新一輪提升，不斷完善公司可持續發展治理體系，優化可持續發展治理架構，細化落實可持續發展職能與分工等；同時，亞美能源在2021年對ESG管理現狀進行了系統梳理與分析，並對標國內外同業實踐，完成了可持續發展五年戰略規劃制定和ESG環境目標設定工作，明確了溫室氣體排放控制目標、用水控制目標、廢水排放控制目標，提出強化偏遠地區煤層氣的產銷比提升，加大回收利用和減少放空量，探索加大在項目開發過程中建設或利用更多風電、光伏發電等綠色動能，進一步推動ESG管理滿足更高的合規要求、資本市場要求，提升公司的ESG表現。

為進一步規範和加強公司ESG管理工作，保障ESG工作落地與執行，亞美能源將ESG管理不斷納入公司業務運營，對ESG信息進行體系化管理，持續對潘莊項目及馬必項目進行季度ESG信息收集，對潛在ESG風險進行日常管理，不斷提升公司ESG管理水平。



# 1. Sustainable Development Management

## 可持續發展管理

To achieve sustainable development, AAG Energy pledges as follows:

- We adopt fair labor practices at our workplaces and will abide by all relevant laws and industry standards.
- We prevent any work-related injuries, fatalities, or health impairments to employees and contractors.
- We maintain transparent and trustworthy relationships with all shareholders and communicate issues of common concern to enhance mutual understanding.
- We strive to run our operations in socially responsible, sustainable and environmental manners, thereby minimizing adverse impacts caused by the production.
- We are committed to helping all employees unleash their full potential to gain satisfaction from work and make their greatest contribution to the Company.

在實現可持續發展的路上，亞美能源承諾：

- 我們承諾，我們在工作場所將採用公平的行為準則並遵守所有相關的法律和工業標準。
- 我們承諾避免員工和勞務人員出現任何工傷，致死事故以及健康損害。
- 我們將與所有股東保持透明和互相信任的關係並就雙方互相關心的問題進行溝通以增進相互了解。
- 我們將堅持對社會負責、可持續發展和環保的經營理念，開展生產活動，以減少生產所帶來的不利影響。
- 我們致力於促使所有員工發揮其最大潛能，從工作中獲得滿足感，最大程度的為公司做出貢獻。

# 1. Sustainable Development Management

## 可持續發展管理

### 1.2 Stakeholders Engagement

AAG Energy attaches great importance to stakeholder engagement. An efficient stakeholder communication and feedback mechanism has been established, through different channels to listen to the opinions and suggestions of the government and regulators, shareholders, customers, employees, communities and the public and other stakeholders and to identify the feedbacks and expectations of various stakeholders to the Company. The demands of various parties have been responded to in a targeted manner in order to improve the Company's social responsibility performance on all fronts.

The following table shows the main communication channels we use, the main concerns and expectations of stakeholders, and the measures taken by the Company regarding relevant opinions.

### 1.2 利益相關方參與

亞美能源重視利益相關方溝通，建立高效的利益相關方溝通反饋機制，借助不同渠道聽取政府與監管機構、股東、客戶、員工、社區及公眾等利益相關方的意見和建議，識別各利益相關方對公司的反饋與期望，有針對性地回應各方需求，綜合提升公司社會責任表現。

下表對亞美能源所使用的溝通渠道、利益相關方的主要關注議題及期望進行展示，以及公司就有關意見所採取的措施。

Stakeholders 利益相關方	Expectations and Demands 期望與要求	Communication Channel 溝通方式
<b>Governments and Regulators</b> 政府與監管機構	Complying with national laws and regulations Promoting local economic development Boosting local employment Promoting industry development 貫徹落實國家政策及法律法規 促進地方經濟發展 帶動地方就業 推動行業發展	Reporting and filing Providing suggestions Special report Discuss and cooperation 上報文件 建言獻策 專題匯報 洽談合作
<b>Shareholders</b> 股東	Return of investment Compliance operation Safe production 收益回報 合規運營 安全生產	Company announcements Special report Field visit 公司公告 專題匯報 實地考察
<b>Customers and Partners</b> 客戶及合作伙伴	Lawful performance of contracts Operations with integrity High-quality products and services 依法履約 誠信經營 優質產品與服務	Business communication Customer feedback Communication and discussion 商務溝通 顧客反饋 交流研討

# 1. Sustainable Development Management

## 可持續發展管理

Stakeholders 利益相關方	Expectations and Demands 期望與要求	Communication Channel 溝通方式
<b>Environment</b> 環境	Emission compliance Energy conservation and emission reduction Ecological protection 合規排放 節能減排 保護生態	Work reports Statement submission Investigation and inspection 工作匯報 報表報送 調研檢查
<b>Employees</b> 員工	Protection of rights and interests of employees Occupational health Compensation and benefits Career development 權益維護 職業健康 薪酬福利 職業發展	Staff informal meeting Collective negotiation Democratic communication platform 員工座談會 集體協商 民主溝通平台
<b>Communities and the Public</b> 社區及公眾	Improvement of community environment Public welfare engagement Open and transparent information 改善社區環境 參與公益事業 信息公開透明	Company Official website Company announcements Interview and communication 公司官方網站 公司公告 採訪交流

# 1. Sustainable Development Management 可持續發展管理

## 1.3 Response to ESG Reporting Principles

**Materiality:** In accordance with the requirements of the “ESG Reporting Guide” and other relevant principles, combined with the capital market’s concerns about the Company’s sustainable development, AAG Energy communicated with various stakeholders via different channels, and then identified the ESG issues related to the Company based on a benchmarking analysis of the issues disclosed in the reports of companies in the same industry.

Using anonymous online questionnaire surveys, we sorted the selected issues according to the priority so as to understand the importance of internal and external stakeholders put on the relevant issues and drew a materiality matrix of AAG Energy’s sustainable development issues. We regularly review the materiality matrix in combination with external development trends and the characteristics of our business operation, downgrade or upgrade the importance of some issues, and ensure the timeliness and appropriateness of the matrix.

## 1.3 ESG 報告原則回應

**重要性原則：**亞美能源按照《環境、社會及管治報告指引》及相關原則等要求，結合資本市場對公司可持續發展關注重點，通過與各類利益相關方不同形式的溝通與交流，對同行業企業報告披露的議題進行對標分析，識別並篩選與亞美能源相關的ESG議題。

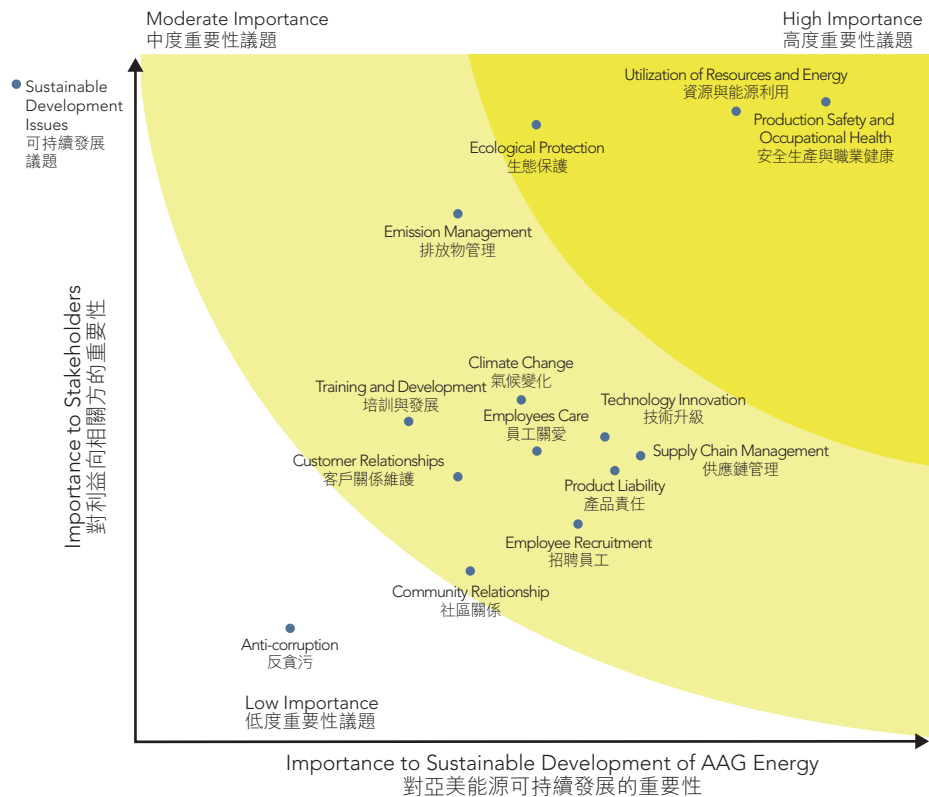
我們借助不記名的在線問卷調研方式對篩選出的議題進行優先級排序，了解內外部利益相關方對ESG議題的重視程度，繪制出亞美能源可持續發展議題重大性議題矩陣。我們定期結合外部發展趨勢及自身業務運營特點，進一步審閱重大性議題矩陣，調整部分議題重要性程度，確保重大性議題矩陣的時效性與合理性。

### Steps to Identify Material Environmental, Social and Governance Issues 環境、社會及管治議題識別流程



# 1. Sustainable Development Management 可持續發展管理

Materiality Matrix of AAG Energy of 2021  
亞美能源 2021 年可持續發展重大議題矩陣



**Quantitative:** AAG Energy established standardized ESG indicator management tools covering the headquarters, Panzhuang and Mabi concessions to conduct regular statistics on quantitative key disclosure indicators involving the whole “Environmental” scope and the partial “Social” scope from the *ESG Reporting Guide*. Statistical data was summarized during the year and finally form this report for disclosure. ESG quantitative data is detailed in sections of this report.

**Consistency:** This report made no major adjustments to the scope of disclosure compared with the ESG reports for previous years, and adopted consistent statistical and disclosure methods and further refined some categories of disclosure corresponding to the *ESG Reporting Guide*. For detailed ESG comparison data over the years, please refer to the relevant sections of this report.

**量化原則：**亞美能源建立了覆蓋總部、潘莊項目及馬必項目的標準化ESG指標管理工具，對包括ESG報告指引中所有「環境」範疇及部分「社會」範疇的量化關鍵披露指標進行定期統計，並於年內進行匯總，最終形成本報告對外披露。ESG量化數據詳見本報告各章節。

**一致性原則：**本報告相對往年可持續發展報告披露範圍並無重大調整，且使用一致的披露統計方法，並進一步細化部分聯交所ESG報告指引對應披露類別。ESG多年對比數據詳見本報告各章節。

## 2. Safe Production and Clean Operations

### 安全生產 清潔運營

AAG Energy attaches great importance to safe production and green operation. We continue to establish and improve the safety management system and environmental management system, coordinate and promote the company's safety and environmental protection efforts, and fully implement the responsibility for safety and environmental protection in all aspects of operation, thereby creating a safe, stable, environment-friendly and sustainable company.

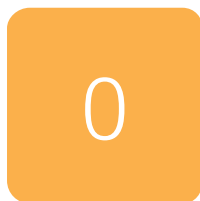
In 2021, with the health, safety, and environmental target: LTIR < 0.45 and TRIR < 1.35, AAG Energy maintained the performance record: zero LTIR, TRIR, and environmental pollution accidents, and successfully completed the key performance target of health, safety, and environmental protection. As of 31 December 2021, AAG Energy had achieved excellent safety performance with zero LTIR for 7 years and 117 days in a row.

亞美能源高度重視安全生產與清潔運營。我們持續建立健全安全管理體系與環境管理體系，統籌推進公司安全環保工作，全面落實各運營環節安全環保責任，致力於打造安全穩定、環境友好的可持續發展企業。

2021年，亞美能源設立損失工時事故率LTIR < 0.45、總可記錄事故率TRIR < 1.35的健康安全環保目標，保持損失工時事故率（「LTIR」）、總可記錄事故率（「TRIR」）、環境污染事故均為零的績效記錄，圓滿完成健康安全環保關鍵績效目標。截至2021年12月31日，亞美能源已累計實現7年零117天無損失工時事故的安全業績。



LTIR(損時工時事故率)  
LTIR (Lost Time Injury Rate)



TRIR(總可記錄事故率)  
TRIR (Total Recordable Incident Rate)



EPA(環境污染事故)  
EPA (Environmental Pollution Accident)

## 2. Safe Production and Clean Operations

### 安全生產 清潔運營

#### 2.1 Consolidating the Foundation of Workplace Safety

AAG Energy adheres to the management policy of “vigorously promote standardization of safe production” and continues to build an HSE management system and standardized safe production management system. We regularly collect and identify the requirements of laws and regulations related to health, safety and environmental protection, actively carry out training and publicity on safe production, constantly improve employees’ safety awareness and skills and engage contractors in the responsibilities of safety management, so as to create a strong corporate culture of safety and comprehensively improve the safety management.

##### Safety Management

AAG Energy strictly abides by the laws and regulations such as the *Production Safety Law of the People’s Republic of China*, the *Environmental Protection Law of the People’s Republic of China* and *Safety Regulations for CBM Exploitation (Trial Edition)* and forms the Management System for Standardized Internal Control, the HSE Management System and the Management System for Safe Production Standardization. In 2021, we updated the *Abstract of Health, Safety and Environmental Protection Management Systems* for the Panzhuang project and Mabi project respectively, laying a solid ground for effectively carrying out a safety and environmental management system.

In 2021, on the basis of the new organizational structure and responsibilities, as well as the reality of the project, AAG Energy updated the organizational structure of the Safety Management Committee and HSE Management Committee, and continuously improved the safety management system. We demanded that “whoever is in charge is responsible”, and “those who take charge of industry, business, and production and operation must also emphasize safety”. We further established and enhanced the company-wide HSE responsibility system, perfect the HSE responsibility for all positions in functional departments, and asked the management, heads of departments and employees to sign the letter of responsibility for HSE target management at all levels. Besides, we carry out the annual assessment of the workplace safety responsibility system among all employees to comprehensively improve their awareness.

#### 2.1 穩固安全根基

亞美能源堅持「大力推行安全生產標準化」的管理方針，持續建設健康安全環保（「HSE」）管理體系和安全生產標準化管理體系。我們定期收集、識別HSE相關法律法規要求，積極開展安全生產的培訓與宣傳工作，不斷提升員工安全意識和技能，落實承包商安全管理責任，打造良好的安全企業文化，實現公司安全管理水平的全方位提升。

##### 安全管理

亞美能源嚴格遵守《中華人民共和國安全生產法》《中華人民共和國環境保護法》《煤層氣地面開採安全規程（試行）》等法律法規，內部制定《先進性標準化內控管理制度》《健康安全環境管理體系》《安全生產標準化管理體系》等規章制度。2021年，我們分別更新了潘莊項目和馬必項目《健康安全與環保管理制度匯編》，為安全環保管理體系的有效實施夯實了基礎。

2021年，亞美能源根據公司新的組織架構、職責分工，結合項目實際情況，更新安全管理委員會及HSE管理委員會的組織架構，持續完善安全管理體系。我們秉持「誰主管，誰負責」、「管行業必須管安全、管業務必須管安全、管生產經營必須管安全」的原則，在公司範圍內進一步建立健全公司的HSE責任制，補充完善公司職能部門所有崗位的HSE責任制體系，推進公司管理層、各部門負責人及部門員工層層簽署HSE目標管理責任書，並開展全員安全生產責任制年度考核，全面提升員工的安全生產意識。

## 2. Safe Production and Clean Operations

### 安全生產 清潔運營

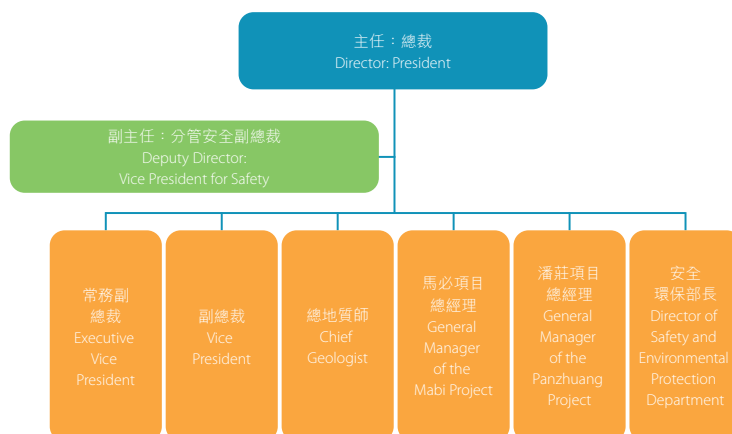


Figure: Structure of HSE Management Committee

圖：HSE 管理委員會組織架構圖

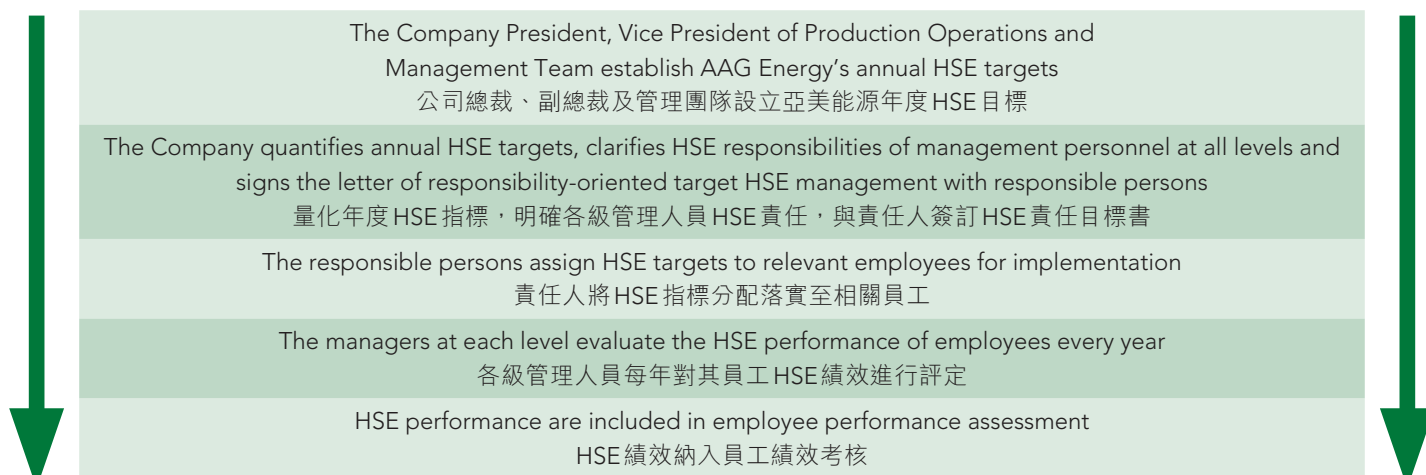


Chart: Workflow of HSE Index Establishment and Application in AAG Energy

表：亞美能源 HSE 指標建立與落實流程



## 2. Safe Production and Clean Operations 安全生產 清潔運營

In 2021, on the basis of informatization, AAG Energy continued to develop a smart HSE management system with big data as the core, and build an innovative safety management model which highly integrates big data and HSE management. We build the system on a large platform with collected data for many small function use. We use a low-code development platform to build the HSE information basic service function, HSE data lake compatible with heterogeneous data, HSE full process business management function, HSE work-site portal and mobile terminal. By the end of 2021, we have basically completed the preparation of the project and planned to move it into the stage of comprehensive development in 2022.

Panzhuang project has tried a new working permit management system to effectively control all kinds of operations, fully identify the risks existing in the operation and take reliable safety measures. Subject to compliance and risk control, the system increased the efficiency of working permits by about 30%, which greatly improved the efficiency of project operation management.

### Safety Training

AAG Energy strictly abides by the *Production Safety Law of the People's Republic of China*, the *Production Safety Training Management Measures*, and the regulations and requirements of all levels of government on production safety education and training. In combination with the Company's HSE work plan, we continue to build an HSE training system and promote the full enforcement of safety education. In 2021, the Company organized a large number of HSE education and training sessions involving statutory certificate training, employee on boarding training, HSE skill training, training on regulations/standards/systems, and annual training for employees and contractor foremen training etc..

2021年，亞美能源以信息化為依托，不斷推進以大數據為核心的智慧HSE管理系統建設，構建大數據與HSE管理高度融合的創新安全管理模式。我們秉承「大平台、小應用、匯數據」的總體建設思路，採用低代碼開發平台構建公司的HSE信息化基礎服務功能，並建設兼容異構數據的HSE數據湖、HSE全流程業務管理功能、HSE工作門戶和移動端。截至2021年末，該項目前期工作已經基本完成，計劃2022年進入全面開發階段。

潘莊項目試行了全新作業許可管理系統，以對各類作業進行有效控制，充分識別作業中存在的風險並落實可靠的安全防範措施。在滿足合規和風險控制的前提下，該系統使得作業許可運行效率提高約30%，極大地提升了項目作業管理效率。

### 安全培訓

亞美能源嚴格遵守《中華人民共和國安全生產法》、《安全生產培訓管理辦法》及各級政府對安全生產教育培訓的規定和要求，結合公司HSE工作計劃，持續建立健全安全培訓體系，推進安全教育工作全面落實。公司在2021年度從法定取證培訓、員工入職培訓、HSE技術培訓、法規／標準／體系培訓、從業人員年度培訓和承包商領班培訓等方面，組織開展了大量HSE教育培訓工作。

## 2. Safe Production and Clean Operations 安全生產 清潔運營



**Figure: HSE Education and Training System**  
圖：亞美能源安全培訓體系

We strictly offer the three-level safety education system and put an end to the practice of working directly without attending safety education. New employees must receive three-level safety education, including safety technical knowledge, equipment performance, operating procedures, safety system, and prohibitory regulations. They have to receive three-level safety training for not less than 72 hours and pass the test before taking the role of operators. In 2021, AAG Energy held HSE training for 4,299 employees and contractors, which lasted for 29,580 hours. All on-site operators have received annual safety education and training.

AAG Energy attaches importance to HSE talent team building. The Company has trained part-time safety inspectors to improve the overall quality of the HSE team. We actively carry out many forms of safety education and training and repeatedly conduct professional skill training for part-time safety inspectors, whether online or offline. At the same time, we encourage employees to obtain registered safety engineers and safety evaluators certificates, which are our HSE talent backups.

我們嚴格實行三級安全教育制度，杜絕未經三級安全教育就直接上崗的現象。對於新員工，我們要求其必須參與三級安全教育，學習內容包括安全技術知識、設備性能、操作規程、安全制度和嚴禁事項，並要求其考核合格後方可進入操作崗位，三級安全教育時間要求不少於72學時。2021年，亞美能源組織實施公司及承包商人員的HSE相關培訓總計4,299人次，約29,580學時。現場作業人員100%經過年度安全教育培訓。

亞美能源重視HSE人才梯隊建設，建立了兼職安全員培養機制，旨在提升HSE隊伍的整體素質。我們積極開展形式多樣的安全教育培訓，通過線上和線下方式，多次開展對兼職安全員的專業技能培訓，同時，我們鼓勵員工考取註冊安全工程師和安全評價師，積極建設HSE後備人才梯隊。

## 2. Safe Production and Clean Operations 安全生產 清潔運營

公司安全環保培訓人次統計  
HSE training by Employee

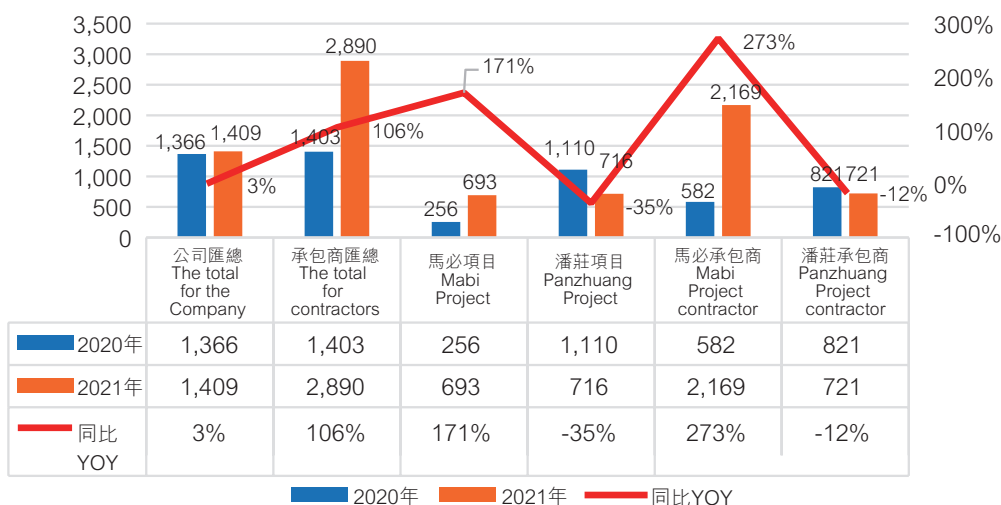


Chart: HSE training by Employees

表：公司安全環保培訓人次統計

公司安全環保培訓課時統計  
HSE training by Hours

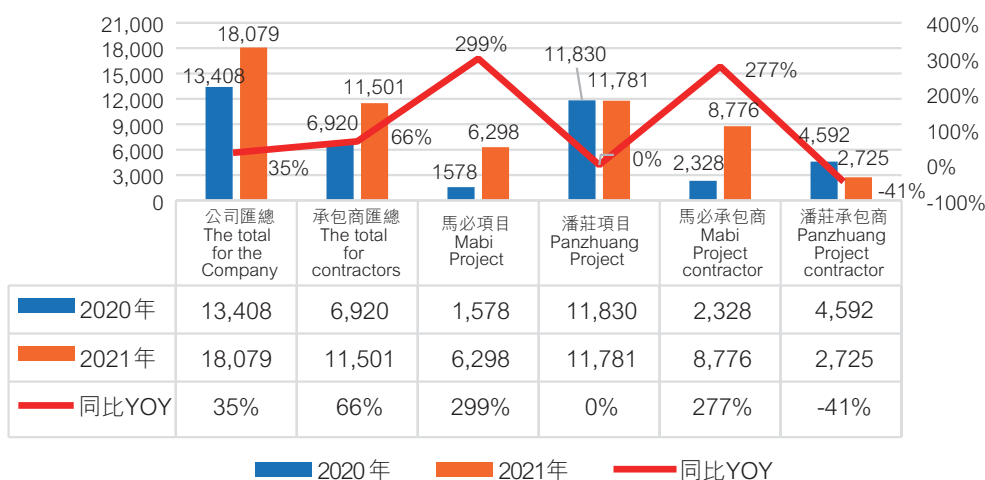


Chart: HSE training by Hours

表：公司安全環保培訓課時統計

## 2. Safe Production and Clean Operations

### 安全生產 清潔運營

#### Safety Inspection

AAG Energy continued to promote the standardization of safety production and organized the self-assessment of workplace safety standardization. We have carried out the standardized safety production self-assessment on Panzhuang and Mabi projects and issued the self-assessment report in accordance with the *Jincheng Evaluation Standard of Safety Production Standardization for Coalbed Methane Surface Mining Enterprises (Trial)*. Now, we have registered and filed the report on the online system.

In 2021, to test the completeness, suitability, and effectiveness of the Company's HSE management system, AAG Energy organized internal audits and identified 44 problems, but all of them have been rectified within the time limit. In addition, AAG Energy also actively embraced external security inspections.

- AAG Energy successfully passed the annual external audit of the HSE management system by DET NORSKE VERITAS (DNV GL) in September 2021.
- Mabi Project and Panzhuang Project successfully passed the annual review of safety production standardization of Jincheng Emergency Management Bureau in December 2021.

Based on the principle of "comprehensive investigation and highlighting key points", AAG Energy conducted season-specific safety inspections such as fire control or forest fire prevention in spring and autumn, flood control and thunder prevention in summer and thermal insulation in winter in 2021. The Company promoted the projects to carry out special inspections such as environmental protection, emergency management, special equipment, contractor management, working permit, vehicle management and change management and comprehensive safety inspections on holidays, plus internal audit and external audit. The problems found through inspections and audits at all levels throughout the year have been 100% rectified, and there were no major hidden risks this year.

Through continuous inspection, review, analysis and rectification, the Company strengthens the use of safety technology, designs safer facilities and equipment, increases supervision and management of employees' safe operation, so as to improve the standardized management of production and operation site and construction site.

#### 安全檢查

亞美能源持續推動安全生產標準化建設，組織開展安全生產標準化自評工作。潘莊、馬必項目按照《晉城市煤層氣地面開採企業安全生產標準化評審標準（試行）》，開展了公司安全生產標準化自評工作並出具自評報告，現已完成網上系統登記報備。

2021年，亞美能源為檢驗公司HSE管理體系的充分性、適宜性和有效性，組織開展了內部審核，共發現44項問題，均已經在整改時限內完成整改。此外，亞美能源也積極參與外部安全審查。

- 2021年9月，亞美能源順利通過由挪威和德國船級社(DNV·GL)開展的安全環保管理體系年度外部審核。
- 2021年12月，馬必項目和潘莊項目順利通過晉城市應急管理局的安全生產標準化建設的年度審查。

亞美能源本著「全面排查、突出重點」的原則，2021年，實施了春秋季消防／森林防火，夏季防洪防汛、防雷電、冬季冬防保溫等季節性安全檢查，推進各項目實施了環保、應急管理、特種設備、承包商管理、作業許可、車輛管理、變更管理等專項檢查，並在節假日開展了綜合性安全大檢查，實施了內部審核和外部審核等。全年通過各級檢查和審核發現的問題，已經100%整改完成，全年無重大隱患項。

公司通過持續的檢查、審核、分析和整改，不斷加強安全技術應用，提升設施設備的安全設計，強化對員工安全操作的監督和管理，持續提升生產運行現場和施工現場管理的規範化和標準化水平。

## 2. Safe Production and Clean Operations 安全生產 清潔運營

### Building a Culture of Safety

AAG Energy adheres to the idea of “education for safety”, with a commitment to improving the Company’s culture of safety by actively carrying out publicity and education on safety production and relevant training activities, so as to improve employees’ awareness and skills of safety production, and promote the safe and long-term development of the Company.

To increase employees’ attention to HSE protection, improve their HSE protection awareness, knowledge and skills and promote the development of the Company’s HSE culture, AAG Energy organized a wealth of HSE protection activities in 2021 according to the requirements of national and local governments on safety production month and other activities.

### 安全文化建設

亞美能源堅持「以教育保安全」的安全工作思路，致力於完善公司文化建設，積極開展安全生產宣傳教育和相關培訓活動，提升員工的安全生產意識和技能，推進企業安全、長效發展。

為提高員工對HSE工作的重視，提升HSE意識、知識和技能，促進公司HSE文化建設，根據國家和地方政府關於開展安全生產月活動及其他活動的要求，亞美能源在2021年組織開展了豐富的HSE活動。

Chart: Safety-Related Activities in 2021  
表：2021年度安全活動

No. 序號	Activities 活動內容	Time 活動時間
1	Positive pressure respirator wearing contest by production and operation department 正壓式呼吸器穿戴評比活動(生產運行部)	From February to March 2021 2021年2-3月
2	Safety knowledge competition by production and operation department 安全知識競賽活動(生產運行部)	From April to June 2021 2021年4-6月
3	Occupational disease prevention week 職業病防治宣傳週	May 2021 2021年5月
4	Traffic safety evaluation by the comprehensive security department 交通安全評比活動(綜合保障部)	From May to June 2021 2021年5-6月
5	World Environment Day on June 5 6月5日環境日活動	June 2021 2021年6月
6	AAG Energy Safety Day 亞美能源安全日活動	June 2021 2021年6月
7	Production Safety Month, including warning education, emergency drill, Q&A contest 安全生產月(警示教育、應急演練、答題競賽)	June 2021 2021年6月
8	Safety management review of drilling contractors 鑽井施工承包商審核活動	From June to September 2021 2021年6-9月
9	Safety management review of the surface construction contractors 地面建設工程承包商審核活動	From October to November 2021 2021年10-11月
10	Fire Fighting Month activities to increase fire protection propaganda and improve firefighting and fire escape knowledge 消防月系列活動，加強消防宣傳，提高大家消防和自救知識	November 2021 2021年11月
11	Permit to work (PTW) reviews and evaluations 作業許可(PTW)審核評比活動	From November to December 2021 2021年11-12月
12	Traffic safety activities 交通安全活動	From November to December 2021 2021年11-12月

## 2. Safe Production and Clean Operations

### 安全生產 清潔運營

AAG Energy has always encouraged employees to observe people's unsafe behaviors and materials' unsafe status. In 2021, employees submitted 12,885 safety observation forms online. All our employees' participation and intervention can help problems being discovered and solved in a timely manner, so as to effectively avoid all kinds of safety production accidents.

#### Case: AAG Energy launched safety culture answer activity

In October 2021, to improve the safety awareness and skills of all employees and develop a culture of safety, AAG Energy launched daily question-answering activities — "Do you keep safety today?" In addition, AAG Energy released 52 issues of toolbox safety knowledge throughout the year and organized 4 toolbox safety tests. Nearly 90% of employees joined the answering part and 88% of them gave all the right answers.

亞美能源一直鼓勵員工從人的不安全行為、物的不安全狀態方面進行行為安全觀察。2021年，公司員工累計在線提交行為安全觀察卡12,885張。通過促使全員的參與和干預，推動問題的發現和及時處理，從而有效避免各類生產安全事故發生。

#### 案例：亞美能源推出安全文化答題活動

2021年10月，亞美能源為提高全員安全意識和技能、推動公司安全文化建設，推出了「今天您安全了嗎？」每日答題活動。此外，亞美能源全年累計發佈52期工具箱安全知識材料，組織進行4次工具箱知識測試。該活動全員答題率達90%，答題通過率達88%。



## 2. Safe Production and Clean Operations

### 安全生產 清潔運營

#### Safety Emergency Management

AAG Energy has continuously improved the emergency plan and regularly carried out emergency drills to comprehensively enhance the emergency response awareness and skills of all employees. In 2021, AAG Energy carried out 72 emergency drills on public health emergencies, mechanical injury and electric shock, well control, gas leakage on valve well pipeline, chemical leakage on valve group, hydrogen sulfide leakage, hazardous waste leakage in the reservoir, forest fire, hydrogen sulfide leakage during tripping the tubing, flood control and earth rock collapse, CBM fire and explosion containing hydrogen sulfide, first aid for the wounded, etc. A large number of emergency drills have tested the emergency plan, trained the emergency team, adjusted the emergency mechanism, publicized the emergency management knowledge and improved the emergency rescue preparation.

Panzhuang Project and Mabi Project, following the requirements of the *New Guidelines for the Preparation of Safety Production Emergency Plan* and in combination with the actual adjustment of projects' organizational structure, entrust a third-party agency of safety technical service to revise the *Safety Production Emergency Plan* and file to the municipal emergency management department. In 2021, Panzhuang Project completed the revision of the *Emergency Plan for Environmental Emergencies* and the filing to the government. Mabi Project's *Emergency Plan for Environmental Emergencies* is still valid.

#### 安全应急管理

亞美能源不斷完善應急預案，並定期開展應急演練活動，旨在全面提升全員的應急反應意識和技能。2021年，亞美能源累計組織開展了72次應急演練，演練科目包括：突發公共衛生事件、機械傷害和觸電、井控、閘井管道氣體洩漏、閘組化學品洩漏、硫化氫洩漏、庫區危廢洩漏、森林火災、下油管過程中硫化氫洩露、防洪防汛和土石塌方、含硫化氫煤層氣火災爆炸、傷員急救等。通過大量的應急演練，使應急預案得到檢驗、應急隊伍得到鍛煉、應急機制得到磨合、應急管理知識得到宣傳、應急救援準備得到完善。

潘莊項目、馬必項目根據新的《安全生產應急預案編製導則》要求，結合項目組織架構調整實際情況，推進項目委託第三方安全技術服務機構對項目《安全生產應急預案》進行重新修訂並完成市級應急管理部門備案。2021年，潘莊項目完成《突發環境事件應急預案》修訂及政府備案工作，馬必項目《突發環境事件應急預案》尚處於有效期內。

## 2. Safe Production and Clean Operations 安全生產 清潔運營

### Case: Comprehensive Emergency Drill for CBM Leakage of AAG Energy 508 Centralized Transmission Pipeline

To make emergency management personnel and response team more proficient in the emergency plan and improve their emergency response capacity, Panzhuang Project carried out a comprehensive emergency drill for AAG Energy 508 gathering and transportation pipeline on November 11, 2021. This drill tested the plan, trained the team, run in mechanism and achieved publicity and education. At the same time, it also further popularized the knowledge of emergency handling after the leakage of gathering and transportation pipeline and increased the risk awareness and self and mutual rescue ability of employees.

### 案例：亞美能源508集輸管道煤層氣洩漏綜合應急演練

為增強應急管理人員和響應團隊對應急預案的熟練程度，提高應急處置能力，2021年11月11日，潘莊項目開展了508集輸管道煤層氣洩漏綜合應急演練。通過此次綜合演練，達到了檢驗預案、鍛煉隊伍、磨合機制、宣傳教育的演練目的，同時，進一步普及集輸管道洩露後的應急處置知識，提高員工風險防範意識和自救互救應對能力。



Figure: Emergency Operation Center (EOC) and On-Site Operators Cut Off the Gas Source  
圖：應急指揮中心和現場作業人員進行氣源關斷操作



## 2. Safe Production and Clean Operations 安全生產 清潔運營

### Contractor Safety Management

Upholding the concept of “long-term cooperation and mutual benefit”, AAG Energy strengthened the safety production management of contractors. AAG Energy took several actions including on-board training, foreman training, safety management appraisals and contractors’ safety conferences to drive the continuous improvement of the contractor’s on-site safety management, which fully ensured the safety of field operation.

### 承包商安全管理

亞美能源秉持「長久合作、互利共贏」的理念，持續完善承包商的安全生產管理工作。我們通過開展入場培訓、領班培訓、安全管理評比活動、承包商安全大會等系列行動，促進承包商現場安全管理水平不斷提升，全面保障承包商施工作業安全。

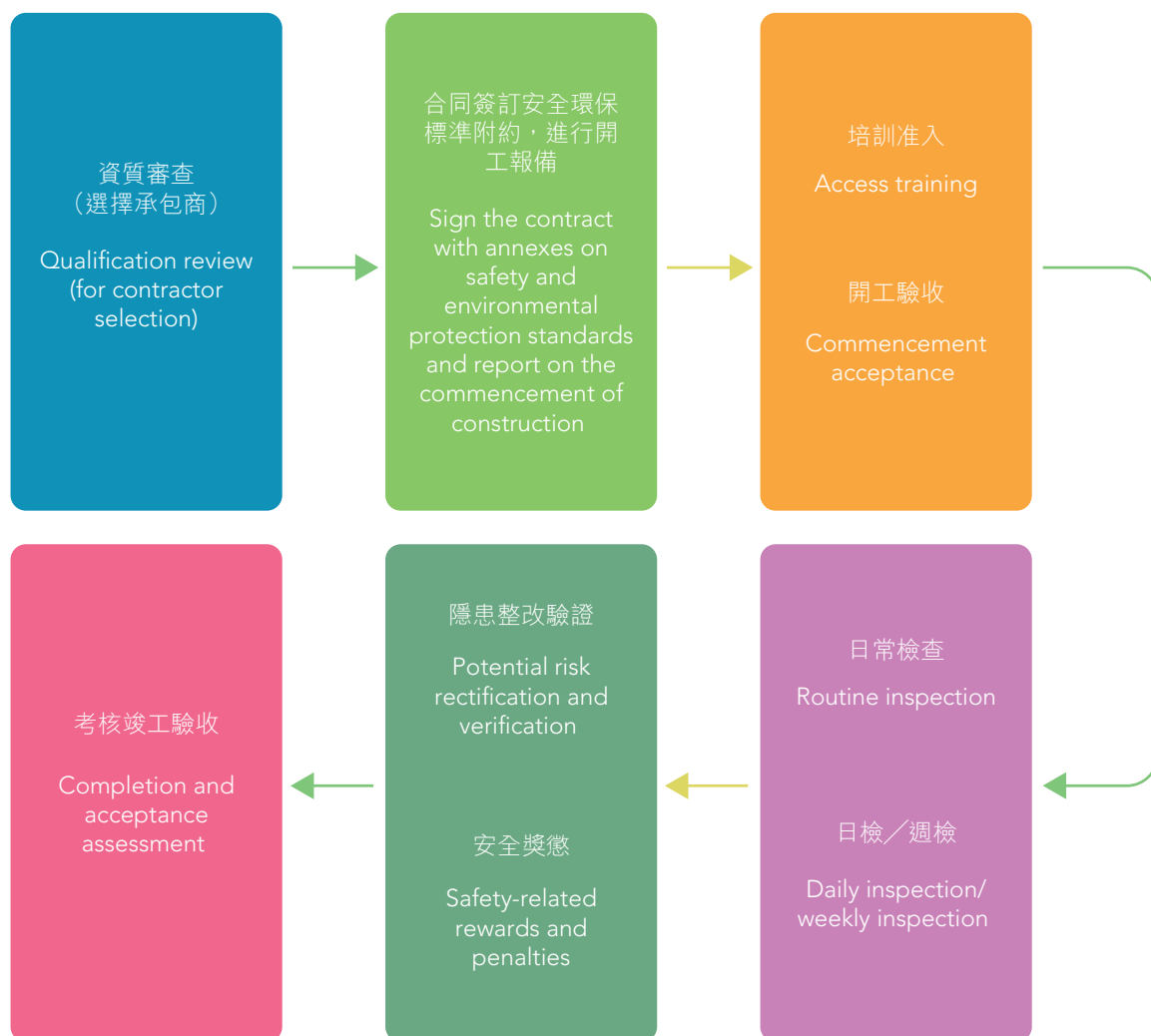


Figure: Contractor safety management control process

圖：承包商安全管理控制流程

## 2. Safe Production and Clean Operations

### 安全生產 清潔運營

Qualification examination	We conduct on-site investigations on major contractors before they enter the site, mainly from the aspects of corporate qualification, safety management system, management system, preservation of equipment and facilities, personnel qualification, detection of mandatory safety accessories, emergency management, safety investment and safety performance in recent years. In this way, we select competent teams with qualified equipment, excellent performance in safety management, extensive experience and strong technical skills.
資質審查	對重要承包商入場前進行實地考察，主要從單位資質、安全管理體系、管理制度、設備設施的完好率、人員資質、強檢設備安全附件的檢測、應急管理、安全投入及近幾年的安全業績等多方面進行初步考察，優選資質具備、設備合格、安全管理業績優良、經驗豐富、技術素質過硬的隊伍。
Preparation for commencement	In accordance with the <i>Interim Measures for the Safety Management of Non-coal Mine Outsourcing Projects</i> , the <i>Production Safety Law of the People's Republic of China</i> , the <i>Safety Regulations for Surface Mining of CBM (for Trial Implementation)</i> and other laws and regulations, as well as the safety management requirements of local governments at all levels on the outsourcing projects of the construction company, we strictly implement the project commencement reporting system, interpret, publicize and implement the notice on the project filing documents issued by the government to the entry contractors, assist the contractor to prepare the submitted files as required. We carefully review their files before submission, give suggestions on rectification for contractors whose files are unqualified and handle the reporting procedures with one report for one project, namely, a construction contract for a project.
開工準備	根據《非煤礦山外包工程安全管理暫行辦法》《安全生產法》及《煤層氣地面開採安全規程(試行)》等相關法規及地方各級政府關於建設單位外包工程安全管理要求，嚴格落實工程項目開工報告制度，解讀政府下發的關於工程項目報備文件通知並向入場承包商進行宣貫，協助承包商按照文件要求準備報備資料。在遞交資料前進行認真審查，對資料不合要求的承包商提出整改建議，按照「一項目一報告」(一份施工合同為一個項目)要求進行政府報告手續辦理。

## 2. Safe Production and Clean Operations

### 安全生產 清潔運營

Training before entry

We participate in the Contractor's operation start-up meeting, inform them of safety management requirements before entering the site and provide safety education and training when suppliers returned to work and production on the sites. We promote the contractor to participate in the Company's foreman training to ensure that each construction project is equipped with a qualified on-site foreman.

培訓准入

參加承包商作業啟動協調會，提出安全管理要求，進行入場前安全告知，實施供應商復工復產及入場安全教育培訓，並推進承包商參加公司領班培訓，確保每個施工項目都配備有培訓合格的現場領班。

In 2021, we trained 2,890 contractors for 11,501 hours. The study and publicity of safety knowledge on laws and regulations, the Company's management system, on-site management requirements, high-risk operation management, occupational health and risk notification improved the safety awareness and professional skills of on-site operators.

2021年，全年共培訓承包商2,890人次，共計11,501學時。通過相關法律法規、公司管理體系制度、現場管理要求、高風險作業管理、職業健康、風險告知等相關安全知識的學習和宣貫，提升了現場作業人員的安全素質和業務技能。

Daily inspection

In 2021, we organized and promoted the project-level and department-level safety inspection on the Contractor's site throughout the year and tracked the problems found until they are rectified and closed.

日常檢查

2021年，全年通過組織推動開展項目級、部門級對承包商現場進行安全檢查，對查出問題進行跟蹤，直至全部整改關閉。

We continue to strengthen the acceptance and inspection before commencement in terms of contractor's organization, standardization of site, report of main equipment and facilities, emergency equipment, labor protection and environmental protection, etc.

持續強化開工前驗收檢查，重要檢查項包括：承包商組織機構、現場標準化、主要設備設施報告、應急裝備、勞動防護、環境保護等。

The contractors identified many problems with weaker safety management at the acceptance site for commencement shall be rectified and shut down within a time limit. If they fail to meet the commencement requirements, we asked the business department to urge the contractor to make significant corrections, which should be verified by the business department on-site before the construction start.

對開工驗收現場存在問題較多、安全管理相對薄弱的承包商進行限期整改和停工整改，達不到開工要求的通知業務部門督促承包商認真整改，經業務部門現場核實後方可開工。

## 2. Safe Production and Clean Operations

### 安全生產 清潔運營

Hidden risk rectification and check	We strictly implement the <i>Supplementary Agreement on HSE Standards and Agreement on the Safety Management of Non-coal Mine Outsourcing Projects</i> . During the operation, we carefully implement the <i>Regulations on Safety Management of Engineering Contractors</i> and the hidden risk troubleshooting management system. In addition to daily inspection and weekly inspection, we focus on the key processes and key nodes of the construction project and conduct on-site supervision and guidance. We increase the contractor punishment for violation of regulations and strengthen contractor safety management throughout the year. In 2021, Mabi Project issued 106 punishments to the contractors for quality, safety and environmental problems, and collected a fine of about RMB1.032 million.
隱患整改驗證	嚴格執行《環境健康與安全的標準附約》《非煤礦山外包工程安全生產管理協議》，作業過程中認真落實《工程承包商安全管理規定》相關要求和隱患排查管理制度，除日常檢查、週檢外，把施工項目關鍵工序及關鍵節點作為重點關注，做好現場監督指導工作。加大承包商違章處罰力度，全年持續強化承包商的安全管理，2021年度馬必項目因質量安全環保問題，累計處罰承包商106次，共計收繳罰款約103.2萬元。
安全獎懲	
Assessment and acceptance	We keep a sense of proportion by giving suggestions on rectification for the non-conformities found in the acceptance of completion, truthfully recording them on the acceptance record sheet and following up on the rectification.
考核竣工驗收	採取「輕重緩急」的工作模式，對竣工驗收發現的不符合項提出整改建議，如實記錄在驗收記錄單上，並進行跟進整改閉合。

## 2. Safe Production and Clean Operations

### 安全生產 清潔運營

In 2021, we improved the provisions in the *Agreement on the Safety Management of Non-coal Mine Outsourcing Projects and Supplementary Agreement on HSE Standards* signed with the contractor to make the HSE requirements more specific and the responsibilities of both parties more defined while strengthening the punishment provisions for HSE violations. At the same time, we revised the *Contractor Management Procedure and Supplier Management Regulations*, added the requirements of the contractor's ESG entry and safety assessment and formulated a more targeted and practical safety assessment form. We completed 52 engineering contractor assessments in the first half of 2021 and 76 engineering contractor assessments in the second half of 2021.

In addition, we carry out contractor bridging management to more comprehensively and effectively manage the construction contractor team. By the end of December 2021, the Company has completed the bridge management of 9 contractors, accounting for 33% of contractors in high-risk industries. The bridging management of the contractor's documents reinforced the contractor's responsibility for operational risk control and improved the contractor's operation efficiency.

### 2.2 Creating Clean Environment

Adhering to the concept of green development, AAG Energy actively assumes environmental responsibilities and is committed to building an eco-friendly enterprise. We pursue the concept of "clear water and green mountains are as good as mountains of gold and silver" by strictly implementing the national and local government's ecological and environmental requirements. With the strengthening of environmental protection and energy and resources management as the starting point for work, we effectively raise the level of environmental management and the utilization of energy and resources, achieving continuous improvement of environmental performance and further mitigating the impact of our production and operation links. As of December 31, 2021, AAG Energy has no environmental incidents that caused serious impacts.

2021年，我們完善了與承包商簽署的《非煤礦山外包工程安全生產管理協議》《HSE標準附約》合同中的相關條款，對HSE要求具體化，雙方責任更加明確，同時強化了HSE違約處罰條款等。同時，我們修訂了《承包商管理程序》《供應商管理規定》，增加承包商關於ESG方面的准入要求和安全考核要求，制定了更有針對性和實用性的「安全考核表」。2021年，上半年累計完成52家次工程類承包商考核，下半年累計完成76家次工程類承包商考核。

此外，我們開展承包商橋接管理，更加全面、有效的管理承包商施工隊伍。截至2021年12月底，公司已完成9家承包商橋接管理工作，佔高危行業承包商數的33%。通過承包商文件橋接管理，壓實了承包商作業許可風險管控責任，提高了承包商作業效率。

### 2.2 共創綠色環境

亞美能源始終高度重視生態環境保護，致力於打造生態友好型企業。我們堅持秉承「綠水青山就是金山銀山」的初心，嚴格貫徹落實國家及地方政府關於生態環保要求，主動識別並積極應對氣候變化帶來的風險與機遇，不斷提升環境管理水平與能源資源利用率，進一步減少自身生產運營給環境所帶來的負面影響。截至2021年12月31日，亞美能源未發生造成嚴重影響的生態環保事件。

## 2. Safe Production and Clean Operations 安全生產 清潔運營

### Response to Climate Change

Climate change is a major global challenge facing mankind today. AAG Energy continues to focus on climate change issues with the vision of aspiring “to be the world’s leading, most enduring clean energy company for today and tomorrow”.

In 2021, based on our business and operational reality, we systematically produced a climate change governance system, actively identified and responded to transformation-level risks and entity risks faced by the Company due to climate change, formulated special response measures to climate risks, and comprehensively planned the path of low-carbon development. In order to continuously improve the Company’s resilience to climate change, we fully dealt with the impact of climate change on the Company’s business operation, grabbed the industry opportunities brought by climate change, created long-term and stable corporate value and contributed to the harmonious development of energy, economy, society, and environment.

We focus on our climate-related risk management and response in the terms of governance, strategy, risk management, indicators and targets with reference to the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD) established by the Financial Stability Board (FSB) and the *Guidance on Climate Information Disclosure* of the Stock Exchange.

### 應對氣候變化

氣候變化是當今人類面臨的重大全球性挑戰。亞美能源持續以「勵志成為國際領先的永續發展的清潔能源偉大企業」為願景，高度關注氣候變化議題。

2021年，我們結合自身業務及運營特點，系統性建立起氣候變化管治體系，主動識別與積極應對公司因氣候變化所面臨的各項轉型風險與實體風險，制定氣候風險專項應對舉措，統籌佈局低碳發展路徑。以持續提升公司對氣候變化的適應能力，充分應對氣候變化對於公司業務運營帶來的影響，把握氣候變化帶來的行業發展機遇，以創造長期穩定的企業價值，為促進能源、經濟、社會與環境的和諧發展貢獻力量。

我們參照金融穩定理事會(FSB<sup>1</sup>)成立的氣候相關財務信息披露工作組(TCFD)建議與香港聯交所《氣候信息披露指引》，重點披露我們在治理、戰略、風險管理，以及指標和目標四個領域的氣候相關風險管理和應對。

<sup>1</sup> FSB, Financial Stability Board，即金融穩定理事會

## 2. Safe Production and Clean Operations 安全生產 清潔運營

### Climate Governance

Based on the Company's ESG organizational structure, AAG Energy has established a comprehensive climate risk governance system involving different levels from the Board to the executive level to promote the implementation of the Company's climate strategy and climate risk management affairs.

**The Board:** as the highest responsible body for ESG work of the Company, it shoulders the top responsibility for the Company's response to climate change-related matters.

**ESG Working Group:** as the management body of the Company's ESG work, it comprehensively leads and manages the climate risk management within the Company and its subsidiaries, regularly discusses climate change-related matters and monitors climate risks. Besides, the ESG Working Group also reviews the Company's climate change response work and the achievement of climate objectives, regularly reports to the Board and proposes suggestions to support the Board's supervision and decision-making on climate change-related matters. Its specific responsibilities include:

- (1) Assess, discuss and monitor climate-related issues and risks of the Company every half year, ensure the proper risk identification and assessment results and incorporate them into the Company's development strategy;
- (2) Regularly supervise the Company's policies, plans and performance related to climate change to ensure the climate strategies and measures are applicable and proper;
- (3) Set climate targets, including carbon emission reduction targets, and regularly review the completion of climate-related targets to assess the effectiveness of climate targets and measures.

### 氣候治理

亞美能源以公司ESG工作組織架構為基礎，建立起董事會至執行層面的全方位氣候風險管治體系，以推進公司氣候戰略及氣候風險管理相關事務的實施與落地。

**董事會：**作為公司ESG工作的最高負責機構，對公司應對氣候變化相關事宜負最高責任。

**ESG工作組：**作為公司ESG工作的管理機構，全面領導、管理公司及附屬公司範圍內的氣候風險管理工作，定期討論氣候變化相關事宜並監控氣候風險，監管審閱公司氣候變化應對工作及氣候目標達成情況，定期向董事會匯報並提出建議，以支持董事會對於氣候變化相關事宜的監管與決策，具體職責包括：

- (1) 每半年評估、討論、監察公司氣候相關議題及風險，確保風險識別及評估結果合理性，並將其納入公司發展策略；
- (2) 定期監管公司有關應對氣候變化的政策、計劃及表現，以確保氣候策略及措施的適用性及合理性；
- (3) 制定包括碳減排目標在內的相應氣候目標，定期審閱氣候相關的目標的完成情況，以評估氣候目標及措施的有效性。

## 2. Safe Production and Clean Operations 安全生產 清潔運營

**ESG Executive Group:** responsible for overall coordination of the Company's regular climate risk management, and has an ESG Executive Office. Specific responsibilities include:

- (1) Organize and coordinate all ESG special working groups and relevant departments to carry out climate risk identification and assess the impact of risks;
- (2) Assist ESG Working Group to make climate action plans for the Company and set relevant climate targets;
- (3) Regularly disclose the work and risk identification results of addressing climate change to stakeholders;
- (4) Coordinate internal and external resources, regularly provide training on climate change response, ensure that the Board and the Company's business departments have the necessary expertise and skills, improve the Board's ability to supervise climate-related issues and risks and ensure the Company's overall resilience to climate risk.

### Climate Strategy

On the basis of business characteristics, AAG Energy actively identifies and evaluates the risks and opportunities related to climate change, and incorporates climate risk identification and management into the existing risk management system. In 2021, we identified the transformation-level risks and entity risks related to the Company's operation. According to the list of risks and opportunities, we conducted materiality assessment and prioritization with reference to different risk analysis approaches and formulated response measures and strategies for climate risks and opportunities.

**ESG 執行組：**負責統籌協調公司日常氣候風險管理工作，下設ESG執行辦公室，具體職責包括：

- (1) 組織、聯動各ESG專項工作組及相關部門，開展氣候風險識別工作，評估各類風險影響；
- (2) 協助ESG工作組制定公司各項氣候行動計劃並訂立相關氣候目標；
- (3) 定期向利益相關方披露應對氣候變化工作內容與風險識別結果；
- (4) 協調內外部資源，定期提供應對氣候變化能力培訓，確保董事會及公司各業務部門具備必需的專門知識及技能，提升董事會對氣候相關議題、風險監管能力，確保公司整體氣候風險適應力。

### 氣候戰略

亞美能源從企業自身出發，結合自身業務特點，主動識別並評估氣候變化相關風險和機遇，將氣候風險識別與管理工作融入現有風險管理體系。2021年，我們識別出與公司運營相關的轉型風險和實體風險，依據風險機遇清單，我們參考不同風險分析方法，進行重大性評估與優先級排序，以此為基礎制定相應的氣候風險與機遇的應對措施與策略。



## 2. Safe Production and Clean Operations 安全生產 清潔運營

	Risk 風險		Impacts 影響描述	Response Measures 應對措施
Transformation risks 轉型風險	Policy risks 政策風險	Energy structure and energy use 能源結構及能源使用	<ul style="list-style-type: none"> <li>The national energy structure will shift to non-fossil energy in the long run.</li> <li>長期來看國家能源結構將轉向非化石能源。</li> </ul> <p>Carbon neutrality will promote the transition of China's development powered by fossil energy to non-fossil energy, which is of great significance for China to achieve energy independence and ensure energy security. In 2019, the Ministry of Ecology and Environment issued the <i>Implementation Guides for Carbon Neutrality of Large-Scale Operation (for Trial Implementation)</i>, which aims to offset GHG emissions of large-scale operations by trading carbon quotas, and carbon credits or carbon sinks generated by new forestry projects. 碳中和將推動我國發展從化石能源為主向非化石能源過渡，對中國實現能源獨立、確保能源安全具有重要意義。2019年生態環境部發佈了《大型活動碳中和實施指南(試行)》，為較大規模聚集行動通過購買碳配額、碳信用的方式或通過新建林業項目產生碳匯量的方式抵銷大型活動的溫室氣體排放量。</p>	<ul style="list-style-type: none"> <li>Accelerate the establishment of a low-carbon, clean and efficient new energy supply system to support high-quality economic development</li> <li>應加快建立低碳清潔的高效新能源供應體系，支持經濟高質量發展</li> <li>Speed up the introduction or development of clean energy technologies and equipment</li> <li>加快引進或研發清潔能源技術及設備的進程</li> <li>Establish a committee to report on sustainable development and other contents, and set targets such as low-carbon emission reduction</li> <li>建立委員會，將可持續發展等相關內容進行報告，以及設定低碳減排等目標</li> </ul>
		Carbon trading market 碳交易市場	<ul style="list-style-type: none"> <li>The state continues to improve the carbon emission trading market and operating mechanism, and the Company may be included in the carbon emission trading market, increasing operating costs and low-carbon investment costs. At the same time, the quota and carbon price will also bring the risk of increased performance costs to the Company.</li> <li>國家不斷完善碳排放交易市場及運行機制，且公司可能會被納入碳排放交易市場，導致公司的運營成本、低碳化投資成本增加，同時，相關配額分配、碳價格等也會為企業帶來履約成本增加的風險。</li> </ul>	<ul style="list-style-type: none"> <li>Actively promote the transformation of low-carbon production and operation</li> <li>主動推進低碳化生產運營的轉型</li> <li>Long term realization through transformation to digitalization and electrification</li> <li>通過向數字化和電氣化轉化的途徑來長期實現</li> <li>Connect with the national carbon market, continue to optimize the development of the local carbon market</li> <li>做好與國家碳市場的銜接，繼續優化本地碳市場的建設</li> </ul>

## 2. Safe Production and Clean Operations 安全生產 清潔運營

Risk 風險	Impacts 影響描述	Response Measures 應對措施
Legal risks 法律風險	<p>Compliance risks 合規風險</p> <ul style="list-style-type: none"> <li>In the long run, the international political and economic changes and the tighter domestic and international laws related to climate change may increase the Company's compliance risk, including the difficulty of getting approvals.</li> <li>長期來看，國際政治經濟局勢變化，國內和國際關於氣候變化相關的法律制定趨向嚴格，可能會使得公司的合規風險增加，包括相關審批的難度加大等。</li> </ul>	<p>Strictly abide by laws and regulations, and disciplines 嚴格遵守相關法律法規，遵紀守法</p>
	<p>Lawsuit risks 訴訟風險</p> <ul style="list-style-type: none"> <li>During the routine operation, the aging infrastructure, land use and environmental pollution of on-site construction and disputes over information disclosure may lead to lawsuits against the Company.</li> <li>在企業日常運營的過程中，基礎設施老化、現場施工的土地佔用和環境污染、信息披露存在爭議等情況可能會導致公司產生訴訟事件。</li> </ul>	<ul style="list-style-type: none"> <li>Promote the Company's information disclosure to be more transparent and accurate 推動公司信息公開披露的透明度準確度</li> <li>Timely check the potential risks in the project and take measures to reduce GHG emissions 及時排查項目中的潛在風險，採取降低溫室氣體排放的相關措施</li> <li>Handle disputes in accordance with laws and regulations 依法合規處理相關糾紛事件</li> </ul>

## 2. Safe Production and Clean Operations 安全生產 清潔運營

Risk 風險		Impacts 影響描述	Response Measures 應對措施
Technological risks 技術風險	Emission reduction investment 減排投資	<ul style="list-style-type: none"> <li>In the long term, investing in low-carbon projects with great potential meets the needs of the Company to deal with climate change and respond to the national "dual carbon" targets.</li> <li>長期來看，投資具有重大潛力的低碳項目符合企業應對氣候變化、響應國家「雙碳」目標的需要。</li> </ul>	<ul style="list-style-type: none"> <li>Invest in the development of renewable energy to reduce direct or indirect GHG emissions during operation</li> <li>投資開發可再生能源，以減少運營過程中直接或間接溫室氣體排放</li> </ul>
	Technology R&D 技術研發	<ul style="list-style-type: none"> <li>In the context of global climate change, low-carbon technology, as the core driving force for the low-carbon economy, has become a key factor for the Company to develop the low-carbon economy.</li> <li>在全球氣候變化的背景下，低碳技術作為低碳經濟發展的核心動力，已經成為企業發展低碳經濟的關鍵因素。</li> </ul>	<ul style="list-style-type: none"> <li>Increase technological research and investment in research</li> <li>加大技術研究，增加科研投入</li> <li>Track the development and application of new technologies in the industry</li> <li>關注行業內新技術的發展和應用</li> <li>Analyze the feasibility of technological replacement</li> <li>分析技術更換的可行性</li> <li>Establish experimental units for energy-saving and consumption reduction technology to reduce large-scale losses caused by the technological replacement</li> <li>成立節能降耗技術試驗點，降低因技術更換造成的大規模損失</li> </ul>

## 2. Safe Production and Clean Operations 安全生產 清潔運營

Risk 風險	Impacts 影響描述	Response Measures 應對措施	
Market risks 市場風險	<ul style="list-style-type: none"> <li>Consumer preference change 消費者偏好轉變</li> </ul>	<ul style="list-style-type: none"> <li>The dual carbon targets will lead to changes in customer preferences and the demand for more low-carbon energy solutions. The failure to meet the customer's demand in time will lead to the loss of revenue and market share.</li> <li>國家雙碳目標背景下將導致客戶偏好轉變，產生更多低碳能源解決方案的需求，若亞美能源未能及時把握客戶需求，將導致收入與市場份額的損失。</li> </ul>	<ul style="list-style-type: none"> <li>Integrate biomass, solar energy, geothermal and other low-carbon energy based on local conditions to meet the needs of customers for low-carbon solutions</li> <li>因地制宜融合生物質、太陽能、地熱等低碳能源，匹配客戶低碳方案的需求</li> <li>Develop low-carbon and energy-saving technologies</li> <li>開發低碳節能技術</li> <li>Cultivate and introduce technological innovation talents and increase the research on energy conservation and consumption reduction technology</li> <li>培養和引進技術革新人才，加大節能降耗技術研究</li> <li>Replace or upgrade equipment and facilities and eliminate highly energy-consuming equipment</li> <li>更換或升級設備設施，淘汰高耗能設備</li> </ul>
	<ul style="list-style-type: none"> <li>Extreme climate change affects product supply 極端氣候變化影響產品供應</li> </ul>	<ul style="list-style-type: none"> <li>Affected by extreme weather, in case of warmer winter, the demand for CBM in heat supply will generally decrease, and will have a direct impact on the turnover of the Company</li> <li>受極端天氣影響，若出現暖冬等氣候現象，供暖季節的煤層氣需求普遍降低，對於企業的營業額產生直接影響</li> </ul>	<ul style="list-style-type: none"> <li>Prepare emergency plans for extreme weather in advance</li> <li>提前制定極端天氣應急預案</li> <li>Improve the resilience of facilities and equipment to extreme weather</li> <li>提升設施設備面對極端天氣的抵御能力</li> </ul>

## 2. Safe Production and Clean Operations 安全生產 清潔運營

Risk 風險		Impacts 影響描述	Response Measures 應對措施	
Reputational level risks 聲譽風險	Investor concerns 投資者關注	<ul style="list-style-type: none"> <li>Investors and other stakeholders pay more attention to climate change, the Company's poor performance in environmental protection and carbon emission reduction will not only affect its public image but also will be distrusted and unfavored by investors and customers.</li> <li>隨著投資者和其他利益相關方對氣候變化重視增加，公司在環保與碳減排方面的不良表現不僅會影響公眾形象，也會導致投資者和客戶的不信任、不支持。</li> </ul>	<ul style="list-style-type: none"> <li>increase the Company's attention to climate change, including strengthening the identification, management and plan of climate change risks</li> <li>加大公司對氣候變化的重視程度，包括加強對氣候變化風險的識別、管理和預案</li> <li>Establish all-round communication channels with stakeholders, communicate regularly with stakeholders and feedback the Company's climate actions in a timely manner</li> <li>與利益相關方建立全方位的溝通渠道，定期與利益相關方溝通，及時反饋公司在氣候問題方面的行動</li> </ul>	
	Corporate image 公司形象	<ul style="list-style-type: none"> <li>In the long run, with the public's increasing attention to climate change, whether the Company adopts low-carbon and environmentally friendly operation models is directly related to the corporate image.</li> <li>長期來看，隨著社會大眾對氣候變化的關注，企業是否採取低碳環保的運營方式直接關係到企業形象的建設。</li> </ul>	<ul style="list-style-type: none"> <li>Continuously strengthen the Company's environmental management, control GHG emissions and pollutant emissions, and ensure better environmental performance</li> <li>不斷加強公司環保方面的管理工作，做好溫室氣體排放控制和污染物排放，確保環境方面的表現較好</li> <li>Carry out publicity on environmental protection and energy conservation, and establish communication and display channels with the public</li> <li>開展環保節能宣傳，建立與社會大眾的溝通和展示的渠道</li> </ul>	
Physical risks 物理風險	Emergency risks 急性風險	Typhoon 台風	<ul style="list-style-type: none"> <li>Destroy mining equipment, affect the stability of the mining business, threaten the personal safety of employees and cause loss of the Company's property.</li> <li>破壞開採設備，影響開採業務穩定性，威脅員工人身安全，並造成公司財產安全受損。</li> <li>A shutdown during typhoons may lead to business interruption and other issues, involving breach of contract, compensation and legal liability.</li> <li>台風期間停產可能導致業務中斷等問題，涉及違約、賠償及法律責任。</li> </ul>	<ul style="list-style-type: none"> <li>Prepare typhoon emergency plans in advance to ensure the safety of personnel and property and reduce losses caused by business interruption</li> <li>提前制定台風應急預案，保障人員及財產安全，降低業務中斷造成的損失</li> <li>Improve the wind resistance of equipment</li> <li>提升設備抗風能力</li> <li>Purchase commercial insurance</li> <li>購買商業保險</li> </ul>

## 2. Safe Production and Clean Operations 安全生產 清潔運營

Risk 風險	Impacts 影響描述	Response Measures 應對措施
<p>Extreme rainfall/flood 極端降水/洪水</p>	<ul style="list-style-type: none"> <li>• Extreme rainfall and floods may threaten the safety of production equipment and personnel and interrupt business.</li> <li>• 極端降雨與洪水可能會導致生產設備及人員安全受到威脅，業務產生中斷。</li> <li>• Road collapse, wall collapse, landslide, debris flow, etc., as well as displacement, settlement or fracture of mine pipeline under external force, will result in safety accidents.</li> <li>• 道路塌方、圍牆倒塌、山體滑坡、泥石流等，礦井管道受外力發生移位、沉降或斷裂漏氣，造成安全事故。</li> <li>• The mining area located in the low-lying ground will increase the risk of flood, damage production facilities and equipment, affect supply stability, and cause mine accidents and threaten production safety.</li> <li>• 位處低窪地區的礦區淹水風險增加，破壞生產設施設備，影響供給穩定性，內部洪澇易造成礦井事故，威脅生產安全。</li> <li>• A shutdown during heavy rainfall may lead to business interruption and other issues, involving breach of contract, compensation and legal liability.</li> <li>• 強降水期間停產可能導致業務中斷等問題，涉及違約、賠償及法律責任。</li> </ul>	<ul style="list-style-type: none"> <li>• Prepare flood and heavy rainfall emergency plans in advance to ensure the safety of personnel and property and reduce losses caused by business interruption</li> <li>• 提前制定洪水/強降雨應急預案，保障人員及財產安全，降低業務中斷造成的損失</li> <li>• Improve the flood resistance of the equipment</li> <li>• 提升設備抗洪水能力</li> <li>• Purchase commercial insurance</li> <li>• 購買商業保險</li> </ul>

## 2. Safe Production and Clean Operations 安全生產 清潔運營

Risk 風險	Impacts 影響描述	Response Measures 應對措施	
Extreme heat 極熱天氣	<ul style="list-style-type: none"> <li>Increase the health and safety risks of employees, and easily cause heatstroke.</li> <li>增加員工健康安全風險，易導致中暑。</li> <li>The rising temperature will increase the cost of facility maintenance and the risk of the mine fire.</li> <li>氣溫升高增加設施維修保養成本，增加礦場火災風險。</li> </ul>	<ul style="list-style-type: none"> <li>Prepare extreme heat and coldness emergency plan in advance to ensure the safety of personnel and property</li> <li>提前制定極熱/極寒天氣應急預案，保障人員及財產安全</li> <li>Improve the extreme heat and coldness resistance of the equipment</li> <li>提升設備應對極熱/極寒氣候能力</li> <li>Increase the frequency of equipment maintenance</li> <li>提高設備維護頻率</li> </ul>	
Extreme coldness 極冷天氣	<ul style="list-style-type: none"> <li>Increase the health and safety risks of employees, make the equipment vulnerable to damage in extremely cold weather, and increase the cost of facility maintenance.</li> <li>增加員工健康安全風險，極寒天氣使設備易受損，增加設施維修保養成本。</li> </ul>	<ul style="list-style-type: none"> <li>Increase the frequency of equipment maintenance</li> <li>提高設備維護頻率</li> </ul>	
Chronic risks 慢性風險	Climate change 氣候變化	<ul style="list-style-type: none"> <li>Global warming increases the risk of the heat wave, drought and fire and raises the cost of equipment maintenance.</li> <li>全球變暖增加熱浪、乾旱、火災的風險，增加設備維護成本。</li> <li>In case of warm winter, the demand for heat in winter will be reduced, which will have a direct impact on income.</li> <li>如出現暖冬等氣候現象，冬季供暖需求降低，對收入產生直接影響。</li> <li>Climate change leads to increased rainfall, affecting normal mining operations and increasing the costs of equipment maintenance.</li> <li>氣候變化導致降雨增多，影響正常開採業務，增加設備維護成本。</li> <li>The maintenance and insurance costs of mine equipment in extreme weather increase.</li> <li>礦井設備在極端天氣的維護、保險費用增加。</li> </ul>	<ul style="list-style-type: none"> <li>Prepare fire/heavy rainfall emergency plans in advance to ensure the safety of personnel and property</li> <li>提前制定火災/強降雨應急預案，保障人員及財產安全</li> <li>Increase the frequency of equipment maintenance to ensure the safe and normal operation of the equipment</li> <li>提高設備維護頻率，保證設備安全正常運行</li> <li>Reasonably choose commercial insurance</li> <li>合理選擇商業保險</li> <li>Reasonably plan the market</li> <li>合理規劃市場</li> </ul>

## 2. Safe Production and Clean Operations 安全生產 清潔運營

### Climate Risk Management

Based on the results of regular risk assessment, AAG Energy incorporated climate risk management into its overall risk management system when formulating a business strategy to systematically and scientifically manage climate risks.

We launch climate action in terms of mitigation and adaptation to fully address the impact of climate change. For details, refer to the chapter "Resource Use" in this chapter.

### Indicators and Targets

Based on our peers' environmental targets at home and abroad as well as the national overall goal of achieving a carbon peak in 2030 and carbon neutrality in 2060, the Company fully evaluates its potentials for emission reduction by introducing renewable energy, green power certificates and CCER carbon offset etc. and set the long-term goal of zero-carbon emission in 2060 and 2.5% annual reduction of carbon emission intensity. On this basis, AAG Energy has formulated short-term goals for 2025 and medium-term goals for 2030 respectively:

**Short-term target:** to reduce the Scope I and Scope II GHG emission intensity (tCO<sub>2</sub>e per million cubic meters of natural gas) by 10% by 2025 on the benchmark of 2021

**Medium-term goal:** to reach the Scope I and Scope II GHG emission peak by 2030

**Long-term goal:** achieve zero net Scope I and Scope II GHG emission by 2060

According to the Company's overall climate targets and work plan, AAG Energy links the performance appraisal on climate risk and opportunity management to the Company's sustainable development targets and defines the work and climate risk and opportunity management responsibilities for different departments. The ESG Working Group regularly reviews the completion of climate targets and uses the climate risks and opportunities identified to effectively improve the Company's adaptability to climate change.

### 氣候風險管理

依據定期風險評估結果，亞美能源於業務策略制定環節，將氣候風險管理納入公司整體風險管理體系，對氣候風險進行系統性科學管理。

我們通過緩解與適應兩個層面開展氣候行動，以充分應對氣候變化帶來的影響。詳情請參閱本章「資源使用」章節。

### 指標和目標

綜合國內外同行環境目標設定情況，結合國家2030年實現碳達峰、2060年實現碳中和整體目標，通過可再生能源引入及綠證/CCER碳抵銷等途徑，充分評估自身減排潛力，設定了碳排放量總量2060年將為零、碳排放強度每年遞減2.5%的長期目標。以此為基礎，亞美能源分別制定2025年短期目標及2030年中期目標：

**短期目標：**以2021年為基準年，到2025年範疇一及範疇二溫室氣體排放強度（噸二氧化碳當量/每百萬立方米天然氣）下降10%

**中期目標：**於2030年實現範疇一及範疇二溫室氣體排放總量達峰

**長期目標：**於2060年實現範疇一及範疇二溫室氣體淨零排放

依據公司整體氣候目標及工作規劃，亞美能源確立與公司可持續發展目標相掛鉤的氣候變化機遇/機遇管理績效考核機制，明確各相關部門的工作內容與氣候風險/機遇管理職責，公司ESG工作組定期審閱氣候相關的目標的完成情況，確保氣候風險和機遇的識別成果高效助力於公司氣候變化適應能力的提升。



## 2. Safe Production and Clean Operations 安全生產 清潔運營

Chart: AAG Energy Greenhouse Gas ("GHG") Emissions Data Sheet in 2020 and 2021

表：亞美能源 2020–2021 年溫室氣體排放數據<sup>2</sup>

Greenhouse Gas 溫室氣體	Unit 單位	2020 2020年	2021 2021年
Scope 1 emission equivalent 範疇一排放當量	ton of carbon dioxide equivalent 噸二氧化碳當量	1,389.55	1,034.32
Scope 2 emission equivalent 範疇二排放當量	ton of carbon dioxide equivalent 噸二氧化碳當量	126,681.58	159,343.86
Scope 1 emission density 範疇一排放密度	ton of carbon dioxide equivalent/million cubic meters 噸二氧化碳當量／百萬立方米	1.34	0.80
Scope 2 emission density 範疇二排放密度	ton of carbon dioxide equivalent/million cubic meters 噸二氧化碳當量／百萬立方米	122.52	122.76
GHG emission equivalent 溫室氣體排放當量	ton of carbon dioxide equivalent 噸二氧化碳當量	128,071.12	160,378.18
GHG emission density 溫室氣體排放密度	ton of carbon dioxide equivalent/million cubic meters 噸二氧化碳當量／百萬立方米	123.86	123.56

### Emission Management

AAG Energy adheres to the concept of green development, strictly abides by national laws and regulations, improves and implements the Company's internal rules and regulations and establishes and improves the environmental system to standardize the production process. In this way, the Company ensures that the air pollution, water pollution, and waste generated in the operation process are reduced and disposed of in a standardized manner, and continuously reduces their impacts on the environment.

### 排放物管理

亞美能源堅持綠色發展理念，嚴格遵循國家相關法律法規，完善並落實公司內部規章制度，建立健全環境體系建設，規範日常生產過程，確保經營過程中產生的大氣污染、水污染和廢棄物進行減量化與合規化處置，不斷減輕對生態環境造成的影響。

<sup>2</sup> GHG emissions are presented in CO<sub>2</sub>e. The fossil fuel emission factor is based on IPCC 2006, and the power emission factor is converted according to the *Guidelines for Corporate GHG Emission Accounting Approaches and Reporting — Power Generation Facilities* issued by the Ministry of Ecology and Environment.

<sup>2</sup> 溫室氣體排放量按照二氧化碳當量呈現，其中化石燃料排放因子依據 IPCC 2006，電力排放因子採用生態環境部《企業溫室氣體排放核算方法與報告指南發電設施》進行換算。

## 2. Safe Production and Clean Operations 安全生產 清潔運營

### Air Pollution Management

AAG Energy strictly adheres to national laws and regulations such as the *Environmental Protection Law of the People's Republic of China*, the *Law of the People's Republic of China on Air Pollution Control*, and the *CBM (Coal Gas) Emission Standards (Interim)*, as well as local air emission standards and formulates Environmental Factor Identification, Evaluation and Control Procedures and other internal rules. We have compiled an annual list of important environmental factors to increase air pollution management. In 2021, we have identified and evaluated hazardous factors and environmental factors and established the *List of Major Hazardous Factors* and the *List of Important Environmental Factors*. In addition, we actively explore new approaches and technologies to identify and control various exhaust gases in the production process.

AAG Energy identified and determined the air pollutants emitted during the construction and operation periods and adopted the following special treatment measures.

### 大氣污染管理

亞美能源嚴格遵循《中華人民共和國環境保護法》《中華人民共和國大氣污染防治法》《煤層氣(煤礦瓦斯)排放標準(暫行)》等法律法規，以及地區大氣排放標準，制定《環境因素識別、評價與控制程序》《環境保護管理制度》等內部管理制度，編製年度重要環境因素清單，提升大氣污染管理水平。2021年，我們完成危害因素、環境因素識別與評價工作，並建立《重大危害因素清單》和《重要環境因素清單》。此外，我們積極探索大氣污染治理新技術，有效識別與控制生產過程中的各項廢氣。

亞美能源積極開展建設期與運營期排放的大氣污染物的識別與判定工作，並分別採取相應的專項治理舉措，如下表所示：

**Chart: Identified Sources and Types of Air Pollutants**  
表：大氣污染物排放源及種類識別

Generated during 產生階段	Emission source 排放源	Type of pollutant 污染物種類
Project construction 項目建設期	Drilling diesel engines 鑽井柴油機	SO <sub>2</sub> , NO <sub>2</sub> , particulate matter SO <sub>2</sub> 、NO <sub>2</sub> 、顆粒物
	Construction dust 施工揚塵	Particulate matter 顆粒物
	Construction vehicles 施工車輛	SO <sub>2</sub> SO <sub>2</sub>
	Engineering diesel vehicles, fuel generators and private cars. 工程柴油車、燃油發電機、私家車	SO <sub>2</sub> , NO <sub>2</sub> , particulate SO <sub>2</sub> 、NO <sub>2</sub> 、顆粒物
Project operation 項目運營期	Engineering diesel vehicles, fuel generators and private cars. 工程柴油車、燃油發電機、私家車	SO <sub>2</sub> , NO <sub>2</sub> , particulate SO <sub>2</sub> 、NO <sub>2</sub> 、顆粒物

## 2. Safe Production and Clean Operations 安全生產 清潔運營

For various air pollutants, the following control measures were taken from the source and at the discharge stage:

- Using dust protection measures during the construction period.
- Using low-sulfur fuel for drilling diesel engines as much as possible.
- Using desulfurization equipment such as desulfurization towers, atomization desulfurization devices and hyper gravity machines in gas production to control hydrogen sulfide content.
- Adopting advanced technologies and equipment for CBM gathering and transportation systems to ensure the tightness of equipment.
- Conducting regular line inspections to ensure that the CBM fugitive leakage is controlled within a reasonable range with the help of the pipeline pressure monitoring and control system.
- Placing flare systems at each gas gathering station and the central gas station, igniting the CBM in the pipeline through flare systems for treatment when pigging operations or discharging due to accidents are required so as to reduce direct CBM emissions.

我們針對各類大氣污染物，分別從源頭及排放階段採取以下管控措施：

- 施工期使用揚塵防護措施；
- 鑽井柴油機盡量燃用低硫燃料；
- 採氣過程中使用脫硫塔、霧化脫硫、超重立機等脫硫設備，控制硫化氫含量；
- 對煤層氣集輸系統採用先進的工藝和設備，保障設備密閉性；
- 進行定期巡檢，結合管道壓力監測控制系統，保證煤層氣無組織洩露控制在合理範圍內；
- 各集氣站和集輸總站設置放空火炬，需要進行清管作業或事故狀態排放時，將管道內煤層氣通過放空火炬點火燃燒處理，減少煤層氣直接排放。

## 2. Safe Production and Clean Operations 安全生產 清潔運營

Chart: Data Sheet of AAG Energy Air Pollutants in 2020–2021

表：亞美能源 2020–2021 年大氣污染物數據表<sup>3</sup>

Air Pollutant 大氣污染物	Unit 單位	2020 2020年	2021 2021年
NO <sub>x</sub>	ton 噸	0.15	0.42
SO <sub>2</sub>	ton 噸	0.0037	0.0046
PM 顆粒物	ton 噸	0.01	0.04

### Water Pollution Management

**Wastewater discharge target:** reduce the wastewater discharge density by 8% by 2025 on the basis of 2021 (including drilling wastewater and industrial wastewater).

AAG Energy strictly abides by the *Water Pollution Prevention and Control Law of the People's Republic of China* and strictly disposes of production wastewater to eliminate water pollution incidents. The Company's wastewater discharge mainly comes from the construction and operation periods. The wastewater generated during the construction period mainly includes drilling wastewater, construction wastewater and domestic sewage. Industrial wastewater is generated during the operation period mainly including CBM produced water at the well sites, industrial wastewater and domestic sewage produced at the well sites and stations.

AAG Energy further strengthens the management of drainage, and upgrades and transforms the existing water tank to ensure no leakage of drainage and production water. At the same time, we installed GPS and OBD monitoring systems for all vehicles to monitor the entire process of transshipment and established and improved the ledger throughout the process of production, transfer and disposal of drainage to ensure wastewater was discharged legally and compliantly.

### 水污染管理

**廢水排放目標：**以 2021 年為基準年，到 2025 年，廢水排放密度降低 8% (含鑽井廢水及工業廢水)。

亞美能源嚴格遵守《中華人民共和國水污染防治法》等國家相關法律法規，對生產廢水進行嚴格處理，杜絕水污染事件的發生。公司的廢水排放主要來自施工期與運營期，施工期間廢水主要為鑽井廢水、施工廢水、生活污水等，項目運營期間產生工業廢水，主要包括井場煤層氣採出水、站場工業廢水及生活污水。

亞美能源加強排採水管理，對已建的水池進行升級改造，確保排採水不滲不漏。同時，我們對全部車輛安裝 GPS 和 OBD 監控系統，積極監督排採水拉運單位，建立健全排採水產生、轉移和處置全過程台賬，全面保障合規合法處置。

<sup>3</sup> The air pollutants emitted from the use of diesel were counted with reference to the calculation methods in the *Technical Guidelines for the Compilation of Inventory for Air Pollutant Emissions from Non-road Mobile Sources* of the Ministry of Ecology and Environment; the air pollutants emitted from the use of gasoline were counted with reference to the calculation methods and emission coefficients in the *Reporting Guide for Environmental Critical Performance Indicators* of the Stock Exchange.

<sup>3</sup> 表格內因柴油使用排放的大氣污染物根據生態環境部《非道路移動源大氣污染物排放清單編製技術指南》中的計算方法進行統計；因汽油使用排放的大氣污染物根據香港聯交所《環境關鍵績效指標匯報指引》中計算方法及排放系數進行統計。

## 2. Safe Production and Clean Operations 安全生產 清潔運營

In addition, through special meetings, inspections, consultations and demonstrations with multiple parties, we standardized the collection of oil slick in oily wastewater and included it in the hazardous waste list for management. New valve groups must be built with independent compressor-aided sewage ponds to prevent or reduce the discharge of oily wastewater into the existing production wastewater pond of the well site. In 2021, the Company set new oily sewage treatment equipment to regularly transfer and treat the oily sewage from valve groups and stations. In addition, the Company has carried out special treatment of oily wastewater. In order to better remove petroleum wastewater in the isolator, we adopted the coagulation adsorption method, i.e.: added a certain amount of coagulant into the sewage, flocculated the micro oil dissolved in the sewage into a mass, dehydrated it with the screw-type sludge dehydrator and finally transported the sludge to a landfill.

Panzhuang Project solves the HSE risks such as unsafe road transportation for pumping water, which is largely impacted by weather. Through cooperation with a third party, we installed skid-mounted water treatment devices in the well sites to directly dispose of the pumping water and reduce the safety and environmental risks. The skid-mounted pumping water purification and treatment equipment were patented, and the pumping water treatment project was approved by the local government. At present, the pumping water treatment device has been in a test run.

In order to reduce the cost of pumping water treatment and the risk of environmental policies, Mabi Project comprehensively utilized pumping water, used centralized drainage pools, and installed skid-mounted drainage treatment devices in the well sites. In 2021, the Mabi project comprehensively utilized 60% of pumping water mainly for fracking, operation and dust removal.

此外，我們通過召開專題會議、多方考察諮詢等方式，規範含油廢水中的浮油收集過程，將其納入危廢清單進行嚴格管控，並要求新建閥組必須修建獨立的壓縮機排污收集池，防止或減少含油廢水排入井場生產廢水池內。2021年，公司新建含油污水處理設備，定期對閥組及站場的含油污水進行轉運並處理。此外，公司開展了含油廢水專項治理工作。為提升隔離器內石油類廢水去除效果，我們採用混凝吸附法，在污水中加入定量的混凝藥劑，使溶解在污水中微量油脂等絮凝成團，由疊螺式污泥脫水機進行脫水處理，最後將污泥進行外運填埋。

潘莊項目針對排採水道路運輸安全系數低、受天氣影響大等安全環保風險，通過與第三方合作在井場安裝撬裝式水處理裝置，在井場直接處置排採水，以消減安全環保風險。該撬裝式排採水淨化處理設備已取得相關專利，項目排採水處理項目也獲得地方政府批復，目前水處理裝置已進入試運行。

為降低排採水處理費用和環保政策風險，馬必項目開展了排採水綜合利用、排採水集中收集池和井場安裝撬裝式水處理裝置工作。2021年，馬必項目全年排採水綜合利用率約60%，主要利用至壓裂用水、作業用水和揚塵等。

## 2. Safe Production and Clean Operations 安全生產 清潔運營

### Case: Mabi Project Solved the Problem of Pumping Water Transportation

Mabi Project has high risks and difficulties in transporting pumping water due to its large concession and scattered well sites. In February 2021, since the shutdown of the well and pumping interruption caused by transportation interruption affected the continuity of pumping work, we laid water pipelines in the same ditch with gas pipelines in the well sites and remotely transmitted water to the centralized pools.

### 案例：馬必項目解決排採水拉運問題

馬必項目因區塊大、井場分散導致排採水拉運風險及拉運難度較高。2021年2月，為解決因拉運中斷導致的停井、排採中斷影響排採工作連續性的問題，我們通過井場氣、水管線同溝，完成同溝敷設水管線輸水工作，成功實現遠程輸水到集中水池。

Chart: AAG Energy Wastewater in 2020-2021

表：亞美能源 2020-2021 年廢水排放數據表

Water pollutants 水污染物	Unit 單位	2020 2020年	2021 2021年
Total industrial wastewater discharge 工業廢水排放量	m <sup>3</sup> 立方米	231,491.00	331,141.50

### Waste Management

**The target of non-hazardous waste discharge:** reduce the density of drilling debris and desulfurization waste agent by 8% by 2025 on the basis of 2021.

**The target of hazardous waste discharge:** improve the service life cycle of equipment and reduce the periodic discharge of hazardous waste caused by obsolescent equipment.

AAG Energy strictly abides by the *Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste* and makes *Guidelines for the Establishment of Hazardous Waste Ledgers* to improve the management of hazardous waste files and promote the Company's compliant disposal of all hazardous wastes. In addition, we posted hazardous waste signs in conspicuous locations and commissioned a professionally qualified company for transfer and disposal to ensure that all of the Company's hazardous wastes were disposed of compliantly.

In the principle of reduction, resource utilization and harmless prevention, we strictly manage non-hazardous waste such as drilling mud, drilling cuttings, construction waste, desulfurizers and household waste as well as hazardous waste such as waste engine oil and waste cotton cloth due to equipment maintenance to reduce the generation and discharge of various wastes during the construction and operation periods.

### 廢棄物管理

**無害廢棄物排放目標：**以2021年為基準年，到2025年，鑽井廢屑密度及脫硫劑密度降低8%。

**有害廢棄物排放目標：**提升設備使用生命週期，降低因設備淘汰而產生的週期性有害廢棄物排放量。

亞美能源嚴格遵守《中華人民共和國固體廢物污染環境防治法》，制定《危廢台賬建立指南》，完善危險廢棄物檔案的管理工作，促進公司危廢全部合規化處置。我們通過張貼危險廢物標識，並委託具有專業資質單位進行轉移處置等方式，確保公司全部的危險廢棄物處置合規。

我們遵循「減量化、資源化、無害化」的防治原則，對項目施工期與運營期產生的鑽井泥漿、鑽井巖屑、建築垃圾、廢脫硫劑及生活垃圾等無害廢棄物，以及由於設備維護產生的廢機油、廢棉布等有害廢棄物進行嚴格管理，減少管理施工期與運營期各類廢棄物產生與排放。

## 2. Safe Production and Clean Operations 安全生產 清潔運營

We further standardized the management procedure of general industrial solid waste. We conducted systematic and standardized management of the types, volume, flow, storage, and disposal of general industrial solid waste, established relevant data files and registered with the environmental agencies at the county and prefecture levels. In 2021, we set an environmental key performance target of an environmental pollutant leakage (especially, hazardous waste) of less than 3 cubic meters. As of December 31, 2021, AAG Energy had no leakage of environmental pollutants.

亞美能源持續完善對一般工業固廢管理流程。我們對一般工業固廢的種類、產生量、流向、貯存、處置等實行系統化的管理流程，建立相關資料檔案，並向縣級地方環境保護行政主管部門申報登記。2021年，我們設立環境污染物(危險廢棄物)洩漏量<3m<sup>3</sup>的環境關鍵績效目標。截至2021年12月31日，亞美能源未發生環境污染物洩漏事件。

**Chart: AAG Energy Non-hazardous Waste in 2020–2021**  
表：亞美能源2020–2021年無害廢棄物排放數據表

Non-hazardous Waste 無害廢棄物種類	Unit 單位	2020 2020年	2021 2021年
Drilling debris 鑽井廢屑	ton 噸	18,509.74	31,572.66
Drilling debris density 鑽井廢屑密度	ton/million cubic meters 噸/百萬立方米	17.90	24.32
Waste desulfurization agent 脫硫廢劑	ton 噸	2,272.40	2,518.10
Waste desulfurization agent density 廢脫硫劑密度	ton/million cubic meters 噸/百萬立方米	2.20	1.94
Household waste 生活垃圾 <sup>4</sup>	ton 噸	129.66	119.08
Household waste density 生活垃圾密度	ton/million cubic meters 噸/百萬立方米	0.13	0.09

<sup>4</sup> There are two ways to estimate the amount of household waste. Method 1: domestic waste comes from kitchen and office. The amount of kitchen waste is estimated by amount generated per day × days; the amount of sold part of the office waste is based on its weight, and non-sold part is estimated by daily output × days. Method 2: amount of household waste = number of employees × coefficient of household waste generated and discharged × days, among which the average working days per quarter is 65.25, and the coefficient is calculated based on the *Handbook of Urban Domestic Pollution Source Production and Emission Coefficient (2008)*.

<sup>4</sup> 生活垃圾含兩種估算方式。方式一：生活垃圾含廚餘垃圾、辦公垃圾兩類，廚餘垃圾由每日產生廚餘垃圾 × 總日數匯總估算，辦公垃圾中對外出售部分以售賣重量為準，非對外售賣部分按每日產生量乘以總日數估算。方式二：生活垃圾產生量 = 員工數量 × 居民生活垃圾產生和排放系數 × 天數（每季度平均工作天數取65.25），居民生活垃圾產生和排放系數根據《城鎮生活源產排污系數手冊》(2008)計算。

## 2. Safe Production and Clean Operations 安全生產 清潔運營

Chart: AAG Energy Hazardous Waste in 2020–2021  
表：亞美能源 2020–2021 年有害廢棄物<sup>5</sup> 排放數據表

Emission indicators 排放指標	Unit 單位	2020 2020 年	2021 2021 年
Total discharge of hazardous waste 有害廢棄物排放總量	ton 噸	44.80	28.72
Hazardous waste discharge density 有害廢棄物排放密度	ton/million cubic meters 噸/百萬立方米	0.043	0.020

### Resources Use

AAG Energy advocates the fine management of water resources and energy, improves resource efficiency and minimizes the impact of production and operation on the environment.

### Water Resources Management

**Water consumption target:** reduce the water consumption density by 8% by 2025 on the basis of 2021.

AAG Energy strictly abides by the *Water Law of the People's Republic of China* and national requirements for water management by continuously strengthening the internal water-saving actions and reinforcing water-saving technology innovation to continuously reduce water consumption and comprehensively improve water resource utilization.

In the face of severe water shortage, AAG Energy strengthens water resources management at the source, conducts environmental impact assessment in the early stage of the project, and also considers the local water resources. We scientifically evaluate the water conditions in the place where the projects operate, analyze the scale of water demand, water resources allocation and the potential impact of the project on water resources and water functional areas, and get water in strict accordance with the amount specified in the water draining certificate.

### 資源使用

亞美能源大力推動水資源與能源精細化管理，提高資源利用效率，最大化降低生產運營對環境所造成的影響。

### 水資源管理

**用水目標：**以 2021 年為基準年，到 2025 年，耗水密度降低 8%。

亞美能源嚴格遵守《中華人民共和國水法》以及國家水資源管理要求，不斷強化內部水資源節約，加強節水技術創新，全面提升水資源利用效率。

面對嚴峻的水資源形勢，亞美能源從源頭加強水資源管理，在項目開展前期進行環境影響評估，亦考慮當地水資源情況。我們科學評估項目所在地的水資源條件，分析需水規模、水資源配置以及項目對水資源及水功能區存在的潛在影響，並嚴格按照取水證規定的取水量進行取水。

<sup>5</sup> Hazardous waste includes waste engine oil, waste engine oil drums, waste cotton cloth, pesticide bottles, and discarded molecular sieves generated during the construction and operation periods.

<sup>5</sup> 有害廢棄物，含項目建設與運營期間產生的廢機油、廢機油桶、廢棉布、農藥瓶及報廢分子篩等。



## 2. Safe Production and Clean Operations

### 安全生產 清潔運營

We increase water efficiency under the concept of re-uses and recycling of water during project operation. We set up domestic sewage reuse facilities in the living area. The domestic sewage passes through the biochemical treatment system, and after two-stage filtration, part of which is discharged into the urban sewage pipe network, and the rest of which is discharged into the reclaimed water system for greening and road sprinkling, thereby achieving reuse and recycling of water resources.

During the reporting period, we did not encounter any difficulty in sourcing water that is fit for purpose.

在項目運營階段，我們貫徹一水多用和重複利用的理念，提高用水效率。我們在生活區域設置生活污水再利用設施，生活污水通過生化處理系統，經兩級過濾後，部分匯入城市污水管網系統，部分接入中水系統用於綠化及道路灑水，實現水資源的重複利用和循環利用。

報告期內，我們在求取適用水源上沒有任何問題。

**Chart: Water Consumption of AAG Energy in 2020–2021**

表：亞美能源 2020–2021 年水資源使用情況

Indicator 指標	Unit 單位	2020 2020年	2021 2021年
Total water consumption 總耗水量	ton 噸	153,711.60	132,090.28
Water consumption density 耗水密度	ton/million cubic meters 噸/百萬立方米	148.65	101.76

#### Energy Management

AAG Energy strictly abides by the *Energy Conservation Law of the People's Republic of China* and other laws and regulations, implements energy conservation and emission reduction policies, and actively explores energy conservation and emission reduction technologies to improve energy efficiency. We proactively obsolete outdated equipment and processes with high energy consumption and high emission, and actively introduce and promote new energy-saving and environmentally friendly equipment, new technologies, new processes and new materials for better energy efficiency. We scientifically manage the use of electricity, natural gas, gasoline and other resources, and have established special statistical ledgers to record the usage. The Company closely monitors and regularly reviews the energy consumption among all links to fully motivate relevant departments to conserve energy and reduce consumption. Meanwhile, we champion the concept of green offices, continuously enhance employees' awareness of resource conservation and encourage employees to save energy by reducing business travel and vehicle use to fully implement the concept of emission reduction and promote the green development of the Company.

#### 能源管理

亞美能源嚴格遵守《中華人民共和國節約能源法》等法律法規，積極貫徹節能減排政策，持續探索節能減排技術，提高能源使用效率。我們主動淘汰高耗能高排放的落後設備與工藝，積極引進並推廣應用節能環保新設備、新技術、新工藝、新材料，提升能源使用效率。我們堅持對電力、天然氣、汽油等各項資源的使用情況進行科學化管理，建立專項統計台賬進行記錄。公司嚴密監控並定期審閱各環節用能情況，充分調動相關部門開展節能降耗工作的積極性。同時，我們積極倡導綠色辦公理念，持續培養員工節約資源的意識，減少差旅與車輛使用次數，全面貫徹落實減排理念，促進公司綠色發展。

## 2. Safe Production and Clean Operations 安全生產 清潔運營

### Case: AAG Energy's Mabi Project was powered by inter-well power grid in place of diesel

To promote energy conservation and emission reduction Mabi Project used an inter-well power grid to power some well sites, which were previously powered by diesel generator sets. The replacement saved about 84,490 liters of diesel and a total of approximately RMB481,593 in three months.

案例：馬必項目由柴油供電替換為井間電網

為大力推進節能減排力度，亞美能源馬必項目將以前使用柴油發電機組供電的部分井場替換為井間電網供電，三個月共節省柴油用量約84,490升，共計節約481,593元。

Chart: Energy Consumption of AAG Energy in 2020–2021

表：亞美能源2020–2021年能源使用情況

Use of Energy 能源使用種類	Unit 單位	2020 2020年	2021 2021年
Purchased Electricity 外購電力	MWh 兆瓦時	130,869.40	164,611.42
Purchased Gas 外購天然氣	m <sup>3</sup> 立方米	14,100.00	16,722.00
Purchased Gasoline 外購汽油	liter 升	233,434.95	269,567.38
Purchased Diesel 外購柴油	liter 升	132,644.00	44,615.17
Self-Produced CBM 自產煤層氣	m <sup>3</sup> 立方米	230,564.57	135,862.00
Comprehensive Energy Consumption 綜合能耗 <sup>6</sup>	ton 噸	16,791.35	20,757.87
Comprehensive Energy Consumption/ per Million Cubic Meter CBM Produced 綜合能耗／生產百萬立方米煤層氣	ton/million cubic meters 噸／百萬立方米	16.24	15.99

<sup>6</sup> The energy consumption is calculated in accordance with the conversion coefficient of energy into standard coal in the *General Rules for Calculation of Comprehensive Energy Consumption GBT2589-2008*.

<sup>6</sup> 能源消耗量根據《綜合能耗計算通則 GBT2589-2008》各種能源折標準煤系數計算得出。

## 2. Safe Production and Clean Operations

### 安全生產 清潔運營

#### Construction of Ecologically-Friendly Well Site

AAG Energy follows the requirements of local ecological environment protection, formulates the implementation plan of ecologically friendly well site, and shoulders its responsibility to mitigate the potential impact of production and operation on the ecological environment and biodiversity and protect biological habitats.

To coordinate sustainable mineral resources development and environmental protection, we continue to explore more advanced and practical environmental development approaches with a commitment to developing CBM resources with advanced technology and environmental concepts. First, we select PDW wells, where the well sites are small and which have less damage to forest vegetation, as the main type for developing wells, optimizing the exploitation landscape, and achieving the progress of both economic development and environmental protection. we have formulated the *Technical Requirements for Standardized Construction of Well Site* to emphasize both productions of CBM pumping wells and regional environmental protection and protect the environment around. The Technical Requirements clarified unified standards for constructing fences around all well sites, pipeline color code and direction, cable laying, pumping water pool and warning signs. At the same time, we plant trees and grass on the well sites and engineering roads to improve the environment of production and install environmental monitoring facilities. With the full coverage of monitoring, we make sure there are no well sites in sight, but the green; we fully treat visible pollution and compensate for the obvious damage to avoid environmental pollution incidents.

#### 生態井場建設

亞美能源遵循地方生態環境保護要求，制定「生態井場」建設實施方案，嚴格落實主體責任，旨在減少生產運營可能給生態環境和生物多樣性帶來的潛在影響，保護生物棲息地。

為實現礦產資源開發與生態環境保護可持續協調發展，我們不斷探索更先進的、更貼合實際的環保開發方式，致力於以先進的技術手段和環保理念進行煤層氣資源開發。我們首先從井型選擇上優先選擇井場佔地面積小、對森林植被破壞小的叢式井作為開發主力井型，優化開採佈局，做到經濟發展與保護環境協同並進。為實現煤層氣排採井生產與區域環境保護工作並重，保護井場周邊生態環境，我們制定有《井場標準化建設技術要求》，對井場圍欄、管線色標與走向、電纜鋪設、排採水收集池、警示標誌等制定了統一的建設標準。所有井場均按統一標準進行規範施工。同時，我們對井場和工程道路植樹種草，改善生產環境，並安裝環保監視設施，實現「見綠不見井，見污全處理，見損有補償，監控全覆蓋」，避免環境污染事件發生。

## 2. Safe Production and Clean Operations

安全生產 清潔運營

Figure: Land Before Greening

圖：綠化前土地



Figure: Land After Greening

圖：綠化後土地

## 2. Safe Production and Clean Operations

### 安全生產 清潔運營

Construction process of ecologically-friendly well sites:

- Mainly laying stones in the well sites, planting trees and grass within 15 meters around, leveling the slope and land and greening the roads, etc..
- Planting trees and grass outside the fire prevention area around the fence of the well sites as it may be.
- Building the anti-seepage mud pit, and conducting pollution-free solidification treatment for the mud pit in time after the construction of the well site.
- Hire a qualified agency to inspect the treated mud and deliver an inspection report after solidification. Backfill those treated mud passing the inspection and recover the environment. All the solidified mud is qualified.

As of July 2021, Panzhuang Project's well sites in Qinshui have established pumping water pools continuously. All of them are equipped with standard anti-seepage tanks. The pumping water of all well sites has been treated as required, and the record account of pumping water operation has been established and improved; all technological security protection facilities such as video monitoring and pool level gauge have been installed and networked with the monitoring platform of Jincheng Ecological Environment Bureau; we entrusted Zeqin Industry and Trade Company at Qinshui County to transfer the sewage from the well sites. The 11 vehicles for the sewage transfer have been installed with remote online monitoring, liquid level gauge and GPS as required, which was also connected with Jincheng Ecological Environment Bureau. According to the requirements of greening and tree planting, installing video monitoring and liquid level monitoring, AAG Energy has greened 28 well sites and constructed 17 standard anti-seepage tanks. Mabi Project has networked the monitoring in 17 well sites and technological security protection facilities for 18 vehicles.

生態井場建設過程：

- 主要採取綠化種植、井場內鋪設石子、井場周圍15米範圍在允許綠化的情況下採取植樹、種草，進行邊坡治理、土地平整、井場道路綠化等；
- 對井場圍欄外圍防火區域外進行綠化，宜草種草、宜樹種樹；
- 對建井場泥漿池採取防滲處理，井場建設完成後及時對泥漿池進行無公害固化處理；
- 固化處理後，委託有資質的機構對處理後的泥漿進行檢驗，並出具檢驗報告，合格後完成回填並進行生態恢復，固化合格率高達100%。

截至2021年7月，潘莊項目沁水境內的井場均已滾動性建立起排採水收集池，全部建設有標準的防滲池，所有井場的排採水均按要求進行處理，並建立和完善了排採水運轉的記錄台賬；視頻監控和水池液位計等技防設施全部安裝完成，並與晉城市生態環境局監控平台聯網；委託沁水縣澤沁工貿公司進行井場污水轉運工作，負責污水轉運的11輛車均已按要求安裝了遠程在線監測、液位計和GPS，實現了與晉城市生態環境局的平台聯網。按照綠化植樹、安裝視頻監控和液位監控等要求，亞美能源共完成28個井場綠化及17個標準化防滲池建設，其中馬必項目完成17個井場的監控聯網和18輛車輛技防設施聯網工作。

## 2. Safe Production and Clean Operations

### 安全生產 清潔運營

Chart: key performance of Mabi Project in 2021  
表：2021年馬必項目關鍵績效

Item 項目	Number 數量	Unit 單位
Ecologically-friendly well sites 生態井場	21	/ 個
Standard anti-seepage tanks 標準化防滲池	8	/ 個
Well site with monitoring networking 井場的監控聯網	17	/ 個
Vehicles whose technological security protection facilities are networked 車輛技防設施聯網	18	/ 輛
Afforested area 綠化面積	51,352	m <sup>2</sup> 平方米
Trees planting 栽樹	32,150	/ 棵

## 3. Stable Operation and Win-Win Cooperation

### 穩健運營 合作共贏

AAG Energy adheres to the concept of providing customers with high-quality products by continuously standardizing operating procedures, improving customer service quality and actively investing in innovation and R&D to provide sustainable clean energy to society. At the same time, the Company pursues integrity and compliance by formulating internal anti-corruption systems and business ethics requirements, while externally carrying out life-cycle management of suppliers to seek stable operations and common development.

#### 3.1 Consistently Stable Supply of High-Quality Gas

As an excellent CMB industry representative in China's CMB exploitation and development, AAG Energy is committed to the development and utilization of high-quality unconventional natural gas resources to provide clean energy for China's economic development. While ensuring product quality, the Company prioritizes stable gas supply, continuously improves service and technological innovation, fully satisfies the gas demand from downstream customers, and contributes to social stability and development.

##### Quality Assurance

AAG Energy strictly abides by the *Product Quality Law of the People's Republic of China* and other laws and regulations. The Company has formulated a series of internal policies. During the construction period, the Company formulated the *Technical Management System*, including the *Technical Innovation Management Policies*, the *Small and Micro Innovation Management Policies* and the *Technology Innovation Fund Management Policies*. We fully create the quality management system for the full life cycle during the project construction and conduct detailed inspections on key technologies to ensure better production after the project is put into use.

Based on the improvements in the quality of the project construction, to ensure the production quality during operation, we conducted the full process supervision of workplace safety and production quality, and issued the *Detailed Rules for the Supervision and Management of Injection Pressure Drop Well Test Engineering* in 2021 to further standardize the contractor's project and technical quality management and effectively improve the operation and management of the project.

亞美能源致力於為客戶提供高品質、高質量的產品服務，堅持以更完善的運營流程、更卓越的服務品質、更高的技術創新水平，穩定持續地為社會提供清潔能源。公司以誠信、合規為原則，全面制定並落實反腐敗制度與商業道德要求，將ESG管理理念融入供應商全生命週期管理過程，保障多方穩健運營，實現可持續發展。

#### 3.1 持續高質穩定供氣

亞美能源作為中國煤層氣勘探開發的行業卓越代表，始終追求高水準的非常規天然氣資源開發利用，為中國綠色發展提供清潔能源。公司在確保產品質量的前提下，以穩定供氣為首要任務，持續提升服務質量與技術創新能力，充分保障下游客戶的供氣需求，為社會穩定發展貢獻自身力量。

##### 質量保證

亞美能源嚴格遵守《中華人民共和國產品質量法》及其他法律法規要求，於內部制訂了《技術管理體系》等技術質量整體管理制度，包括《技術創新管理制度》《小微創新管理制度》《技術創新基金管理制度》等，充分構建起項目建設期間全生命週期質量管理體系，並對各項關鍵技術進行逐一檢驗，以保證項目投用後的生產水平。

在提升項目建設質量的基礎上，為保障運營期間生產質量，我們對生產安全和生產質量實現全流程監管，並在2021年發佈《注入壓降試井工程監督管理細則》，對承包商項目和技術質量進一步實現規範化管理，有效提升項目運營和管理水平。

### 3. Stable Operation and Win-Win Cooperation 穩健運營 合作共贏

The Company strictly guarantees the quality of sold gas. We regularly invite third-party professionals to conduct gas quality supervision and testing every quarter to satisfy the national quality standard for class II gas. In 2021, in order to further increase the gas quality and meet the national requirements, Panzhuang Project added a number of gas dryers in the central gathering and transmission station, of which processing capacity is 1.65 million cubic meters per day. Each station was equipped with online hydrogen sulfide gas detection equipment for real-time monitoring, and the gas supply was up to the national quality standard for class I gas.

#### Stable Gas Supply

Ensuring a stable gas supply is AAG Energy's responsibility for the industry. In 2021, by enhancing the production technology and adopting new processes, the Company stabilized the capacity of existing wells, greatly improved the gas capacity and stable production in new wells and ensured the sustainable supply of CBM.

#### Optimization of Production and Construction Scheme

AAG Energy closely tracks the projects' capacity dynamics, conducts comprehensive research and analysis of geological gas reservoirs, continuously perfects the evaluation model of CBM-concentrated areas, optimizes the overall development plan and timely gives early warning and correction for abnormal conditions.

In 2021, the Company investigated the south and north areas of the Mabi Project, combined well site resources, properly adjusted some well site development and deployed drilling for the existing idle well site resources. The continuous optimization of the production and construction plan not only meets the needs of the Company's capacity objectives throughout the year, but also makes full use of the idle well sites to reduce the investment in new well sites, and fully utilized the resources beneath the county seat to comprehensively reduce costs and increase efficiency.

公司嚴格保障外銷氣體質量，我們每季度定期請第三方專業機構進行氣體質量監督檢測，確保質量達到國家二類氣體質量標準水平。2021年，潘莊項目為進一步提升氣體質量，滿足國家氣質要求，於集輸總站新增多台氣體干燥器，累計處理能力達165萬方/日，各站安裝硫化氫氣體在線檢測設備進行實時監測，項目供氣質量達到國家一類氣體質量標準。

#### 穩定供氣

確保氣源持續供應是亞美能源所肩負的行業責任。2021年，公司通過提升生產技術水平和採用新工藝等途徑，穩定現有在產井產能的同時，在新井中大幅提高產氣能力和穩產水平，保障煤層氣持續供應。

#### 產建方案優化

亞美能源密切跟蹤各項目產能建設動態，對應進行地質氣藏綜合研究分析，不斷完善煤層氣富集區評價模型，優化開發實施方案，對於異常情況及時進行預警和糾偏。

2021年，公司對馬必項目南區、北區進行踏勘，完成對井場資源的整合，合理調整部分井場開發工作，並對已建成的閒置井場資源進行鑽井部署。經過對產建方案的持續優化，不僅滿足全年公司產能建設目標的需要，同步充分發揮閒置井場資源，減少新建井場投資，對縣城下覆的資源進行利用，全面實現降本增效。



### 3. Stable Operation and Win-Win Cooperation 穩健運營 合作共贏

#### Tapping the Potential of Resources

AAG Energy has deeply tapped the resource potential of the existing project concessions, increased efforts in exploitation, sought for thin coal seam development technology so as to fully discover the possible resource utilization within the concessions.

In 2021, we actively cooperated with other companies to investigate the reserves of thin coal seams in the existing concessions and planned to develop more than 30 thin coal seam wells. The wells in the test run that have been drilled, constructed and fracked, achieved good output, making the exploitation more cost-efficient.

#### Case: Tapping the Resource Potential of Panzhuang Project

In 2021, guided by the achievements of innovative project "Research on Early Warning of Sitou Fault", AAG Energy planned and constructed the production wells near the Sitou fault. At present, 55 wells have been completed and put into operation, all of which have excellent economic output. Several high-yield wells have been excavated, tapping the deep potential of reserves in areas of high geological risk.

In order to actively respond to the national call to fight air pollution and implement the overall requirements of the Shanxi Provincial Government for the "using CBM produced nearby and exporting surplus gas" in winter, we strengthen the monitoring and prediction of energy supply, demand and its changes with more scientific and efficient technology and operation model. In this way, we comprehensively coordinate the supply and allocation, providing a solid foundation for social security, people's livelihood and economic development. In 2021, AAG Energy supplied a total of 730 million cubic meters of CMB to Shanxi Province and Jincheng City, including 128 million cubic meters for the National West-East Gas Pipeline One, 19.06 million cubic meters for Taiyuan city, 69.34 million cubic meters for Jincheng city, 352.13 million cubic meters for Qinshui county, and 153.29 million cubic meters for Yangcheng county.

#### 資源挖潛

亞美能源深入挖掘現有項目區塊資源開發潛力，持續加大勘探力度，探索薄煤層開發技術，充分挖掘區塊資源利用潛力。

2021年，我們積極聯合外部公司，勘察現有區塊薄煤層儲量，共規劃開發30餘個薄煤層井，已鑽進施工、壓裂的試採井具備良好產量表現，進一步提升公司開採工作的經濟性。

#### 案例：潘莊項目資源挖潛

2021年，亞美能源在創新項目《寺頭斷層預警機制研究》成果指導下，開展了寺頭斷層附近生產井的規劃和施工，目前已完成並投產55口井，產氣井均表現出良好的經濟產量，並挖掘出數口高產井，實現了高地質風險區域儲量深度挖潛。

為積極響應國家打贏藍天保衛戰號召，貫徹落實山西省政府對冬季省內煤層氣資源「就近利用、餘氣外輸」的統籌利用要求，我們以更科學、高效的技術和運行模式，加強對能源供需形勢和變動的監測和預判，全方位統籌供應、調度情況，為社會民生保障和經濟發展提供堅實的基礎。2021年亞美能源累計保供山西省及晉城當地7.30億立方米，其中全年保障國家管網西氣東輸一線供氣量1.28億立方米，山西省太原市1,906萬立方米，晉城市6,934萬立方米，沁水縣35,213萬立方米，陽城縣15,329萬立方米。

### 3. Stable Operation and Win-Win Cooperation 穩健運營 合作共贏

#### Case: Guarantee Gas Supply During Flood

On September 26, 2021, affected by continuous heavy rainfall for days, the water along the Qinhe River rose rapidly, and the flood discharge at the reservoir made the buried earthwork on the upper layer of the pipeline laid by CNOOC in the river beach was washed up. The pipeline became floated and there were severe fractures and deformations in the middle section of Douzhuang Village and Qudi Village near the Pingshang Coal Mine. To this end, AAG Energy carried out emergency communication and coordination by switching the standby gas supply path and adjusting the gas supply model to safely and stably shave gas peak.

#### Customer Service

In accordance with the *Consumer Rights Protection Law of the People's Republic of China*, other relevant laws and regulations, AAG Energy has established internal rules and regulations, such as the *Market Operation Management Measures*. We build a stable diversified communication mechanism with customers to timely feedback and respond to customer needs, realize the full closed-loop management of customer complaints and communication, and continuously improve customer satisfaction. We regularly carry out the customer satisfaction survey and opinion collection through questionnaires and after-sales customer services to comprehensively evaluate the Company's performance in product services. The survey has become the key way for the Company to improve product quality and business strength. In 2021, the Company conducted a satisfaction survey on 100% of customers, and the customer satisfaction rate was 99%. There was no complaint about products and services.

#### 案例：洪澇期間積極保供

2021年9月26日，受多日連續強降雨影響，沁河沿途河道水位暴漲，水庫洩洪使中聯公司鋪設在河灘內管線上層填埋土方被沖刷後，管線漂浮進而導致位於竇莊村及曲堤村中間段（坪上煤礦附近）發生嚴重斷裂且多處變形。對於受影響的管線，亞美能源進行緊急溝通協調，切換備用供氣路徑，調整供氣方式，確保氣量調峰的安全穩定。

#### 客戶服務

亞美能源嚴格遵守《中國人民共和國消費者權益保護法》等相關法律法規，制訂《市場經營管理辦法》等內部規章制度，搭建了與客戶穩定的多元化溝通機制，及時反饋現狀、回應客戶需求，實現客戶投訴與溝通的全閉環管理，持續提升客戶滿意度。我們定期通過問卷發放、售後回訪等途徑開展客戶滿意度調查與意見征集，以綜合評估公司產品服務表現，作為公司持續提升產品質量與業務能力的關鍵途徑。2021年，公司客戶滿意度調查覆蓋率達100%，客戶滿意度達99%，未發生產品及服務相關投訴事件。

### 3. Stable Operation and Win-Win Cooperation 穩健運營 合作共贏

#### Innovation-Driven Development

AAG Energy strictly complies with the *Patent Law of the People's Republic of China*, highly respects the intellectual property rights of others while strictly regulating its own intellectual property protection and protecting its own technological innovations, trademarks, patents and other intellectual property rights.

We regard technological innovation as the core competitiveness of corporate development. In 2021, the Company increased significantly its investment in technological innovation and business R&D to RMB108.017 million, and also innovated the ways to develop CBM resources. In addition, under the unified deployment, we continued to engage in UCG techniques, completed relevant supporting materials and feasibility demonstrations to help the underground coal to gas project approval and efficient utilization of resources.

The Company built a research cooperation platform and deepened the cooperation between industry, university and research institutions for external opportunities. In 2021, the Geological Reservoir Department, together with many universities and top enterprises in Shanxi Province, carried out R&D and innovation projects and conducted pilot projects in the Zhongyu coal mine to explore major technological breakthroughs in structural CBM exploitation.

In response to the call for the national goal of dual carbon targets, we continue to develop gas control technology. In 2021, we completed the selection of many coal mines, communicated with many coal mines at an early stage, and promoted and used AAG Energy CBM extraction technology for them. In this way, we helped them deeply understand the significance of gas control and jointly contributed to the practice of the national strategy of carbon peak and neutrality.

#### 創新引領

亞美能源嚴格遵守《中國人民共和國專利法》，高度尊重他人知識產權，並嚴格規範自身知識產權保護工作，主動保護自身科技創新成果、商標、專利等知識產權。

我們視技術創新為企業發展的核心競爭力，2021年，公司大幅增加科技創新研發投入，達10,801.7萬元，大力開展煤層氣資源技術創新。此外，在統一部署下，我們持續佈局UCG工藝技術，完成相關支持性材料與可行性論證，助推地下煤制氣項目立項並實現資源的高效利用。

公司積極展開科研合作平台建設，深化產學研合作力度，尋求外部共創機會。2021年，地質油藏部與山西省多個高校和優質企業共同開展研發創新項目，在中裕煤礦進行試點，持續探索構造煤層氣開採方面的重大技術突破。

為響應國家「雙碳」目標號召，我們持續佈局瓦斯治理技術，2021年，我們完成對多家煤礦的篩選工作，與多家煤礦進行前期溝通並完成亞美能源煤層氣抽採技術的推廣應用，幫助其深刻認識瓦斯治理的重要性與意義，共同助力國家「雙碳」戰略落地。

## 3. Stable Operation and Win-Win Cooperation 穩健運營 合作共贏

### 3.2 Integrity and Compliance

In accordance with national laws and regulations and regulatory provisions, AAG Energy has strengthened the rule-based corporate governance and effectively transformed compliance and integrity management into a sustainable driving force for developing corporate governance capacity. The Company improves its business ethics management system and anti-corruption mechanism to reinforce the results of anti-corruption, anti-fraud and anti-fraud, raises employees' anti-corruption awareness, enhances the ability to manage risks, and fully implements the business philosophy of integrity and compliance.

#### Business Ethics Management

AAG Energy strictly follows *Company Law of the People's Republic of China*, the *Supervision Law of the People's Republic of China* and the *Provisional Regulations on Prohibiting Commercial Bribery* and relevant laws and regulations, and on this basis, formulated several regulations including *Advanced Standard Internal Control Management System* to continuously improve the integrity system and anti-corruption mechanism. In 2021, the Company further revised the *Provisions on Anti-Fraud and Reporting* and implemented the integrity responsibility system while conducting business to ensure operational integrity and efficiency. The Company regularly supervises the anti-corruption affairs and establishes a well-structured regulatory mechanism with defined responsibilities to effectively implement the anti-corruption, anti-fraud and anti-fraud.

- **Audit Committee of the Board:** comprehensively supervise the Company's financial reporting, risk management and internal control system; ensure the coordination between internal auditors and external auditors, supervise the effectiveness of the internal audit department and investigate and deal with senior management's suspected fraud and corruption.
- **Senior management:** continuously improve the internal control system to prevent fraud, create a better anti-fraud cultural environment, and establish a company-wide Anti-Fraud Committee to accept, investigate, determine whether the case can be closed, reward and punish the informant and make decisions on other possible follow-up actions.

### 3.2 堅守誠信合規

亞美能源根據國家法律法規和各項監管規定，加大依法治企的力度，切實將合規經營、誠信經營轉化為推進公司治理能力建設的持續動力。公司完善商業道德管理體系和反腐倡廉機制，深化反腐敗、反舞弊、反欺詐工作成果，加強員工反腐意識，提升風險管理能力，全面貫徹誠信、合規的經營理念。

#### 商業道德管理

亞美能源嚴格遵守《中華人民共和國公司法》《中華人民共和國監察法》《關於禁止商業賄賂行為的暫行規定》等相關法律法規，並以此為基礎制訂公司《先進性標準化內控管理制度》等多項規定，持續完善廉政體系建設和反腐敗工作機制。2021年，公司進一步修訂《反舞弊與舉報規定》，落實廉政工作責任制，實現反腐倡廉與業務工作的共同落實，確保公司運營的廉潔高效。公司定期對反腐敗工作情況進行監管，設立起架構分明、職責清晰的監管機制，確保公司反腐敗、反舞弊、反欺詐工作有效落實。

- **董事會審核委員會：**全面監管公司的財務申報、風險管理及內部監控系統，確保內部及外聘審計師的工作得到協調，並監督內部審計部門的有效性，並對疑似公司高管層面的舞弊及腐敗行為進行調查及處理。
- **高級管理層：**持續完善預防舞弊的內部控制體系，打造良好的反舞弊文化環境，並成立公司層面的反舞弊委員會，對疑似舞弊和腐敗行為進行受理、調查、確定是否可以結案、對舉報人的獎勵及懲罰及對後續可能採取的其他行動作出決策。

### 3. Stable Operation and Win-Win Cooperation

#### 穩健運營 合作共贏

- **Risk Control and Compliance Department:** establish a structured anti-fraud and reporting mechanism, and establish reporting and complaint channels to prevent and detect fraud; implement effective control measures to reduce the chance of fraud and cooperate with the Company to investigate fraud cases.

In 2021, AAG Energy continued to audit, track and supervise the rectification of internal control defects, and comprehensively adjusted the risk management system, on the basis of the former risk management, the existing business operation and external trends, the Company further integrated the risk identification to add 63 risk points. Also, the Company established a risk management responsibility department according to the results of risk identification to realize long-term and institutionalized risk management.

#### Building the culture of integrity

AAG Energy has a sound anti-corruption reporting system and provides diversified reporting channels including letters, mailboxes, WeChat official account "AAG Audit and Supervision Department". We highly value the privacy and security protection of informants and prohibit intentional information disclosure of informants and retaliation against informants with a built system. At the same time, the Company set an audit and approval procedure to supervise anti-corruption and strictly review the clues.

In 2021, AAG Energy had no lawsuits in relation to corruption and received 2 reporting clues. The management was entrusted to carry out an investigation, issued 2 special audit reports and offered 11 opinions on rectification according to the investigation results.

In order to raise employees' anti-corruption awareness, the Company has held a variety of anti-corruption training activities. In 2021, the Company launched targeted anti-fraud publicity and training for employees and Directors in May, October and December respectively. About 285 employees attended the training and the training time amounted to 215 hours.

- **風控合規部：**建立良好的反舞弊與舉報機制，設立舉報投訴渠道防範和發現舞弊，並實施有效的控制措施以降低舞弊發生的機會，協同公司調查舞弊案件。

2021年，亞美能源持續審計跟蹤並監督內控缺陷整改工作，並全面調整風險管理體系，在原有風險管理基礎上，結合現有業務運營特點與外部趨勢，進一步整合、補充風險識別情況，新增63項風險識別點，並根據風險識別結果設立風險管理責任部門，實現對於風險的長效化、機制化管理。

#### 廉政文化建設

亞美能源具備完善的反腐敗舉報體系，並設置包括信件、郵箱、微信公眾號「亞美審計監察部」等在內的多元化舉報渠道。我們高度注重舉報人的隱私安全保護工作，建立起制度保障，嚴禁發生故意洩露舉報人信息和打擊報復舉報人等行為。公司同時設有針對反腐敗監督的審計審批流程，對舉報信息嚴格審查。

2021年，亞美能源未發生腐敗相關訴訟案件，共收到舉報線索2條，管理層委託開展調查1起，共出具專項審計報告2份並已下發，依據調查結果提出整改建議11項。

公司為提高員工反腐敗工作意識，開展了多種反腐倡廉培訓活動。2021年，公司分別於5月、10月、12月，針對員工、董事等開展有針對性的多次反舞弊宣傳培訓，參與培訓員工共計285人次，學習時長215小時。

## 3. Stable Operation and Win-Win Cooperation 穩健運營 合作共贏

### 3.3 Supporting Suppliers to Grow Together

AAG Energy has formulated the *Supplier Management Regulations* and the *Supplier Management Manual* for supplier management. All the rules specify supplier classification, inspection, entry, relation management, performance appraisal and exit process. Also, the Company establishes a supplier classified management system through digital and information technology, standardizes the full life cycle supplier management process to implement and strengthen supplier communication and training, and grows with suppliers.

In 2021, we further updated and improved the Company's supplier management system. Based on the supplier classification management system which features two-way value evaluation, AAG Energy regards the standardized *Supplier Management Regulations* as the criterion and envisions better strategic partnership under market competition. The Company strengthens the entry management at the beginning, and the information collection, analysis and evaluation at the end. The Company evaluates the three core elements of supplier management in the context of supply chain management to access the best products and services at the best cost.

AAG Energy forms the closed-loop supplier management in the full life cycle through the supplier control process including supplier classification, supplier entry, supplier relationship management, supplier evaluation and performance management. According to the list of qualified suppliers, we classify suppliers horizontally in terms of equipment and materials, technical services and constructors, and vertically classify them in terms of qualification, product status and historical cooperation, so as to realize hierarchical and classified supplier management.

Adhering to the concept of "introducing famous and high-quality products in the market and cooperating with suppliers with a certain market share", AAG Energy has carried out on-site audits and technical exchanges in various aspects such as supplier qualifications, safety management systems, management systems, equipment and facilities adequacy and sustainability management system. We add the certification of the QHSE management system as a mandatory requirement for entry. Qualified suppliers are admitted to the Company's supplier database to supply the demand and ensure the quality of the Company's services and products.

### 3.3 供應商共同成長

亞美能源針對供應商管理制訂了《供應商管理規定》和《供應商手冊》，各項規定中設置了分類、考察、准入、關係管理、績效考核、退出相關程序，並通過數字化、信息化技術建立起供應商分類管理體系，規範供應商全生命週期管理流程，落實強化供應商溝通與培養工作，實現與供應商共成長。

2021年，我們進一步更新完善公司供應商管理體系搭建工作。基於雙向價值評估的供應商分類管理體系，亞美能源以規範化的《供應商管理規定》為準則，以形成市場競爭為基礎，以促成戰略伙伴關係為遠景，一方面加強前端的准入管理，另一方面強化末端的信息收集、分析、評價，從供應鏈管理全局出發，評估供方管理三大核心要素，實現以最優成本獲取最好的產品和服務。

亞美能源通過包括供應商分類、供應商准入、供應商關係管理、供應商評價和績效管理等環節的供應商把控流程，形成對供應商的全生命週期閉環管理。我們依照合格供應商名錄，將供應商按照設備物資、技術服務、施工公司等進行橫向分類，結合資質信息、產品情況、歷史合作情況等方面進行縱向分類，實現對供應商分級分類管理。

亞美能源堅持以「引入市場中名優產品，與有一定市場佔有率的供貨商合作」為理念，對供應商資質、技術能力、管理制度、設備水平、可持續管理體系等多維度進行考察、審核和技術交流，並增設QHSE管理體系認證為準入硬性要求。通過審核的供應商予以准入資格，進入公司供應商庫，保障公司服務、產品的需求和質量。

### 3. Stable Operation and Win-Win Cooperation 穩健運營 合作共贏

In routine business, we mainly strengthen the analysis and evaluation of the value and objectives of both suppliers and customers, implementing targeted management strategies for different categories of suppliers. We evaluate suppliers by dynamic tracking and regular evaluation, that is, dynamically collecting the required supplier data and carrying out supplier evaluations on an annual basis. We urge suppliers to use energy-efficient and environmentally friendly equipment, motivate them to engage in cooperation and improve their overall performance to create an efficient, collaborative and mutually beneficial supply chain platform.

In 2021, AAG Energy had 369 suppliers, all of which are from China. According to the performance evaluation system of the supplier information database, the Company assessed 79 suppliers in the middle of the year; 2 unqualified suppliers have been removed from the supplier database. Among 95 new suppliers to be reviewed, 88 of them were actually admitted. At the same time, to optimize the internal information base, the Company made self-inspection and unwound and frozen 80 suppliers.

日常工作中，我們重點加強供需雙方價值目標的分析與評估，及根據供應商的類別特徵實施具有針對性的管理策略，以「動態跟蹤」與「定期評價」相結合的方式開展供應商評價工作，依據實際工作需要，動態收集供應商工作數據信息，按年開展供應商評價工作，督促供應商應用高能效環保設備，增強供方合作積極性，提升供應商的整體績效，打造高效協同、互利共贏的供應鏈平台。

2021年，亞美能源共計擁有369家供應商，全部來自中國境內。公司根據供應商信息庫績效評價體系，年中考核評定79家供應商，其中評定不合格的共2家，已移出供應商庫，新的待審核供應商共考察95家，實際准入88家。同時，為優化內部信息庫建設，公司開展供應商庫自查清理工作，清理後共凍結80家供應商。

## 4. People-oriented and Harmonious Development

### 以人為本 和諧發展

AAG Energy attaches importance to human resources. The Company always adheres to the people-oriented human resource concept, constantly and improves a fair, just and open human resource management system, continuously maintains a harmonious, inclusive and open working environment, and unblocks the path to promotion and improves training mechanism. In this way, we improve the quality and ability of employees, increase their happiness and cohesion, aiming to grow together with them.

#### 4.1 Respecting Employees' Rights and Interests

The Company puts the protection of employees' rights and interests at the core of human resource affairs. The Company actively advocates a consistent value between employees and the Company, attaches great importance to the opinions and feedbacks from each employee, and further enhances their sense of happiness and belonging by constantly offering diversified welfare and benefits for them.

##### Employment

Sticking to openness and equality, AAG Energy strives to create a diversified and inclusive working environment, and constantly optimize the workforce structure by gender, age and region.

亞美能源重視人才，始終秉承以人為本的人才理念，不斷構建並完善公平、公正、公開的人才管理體系，持續創造並維護和諧、包容、開放的工作環境，打造暢通的晉升渠道與完善培訓機制，提高員工素質與能力，增加員工幸福感與凝聚力，致力於與員工共成長。

#### 4.1 尊重員工權益

本公司始終將保障員工權益置於人才工作的核心位置，積極倡導員工價值與公司價值一致，高度重視每一位員工的意見與反饋，通過不斷為員工謀取多樣性的福利待遇，進一步增強員工幸福感與歸屬感。

##### 員工僱傭

亞美能源秉承公開平等的原則，竭力塑造多元共融的工作環境，不斷優化員工結構，推動員工性別、年齡、地區合理分佈。



## 4. People-oriented and Harmonious Development 以人為本 和諧發展

Chart: Workforce in 2021

表：2021年員工概況

Category 指標名稱		in 2021 2021年
Total employees 僱傭總人數		503 persons 人
Number of employees by age 按年齡結構劃分的員工人數	<30 years 30歲及以下	110 persons 人
	31-50 years 31-50歲	350 persons 人
	≥ 51years 51歲及以上	43 persons 人
Number of employees by employment type 按僱傭類型劃分的員工人數	Labor contract 勞動合同	500 persons 人
	Service contract 勞務合同	3 persons 人
Number of employees by gender 按性別劃分的員工人數	Male 男員工	414 persons 人
	Female 女員工	89 persons 人
Number of Employees by region 按地區劃分的員工人數	Other provinces and cities 外省市	146 persons 人
	Beijing 北京	6 persons 人
	Shanxi 山西	351 persons 人
Turnover number 員工流失人數		7 persons 人
Turnover rate 員工流失比例		1.37%
Turnover rate by gender 按性別劃分的員工流失比例	Male 男員工	1.43%
	Female 女員工	1.11%
Turnover rate by region 按地區劃分的員工流失比例	Other provinces and cities 外省市	2.67%
	Beijing 北京	0.00%
	Shanxi 山西	0.85%
Turnover rate by age 按年齡結構劃分的員工流失比例	<30 years 30歲及以下	0.00%
	31-50 years 31-50歲	1.41%
	≥ 51years 51歲及以上	4.44%

## 4. People-oriented and Harmonious Development 以人為本 和諧發展

To safeguard the interests of employees, we continue to offer welfare and benefits for employees. We respect the contributions of employees, and strictly follow the national holiday regulations to ensure their legal access to holidays. The Company pays basic insurance for employees, including endowment insurance, medical insurance, unemployment insurance, work-related injury insurance, housing provident fund and supplementary medical insurance. In 2021, the coverage of basic insurance has reached 100%. In order to create safe and stable working conditions, AAG Energy continues to adopt the employee system in 2020, provides commercial insurance for all employees and offered employees and their children the protection for critical diseases, accidents, hospitalization, outpatient, emergency and other matters. During the reporting period, the Company handled 700 claims for medical reimbursement, with a claim amount of RMB250,000.

### Labor Rights

AAG Energy strictly abides by the laws and regulations including the *Labor Law of the People's Republic of China*, the *Labor Contract Law of the People's Republic of China*, and the *Regulations on Prohibition of the Use of Child Labor*. In order to create a fair, just and open recruitment platform, we have formulated the Recruitment Policy for internal use, which clearly prohibits any form of discrimination in every procedure including employee recruitment, promotion, development, punishment and termination of labor contracts. During recruitment, we respected all candidates' rights to a fair talent election and provided them with equal opportunities to compete and to be employed. The Company completely eradicates child labor in recruitment and opposes all forms of forced labor. During the reporting period, there were no violations related to child labor or forced labor that occurred in the Company.

我們堅持從維護員工利益的角度出發，不斷為員工謀取多樣的福利保障。我們尊重員工的付出，嚴格遵循國家要求的員工休假規定，保障員工享有法定的節假日，依照相關法律規定為員工提供養老保險、醫療保險、失業保險、工傷保險、住房公積金及補充醫療保險等基本保險保障。2021年，公司五險一金保障覆蓋率達100%。為創造安心穩定的工作條件，亞美能源延續2020年員工制度保障，為全體員工提供商業保險，針對員工及其子女的重疾、意外、住院、門診、急診等事宜提供保障。報告期內，共處理員工醫療報銷理賠案件700人次，理賠金額達到25萬元。

### 勞工權益

本公司恪守《中華人民共和國勞動法》《中華人民共和國勞動合同法》《禁止使用童工規定》等相關法律法規。為創造公平、公正、公開的招聘平台，我們於內部制定《招聘政策》，明確員工在招聘、晉升、發展、處分、勞動合作終止等各個環節禁止任何形式的歧視行為，在招聘過程中，我們尊重每一位應聘者享受公平選拔的權利，並為其提供平等的競爭、僱傭機會。此外，本公司嚴格杜絕僱傭童工現象發生，反對各種形式的強制勞動。報告期內，本公司未發生過僱傭童工、強迫勞工等違規事件。

## 4. People-oriented and Harmonious Development 以人為本 和諧發展

### 4.2 Supporting Employee Development

AAG Energy attaches great importance to employee development, constantly improves the talent training system, and develops diversified career development paths. We are committed to improving the quality and ability of employees and helping them achieve their self-realization. At the same time, we continue to enhance our human resource management, actively organize the talent team building, and train talent in a targeted and effective manner.

#### Talent Team Building

To promote the growth of employees, standardize the promotion path, strengthen the talent team development and training, and build a comprehensive career development platform, the Company has formulated management measures such as *Management Measures for the Promotion of Personnel below the Middle Level*, *Management Measures for the Construction of Talents Team*, which specifies the well-defined path to climb the corporate ladder

In 2021, to supply the much-needed high-quality comprehensive talents for the Company's strategic planning and business development, we accelerated the talent training and development and prepared a one-to-one *Employee Development and Training Planning Form* for candidates in key managerial positions, employees with an aptitude to management, employees in key positions and employees with comprehensive potential in many forms of training including coach's guide, major roles with assistants, internal training and acting as lecturers. Every half year and every year, the coach, assistants and superior are invited to make an objective and comprehensive evaluation of the employees' current development, and dynamically update the growth of the members in the talent pools. We also sort out the account book for the talent pools and output of the Company and offer on-the-job continuous training on talents.

### 4.2 助力員工發展

亞美能源十分重視員工發展，不斷完善人才培養體系，開發多元化的職業發展通道，致力提升員工素質能力，助力其實現自我價值。與此同時，我們不斷增強自身人力資源管理水平，積極組織人才梯隊建設，定向有效的實現人才培養。

#### 人才梯隊建設

為促進員工成長，規範晉升通道，加強人才隊伍建設與培養，實現搭建全方位的職業發展平台，本公司制定了《中層以下人員晉升管理細則》《人才梯隊建設管理辦法》等管理辦法，構建起清晰明確的晉升路徑。

2021年，為持續滿足公司戰略規劃及業務發展對高素質綜合性人才的迫切需求，我們加速開展人才培養及發展工作，針對重點管理崗位的後備員工、具有管理潛力的員工、關鍵崗位員工、具有綜合潛力的員工制定了一對一的《員工發展與培養規劃表》，從教練輔導、AB角鍛煉、內部培訓、擔任講師等多種維度進行培養。並於每半年度、年度邀請教練、B角、上級分別對員工的現狀進行客觀綜合評價，動態更新庫內成員的成長狀態，為公司的人才儲備和輸出理清人才賬本、做好人才在崗的持續培養。

## 4. People-oriented and Harmonious Development 以人為本 和諧發展

### Case: Training on top-tier talent

In order to systematically conduct talent review and improve employee leadership, we invite Beisen team to train the senior management team in the top tier of the Company. Through interviews, industry benchmarking and other means, Beisen team built the leadership models of AAG Energy's high-level team and middle-level team respectively. By means of Ruitu evaluation and 360-degree evaluation for each trained senior management, we can help them have a comprehensive insight into their own abilities and give guides on their future growth path.

### 案例：第一梯隊人才培訓

為系統性的進行人才盤點與提升員工領導力，我們邀請北森團隊為本公司第一梯隊中高管班子進行培訓。通過訪談、行業對標等方式，分別建立了亞美能源高層團隊、中層團隊領導模型。採用對每一位受訓的中高管進行銳途測評、360測評的方式幫助其深入、全面的了解自身能力，提出未來發展路線的指導性意見。



## 4. People-oriented and Harmonious Development 以人為本 和諧發展

### Professional Training

AAG Energy attaches great importance to building an employee career development platform and is committed to creating a multi-model and multi-level employee training system that fits job requirements and employees' career goals. By making the *Capability Training Plan for Employees on Key Positions*, we formulate targeted training plans for employees at different levels, so as to improve employees' professional skills. In addition, to create diversified training courses and provide different professional training, the Company has issued the *Plan for the Establishment of Internal Training System* and the *Rules for Internal Lecturer Management*, enhanced employees' expertise and professionalism through basic knowledge training, position-specific skill training and general training.

In 2021, 496 employees in AAG Energy attended training, and each employee received 16.49 hours of training.

### 職業培訓

亞美能源高度重視員工職業發展平台建設，致力為員工打造符合崗位要求和職業目標規劃的多方式、多層次員工培訓體系。我們通過制定《重點崗位人員能力培養方案》，對不同層級的員工制定有針對性的培訓方案，以此不斷提升員工的職業技能。此外，為打造多樣化的培訓課程，提供不同專業的培訓，本公司發佈了《內部培訓體系建立方案》《內部講師管理實施細則》等，通過對員工開展基礎知識培訓、崗位技能知識培訓、綜合素質培訓等，提升員工的專業知識與業務能力。

2021年，亞美能源員工培訓總人數496人，平均培訓時長為16.49小時/人。

### 2021 Employee Training in 2021 2021年員工受訓情況

Category 指標名稱		in 2021 2021年
Percentage of Trained Employees by Gender 按性別劃分的受訓僱員百分比	Male 男員工	98.31%
	Female 女員工	100.00%
Percentage of Trained Employees by category 按僱員類型的受訓僱員百分比	Senior Management 高層員工	88.89%
	Middle Management 中層員工	96.77%
	Staff 普通員工	98.92%
Trained Hours by Gender 按性別劃分的受訓人均小時數	Male 男員工	16.71 Hours 小時/Person 人
	Female 女員工	15.50 Hours 小時/Person 人
Trained Hours by Category 按僱員類型的受訓人均小時數	Senior Management 高層員工	24.72 Hours 小時/Person 人
	Middle Management 中層員工	29.07 Hours 小時/Person 人
	Staff 普通員工	16.23 Hours 小時/Person 人

## 4. People-oriented and Harmonious Development 以人為本 和諧發展

In 2021, in a bid to help new managers quickly change their mindsets and adjust their mentality, AAG Energy purchased the *New Manager Growth Camp* series of courses. The 24-course training and learning include five modules: changing roles, setting goals, leading teams, achieving performance and promoting development, and improving the systematic management theory of middle-level candidates and new managers. In addition, according to the Company's training system features "one body and two wings", i.e.: the training management system as the main body, and the training course system and lecturer system as two wings, we developed the course system management covering all employees.

### Initiative I: AAG Energy's Curriculum System Management

In 2021, the Company continued to develop the curriculum system by adding drilling and completion, geological reservoir, pumping and production, human resources and administrative sequence. After many meetings, discussions, course compiling and reviews, 81 courses were finally officially incorporated into the Company's curriculum system.

During the reporting period, the Company offered targeted training courses for the needs of different employee groups. We invited external lecturers to give advancement training for middle and senior managers, junior managers and entry-level employees, including professional management, leadership improvement, business knowledge, position-specific skills, general skills and improved employees' overall quality.

In 2021, the average satisfaction of employees with 5 established curriculum systems and 68 courses was 4.76 points (out of 5 points).

2021年，為助力新晉經理人快速轉變思維、調整心態，亞美能源採購《新經理成長營》系列課程，從轉角色、定目標、帶團隊、贏績效、促發展五大模塊，開展24課程時長的培訓學習，提升中層後備人員、新晉經理人的系統性理論管理知識。此外，我們依照本公司「一體兩翼」同步提升的培訓體系規劃，堅持以培訓管理體系為一體，培訓課程體系、講師體系為兩翼，開展覆蓋全體員工的課程體系管理。

### 舉措一：亞美能源課程體系管理

2021年，本公司持續開發課程體系，新增鑽完井序列、地質油藏序列、排採序列、人力資源序列、行政序列等課程，歷經多次會議研討、課程撰寫以及評審，最終將81門課程正式納入公司課程體系。

報告期內，本公司根據不同員工群體的培訓需求，開展有針對性的培訓課程，對中高層、基層管理者、基層員工邀請外部講師分別進行了提升培訓，包括專業管理知識、領導力提升知識、業務知識、崗位技能知識、綜合素質培養等多個方面，全面提升公司員工綜合素質。

2021年，員工對已完成的5大課程體系，68門課程的滿意度平均值為4.76(總分5分)。

## 4. People-oriented and Harmonious Development 以人為本 和諧發展

### Initiative II: Employee Training Pattern

To deeply combine talent development and development strategy, AAG Energy has designed four types of training patterns: orientation program for the new employee, internal training, external training to internal training and special promotion training.

- *Orientation program for new employees*  
In 2021, 27 new employees received training on corporate culture, administration, finance, human resource, safety and position responsibilities when they were onboard. We ensured 100% of the new employees completed the orientation, passed the assessment, and accepted pre-job training after passing the exam at their departments.
- *Internal training*  
The Company internally organized training topics for employee groups of different backgrounds, and professional skills training among departments to improve the skills of internal employees. During the reporting period, we held 5,588.25 hours of training.
- *External training to internal training*  
In 2021, the Company conducted 111 external trainings on policy requirements, operation certification and special skill improvement. We also conducted some external to internal training, mainly on non-certification training to enhance the training effect.
- *Special training*  
AAG Energy has formulated talent team-building plans. The Company prepared a one-to-one *Employee Development and Training Planning Form* for employees with overall growth potential. We also carried out a variety of training courses, such as "oil and gas strategic investment and M&A", "coach techniques" and "strategic investment ideas" and etc..

### 舉措二：員工培訓模式

亞美能源為加強人才發展與發展戰略的深度融合，特制定以新員工入職培訓、內部培訓、外部培訓轉內部培訓、專項提升為主的四類培訓模式。

- *新員工入職培訓*  
2021年，本公司新入職員工27人，在入職當天均進行了企業文化、行政、財務、人力、安全及崗位職責等相關培訓，確保新入職員工100%完成入職培訓、通過考核，並在合格後進入部門接受部門崗前培訓。
- *內部培訓*  
本公司內部組織各種基不同群體的培訓課題、各部門專業技能培訓，開展專業培訓課程，以此提升內部員工技能，報告期內共組織開展5588.25小時培訓。
- *外部培訓轉內訓*  
2021年，本公司共計外部培訓111次，包含各種政策要求、作業取證、專項技能提升等內容培訓，對非取證類的培訓均進行了內部轉訓，以此增強培訓效果。
- *專項提升*  
亞美能源制定了人才梯隊的建設，針對具有綜合潛力的員工制定了一對一的《員工發展與培養規劃表》，並開展多種培訓課程，如「油氣行業戰略投資並購」培訓、「教練技術」培訓、「戰略投資思路」培訓等。

## 4. People-oriented and Harmonious Development 以人為本 和諧發展

### 4.3 Employee Care

AAG Energy has been committed to creating a friendly work atmosphere and maintaining employees' work-life balance. To increase employees' happiness, in 2021, the company launched a wide range of activities for Women's Day on March 8, International Labor Day on May 1, Children's Day on June 1, the Month of Health and two parties to welcome newcomers. In addition, we highly value employees' occupational health and safety. We strictly abide by the *Production Safety Law of the People's Republic of China*, continue to strengthen the development and implementation of the internal occupational health and safety management system and provide health checks. What's more, we encourage employee engagement in activities, improve their physical health and effectively ensure their occupational health and safety.

To enhance the cohesion across the Company, in 2021, the Company held a series of employee activities, for instance, "Make AAG Women Look More Professional", "Film Watching on May Day", "AAG Energy Baby Back Home", "AAG Energy Fitness Month", "Newcomer Welcoming Party" and etc..

### 4.3 關愛員工生活

亞美能源始終致力打造良好的工作氛圍，維護員工工作與生活的平衡機制。為提升員工幸福感，2021年，本公司開展包括三八婦女節、五一勞動節、六一兒童節、全員健康月及兩次新員工迎新會在內的多項員工活動。此外，我們高度重視員工的職業健康與安全，嚴格遵守《中華人民共和國安全生產法》等法律法規，持續強化內部職業健康安全管理制度的建設和實施，落實健康查體舉措，並鼓勵員工積極參與公司活動，提升自身身體素質，切實保障員工的職業健康與安全。

為提升公司凝聚力，2021年，本公司分別開展了「亞美女神職業形象塑造」、「五一勞動節觀影」、「亞美寶貝回家」、「亞美能源健身月」、「迎新會」等員工活動。



## 4. People-oriented and Harmonious Development 以人為本 和諧發展

### Case: Make AAG Women Look More Professional Themed “Beautify You in Warm March”

To offer women employees with rich and relaxing cultural and recreational enjoyment, AAG Energy launched the activity “Make AAG Women Look More Professional” on Women’s Day on March 8, 2021. We invited stylists to instruct our women employees on makeup, hair decoration, clothing and accessories. We held the exclusive festival to enable the female employees to show the elegance and charm of educated women in different fields in future work and life.

### 案例：「溫情三月，與美麗相約」— 亞美女神職業形象塑造活動

亞美能源為豐富女職工文娛生活、調節身心，於2021年3月8日女神節，開展了「亞美女神職業形象塑造」活動，通過邀請外部專業職業形象設計老師來我公司為亞美女神們的妝容、發飾、服裝、配飾等方面提供專業建議等方式，為女職工舉辦屬於她們自己的女神節，同時能夠使女職工在今後的工作與生活中在不同領域展現知識女性的優雅與風採。



## 4. People-oriented and Harmonious Development 以人為本 和諧發展

### Case: Film Watching on May Day Themed “Films Touch You Heart”

To enrich employees' cultural and recreational activities and increase cohesion and unity across the Company, we held the activity “Film Watching on May Day” on May 1, 2021, and organized front-line employees and logistic support personnel to go to the cinema. This activity not only released tensions among employees but also further reflected our deep concern for them.

### 案例：「心隨影動、蕩滌心靈」— 五一勞動節觀影活動

為豐富員工的文娛活動，提升公司凝聚力與向心力，2021年5月1日，本公司開展了「五一勞動節觀影」活動，組織一線員工及後勤保障人員於影院觀影。本次活動在舒緩員工緊張工作情緒的同時，進一步體現亞美能源對員工的深切關懷。



## 4. People-oriented and Harmonious Development 以人為本 和諧發展

### Case: The Second AAG Energy Family Open Day on International Children's Day "AAG Energy Baby Back Home"

AAG Energy always advocates a family-like culture. During the reporting period, the Company followed the First AAG Energy Family Open Day on International Children's Day in 2020 and held the Second AAG Energy Family Open Day on International Children's Day with the theme of "AAG Energy Baby Back Home". In this activity, we invited employees under 12 and their families to visit the Company, so that they can understand their parents' daily work environment. The funny parent-child games enabled employees and their families to feel the warmth of the AAG family.

### 案例：第二屆員工家屬公開日 — 「亞美寶貝回家」

亞美能源始終宣揚親人文化理念，報告期內，沿襲2020年第一屆員工家屬公開日活動，舉辦「亞美寶貝回家」為主題的第二屆員工家屬公開日。此次活動，我們邀請公司12週歲以下的員工寶貝與家屬前來公司參觀，以此使其了解父母日常的工作環境。通過開展親子趣味互動小遊戲，讓員工及員工家屬感受亞美大家庭的溫馨氛圍。



## 4. People-oriented and Harmonious Development 以人為本 和諧發展

### Case: "Carry AAG Spirit for Dynamic Life" — the theme activity of AAG Energy Fitness Month

AAG Energy especially holds Fitness Month to strengthen the corporate culture, enrich employees' leisure time, build up their physique, showcase the vitality of both the Company and employees and facilitate employees' communication and exchanges. A series of sports activities balanced employees' life and work, lowered their stress at work and promoted employees' physical and mental health.

### 案例：「揚亞美精神，繪動感人生」— 亞美能源健身月主題活動

亞美能源為加強企業文化建設，豐富員工生活，增強員工體質，展現企業與員工的生機與活力，拉近員工之間的溝通與交流，特舉辦健身月主題活動，通過一系列體育活動開展，有效平衡員工生活與工作的關係，緩解工作壓力，促進員工身心健康。



## 4. People-oriented and Harmonious Development 以人為本 和諧發展

### Case: AAG Energy Newcomer Welcoming Party Themed — “Get Close to You to Warm All of Us”

AAG Energy held newcomer welcoming parties in the first half and the second half of 2021 to help new employees integrate into the “AAG family” more quickly and get the Company closer to them. Those parties facilitated new hires familiar with the Company’s business and corporate culture, and further increased their sense of identity. The considerate warmth in AAG was widely praised by new employees.

### 案例：「靠近你，溫暖我們」— 亞美能源 新員工迎新會

為使新員工更快速的融入「亞美大家庭」，也為更深入的走進新員工的內心，亞美能源在2021年上半年與下半年分別舉辦了新員工迎新會，幫助新員工快速熟悉公司業務與企業文化，進一步提升了員工對公司的認同感，亞美溫度獲得新員工的廣泛好評。



**Newcomer Welcoming Party in  
the First Half of the Year**  
迎新會(上半年)



**Newcomer Welcoming Party in  
the Second Half of the Year**  
迎新會(下半年)

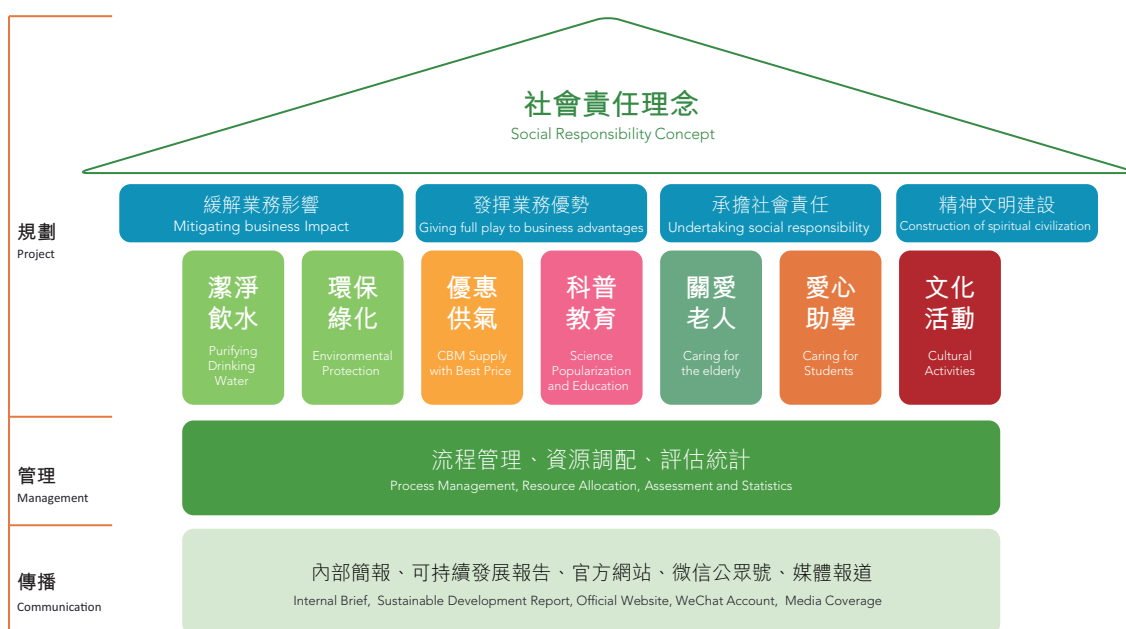
## 5. Benefiting Local Communities 社區關懷

Over the years, AAG Energy has been making earnest efforts to community welfare, and actively practicing social responsibility. The Company responds to the national call for rural revitalization, carries out poverty alleviation in underdeveloped rural areas and contributes to rural development; The Company also works with local governments to engage in anti-pandemic work. In this process, with the progress of our own community projects, we also hire a third-party agency to build an exclusive community project system. Under the framework of planning, management and communication, we improved the community project management mechanism in combination with the Company's social responsibility concept.

多年來，亞美能源熱心於社區公益事業，積極踐行社會責任，體現企業擔當。公司積極響應國家助力鄉村振興的政策號召，在貧困鄉村地區開展扶貧活動，助力鄉村發展；公司積極投身於抗疫工作，與地方合作，同心抗疫。在此過程中我們也根據自身社區項目發展情況，聘請第三方專業機構為公司構建了專屬於亞美能源的特色社區項目體系，即以規劃、管理和傳播三方面為框架，結合公司的社會責任理念，健全社區項目管理機制。

During the reporting period, we invested RMB9.6 million in total in the community.

報告期內，我們社區總投入達960萬元。



**Figure: Community Working Model of AAG Energy**  
圖：亞美能源社區工作模型

## 5. Benefiting Local Communities 社區關懷

### 5.1 Contributing to Rural Revitalization

As the pandemic becomes normalized, the Company has strengthened cooperation with local villages and towns, responded to their diversified needs during this stage, and contributed to fighting the pandemic in underdeveloped areas. In 2021, the state began to make a strategy for rural revitalization. To this end, we actively answered the call, and offered assistance by “purchase for donation and poverty alleviation through consumption”.

#### Case: Poverty Alleviation Through Consumption in Yangzhuang Village, Shizhuang Town Themed “Company’s Charitable Poverty Assistance to Warm the Underdeveloped”

On November 19, 2021, AAG Energy launched a public welfare activity under the theme of “Thanking AAG for Poverty Alleviation” in Yangzhuang Village, Shizhuang Town. Shanxi due to its geographical uniqueness, cultivates many first-class local coarse cereals, especially famous for millet. The prime millet varieties produced in Shanxi have become a golden name card of modern characteristic agriculture in Shanxi. Many villagers in the villages near the Company have been planting millet to support their families for generations, but due to transportation problems and inadequate information, their millet cannot be fully marketed to the outside. Instead of donating, the Company purchased the millets and effectively opened up sales channels for the overstocked agricultural products. This method of poverty alleviation through consumption solved the worries of farmers and promoted the revitalization and development of the countryside with our concrete actions.

### 5.1 助力鄉村振興

本公司針對疫情轉入常態化的現狀，不斷與地方鄉鎮加強合作，積極響應鄉鎮在疫情防控階段的多元化需求，為貧困地區打贏疫情防控戰貢獻一份力量。2021年國家對鄉村振興開始進行戰略化佈局，我們積極響應國家號召，深入貧困地區開展幫扶工作，通過「以購帶捐、消費扶貧」方式，助力鄉村振興。

#### 案例：「愛心企業扶貧助困情系公益溫暖人心」— 柿莊鎮楊莊村消費扶貧主題活動

2021年11月19日，亞美能源在柿莊鎮楊莊村開展了「感謝亞美獻愛心，助力扶貧得民心」的公益活動。山西因其特殊的地理環境，培育出眾多品質一流的特色雜糧，而山西小米以其突出的品質、品種優勢，成為山西現代特色農業的一張「黃金名片」。位於公司附近村莊的很多村民世代都靠耕種養家，但受交通不便、信息不暢等原因制約，自己耕種的小米無法做到完全外銷，公司通過「以購帶捐、消費扶貧」方式，有效幫助滯銷農產品打開銷售渠道，解決農民後顧之憂，以實際行動助力鄉村振興發展。



Figure: The public welfare activity themed “Thanking AAG for Poverty Alleviation”  
圖：「感謝亞美獻愛心，助力扶貧得民心」公益活動

## 5. Benefiting Local Communities 社區關懷

### 5.2 Building Community Together

The Company devotes itself to public welfare and plays the role of corporate citizen. The Company also encourages employees to engage in voluntary activities and charitable activities to carry forward the voluntary spirit to serve and create a beautiful and friendly society.

#### Case: Practice Social Responsibility to Deliver Warmth

AAG Energy visited the seniors at Qinshui County Nursing Home on February 24, 2021, to greet them with our sympathy and care, which practiced the traditional Chinese virtue — “respect the elderly in your family as well as you respect the elderly of other families”.

On December 28, 2021, we re-visited Qinshui County Nursing Home to offer daily necessities such as rice, noodles, grain and oils. Our movement transmitted love and care throughout the nursing home and the elderly were immersed with warmth and support from society during the cold winter.



Figure: Visiting the Seniors at Qinshui County Nursing Home

圖：沁水縣敬老院慰問活動

### 5.2 社區共創

本公司深耕公益事業，充分發揮企業公民的責任，鼓勵員工參與志願活動與社會公益活動，傳承志願服務精神，助力美好、友善社會的創建。

#### 案例：踐行社會責任 傳遞溫情暖人心

2021年2月24日，亞美能源來到沁水縣敬老院，帶著公司的慰問與關懷，看望老年朋友，踐行「老吾老以及人之老」的中華傳統美德。

同年12月28日，我們再次來到沁水縣敬老院，送上米面、糧油、日用品等生活物資，將愛與關懷傳遞到敬老院各個角落，讓在院老人與在寒冬感受到來自社會的溫暖與支持。



Figure: Charitable Goods

圖：慰問物資



# Index of the HKEX ESG Report Guideline

## 聯交所ESG指標索引

Subject Areas, Aspects, General Disclosures and KPIs 環境、社會及管治範疇與一般披露及關鍵績效指標 (KPI)		Response 所在頁碼
<b>Scope: Environmental</b> 環境		
<p>A1: Emissions 排放物</p> <p>General Disclosure 一般披露</p> <p>Information on:</p> <p>(a) the policies; and</p> <p>(b) compliance with relevant laws and regulations that have a significant impact on the issuer</p> <p>relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste.</p> <p>有關廢氣及溫室氣體排放、向水及土地的排污、有害及無害廢棄物的產生等的：</p> <p>(a) 政策；及</p> <p>(b) 遵守對發行人有重大影響的相關法律及規例的資料。</p> <p>Note: Air emissions include NO<sub>x</sub>, SO<sub>x</sub>, and other pollutants regulated under national laws and regulations. Greenhouse gases include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride. Hazardous wastes are those defined by national regulations.</p> <p>註： 廢氣排放包括氮氧化物、硫氧化物及其他受國家法律法規及規例規管的污染物。 溫室氣體包括二氧化碳、甲烷、氧化亞氮、氫氟碳化合物、全氟化碳及六氟化硫。 有害廢棄物指國家規例所界定者。</p>		Pages 47–51 47至51頁
A1.1	The types of emissions and respective emissions data. 排放物種類及相關排放數據。	Pages 47–51 47至51頁
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). 直接(範圍1)及能源間接(範圍2)溫室氣體總排放量(以噸計算)及(如適用)密度(如以每產量單位、每項設施計算)。	Pages 47–51 47至51頁
A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility). 所產生有害廢棄物總量(以噸計算)及(如適用)密度(如以每產量單位、每項設施計算)。	Pages 53–55 53至55頁
A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility). 所產生無害廢棄物總量(以噸計算)及(如適用)密度(如以每產量單位、每項設施計算)。	Pages 53–55 53至55頁
A1.5	Description of emissions target(s) set and steps taken to achieve them. 描述所訂立的排放量目標及為達到這些目標所採取的步驟。	Pages 36–61 36至61頁
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. 描述處理有害及無害廢棄物的方法，及描述所訂立的減廢目標及為達到這些目標所採取的步驟。	Pages 53–55 53至55頁

# Index of the HKEX ESG Report Guideline

## 聯交所ESG指標索引

Subject Areas, Aspects, General Disclosures and KPIs 環境、社會及管治範疇與一般披露及關鍵績效指標 (KPI)		Response 所在頁碼
<p>A2: Use of Resources 資源使用</p> <p>General Disclosure 一般披露</p> <p>Policies on the efficient use of resources, including energy, water and other raw materials. 有效使用資源(包括能源、水及其他原材料)的政策。</p> <p>Note: Resources may be used in production, in storage, transportation, in buildings, electronic equipment, etc. 註： 資源可用於生產、儲存、運輸、樓宇、電子設備等。</p>		Pages 55–61 55至61頁
A2.1	<p>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). 按類型劃分的直接及／或間接能源(如電、氣或油)總耗量(以千個千瓦時計算)及密度(如以每產量單位、每項設施計算)。</p>	Pages 56–57 56至57頁
A2.2	<p>Water consumption in total and intensity (e.g. per unit of production volume, per facility). 總耗水量及密度(如以每產量單位、每項設施計算)。</p>	Pages 55–56 55至56頁
A2.3	<p>Description of energy use efficiency target(s) set and steps taken to achieve them. 描述所訂立的能源使用效益目標及為達到這些目標所採取的步驟。</p>	Pages 36–61 36至61頁
A2.4	<p>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. 描述求取適用水源上可有任何問題，以及所訂立的用水效益目標及為達到這些目標所採取的步驟。</p>	Pages 55–56 55至56頁
A2.5	<p>Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced. 製成品所用包材料的總量(以噸計算)及(如適用)每生產單位佔量。</p>	Not Applicable 不適用
<p>A3: The Environment and Natural Resources 環境及天然資源</p> <p>General Disclosure 一般披露</p> <p>Policies on minimising the issuer's significant impacts on the environment and natural resources. 減低發行人對環境及天然資源造成重大影響的政策。</p>		Pages 36–61 36至61頁
A3.1	<p>Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them. 描述業務活動對環境及天然資源的重大影響及已採取管理有關影響的行動。</p>	Pages 36–61 36至61頁

# Index of the HKEX ESG Report Guideline

## 聯交所ESG指標索引

Subject Areas, Aspects, General Disclosures and KPIs 環境、社會及管治範疇與一般披露及關鍵績效指標 (KPI)		Response 所在頁碼
<p>A4: Climate Change 氣候變化</p> <p>General Disclosure 一般披露</p> <p>Policies on identification and mitigation of significant climate-related issues which have impacted, and those which may impact, the issuer. 識別及應對已經及可能會對發行人產生影響的重大氣候相關事宜的政策。</p>		Pages 37–48 37至48頁
A4.1	<p>Description of the significant climate-related issues which have impacted, and those which may impact, the issuer, and the actions taken to manage them. 描述已經及可能會對發行人產生影響的重大氣候相關事宜，及應對行動。</p>	Pages 37–48 37至48頁
<b>Scope: Social</b> 社會		
<b>Employment and Labor Practices</b> 僱傭及勞工準則		
<p>B1: Employment 僱傭</p> <p>General Disclosure 一般披露</p> <p>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, anti-discrimination, and other benefits and welfare. 有關薪酬及解僱、招聘及晉升、工作時數、假期、平等機會、多元化、反歧視以及其他待遇及福利的：</p> <p>(a) 政策；及 (b) 遵守對發行人有重大影響的相關法律及規例的資料。</p>		Pages 71–71 71至71頁
B1.1	<p>Total workforce by gender, employment type (for example, full- or part-time), age group and geographical region. 按性別、僱傭類型(如全職或兼職)、年齡組別及地區劃分的僱員總數。</p>	Pages 71–71 71至71頁
B1.2	<p>Employee turnover rate by gender, age group and geographical region. 按性別、年齡組別及地區劃分的僱員流失比率。</p>	Pages 71–71 71至71頁

# Index of the HKEX ESG Report Guideline

## 聯交所ESG指標索引

Subject Areas, Aspects, General Disclosures and KPIs 環境、社會及管治範疇與一般披露及關鍵績效指標 (KPI)		Response 所在頁碼
<p>B2: Health and Safety 健康與安全</p> <p>General Disclosure 一般披露</p> <p>Information on:</p> <p>(a) the policies; and</p> <p>(b) compliance with relevant laws and regulations that have a significant impact on the issuer</p> <p>relating to providing a safe working environment and protecting employees from occupational hazards.</p> <p>有關提供安全工作環境及保障僱員避免職業性危害的：</p> <p>(a) 政策；及</p> <p>(b) 遵守對發行人有重大影響的相關法律及規例的資料。</p>		Pages 21–36 21至36頁
B2.1	<p>Number and rate of work-related fatalities occurred in each of the past three years including the reporting year.</p> <p>過去三年(包括匯報年度)每年因工亡故的人數及比率。</p>	Pages 21–36 21至36頁
B2.2	<p>Lost days due to work injury.</p> <p>因工傷損失工作日數。</p>	Pages 21–36 21至36頁
B2.3	<p>Description of occupational health and safety measures adopted, and how they are implemented and monitored.</p> <p>描述所採納的職業健康與安全措施，以及相關執行及監察方法。</p>	Pages 21–36 21至36頁
<p>B3: Development and Training 發展及培訓</p> <p>General Disclosure 一般披露</p> <p>Policies on improving employees' knowledge and skills for discharging duties at work.</p> <p>Description of training activities.</p> <p>有關提升僱員履行工作職責的知識及技能的政策。描述培訓活動。</p> <p>Note: Training refers to vocational training. It may include internal and external courses paid by the employer.</p> <p>註： 培訓指職業培訓，可包括由僱主付費的內外部課程。</p>		Pages 74–78 74至78頁
B3.1	<p>The percentage of employees trained by gender and employee category (e.g. senior management, middle management).</p> <p>按性別及僱員類別(如高級管理層、中級管理層)劃分的受訓僱員百分比。</p>	Pages 74–78 74至78頁
B3.2	<p>The average training hours completed per employee by gender and employee category.</p> <p>按性別及僱員類別劃分，每名僱員完成受訓的平均時數。</p>	Pages 74–78 74至78頁

# Index of the HKEX ESG Report Guideline

## 聯交所ESG指標索引

Subject Areas, Aspects, General Disclosures and KPIs 環境、社會及管治範疇與一般披露及關鍵績效指標 (KPI)		Response 所在頁碼
B4: Labor Standards 勞工準則  General Disclosure 一般披露  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. 有關防止童工或強制勞工的： (a) 政策；及 (b) 遵守對發行人有重大影響的相關法律及規例的資料。		Pages 71–73 71至73頁
B4.1	Description of measures to review employment practices to avoid child and forced labor. 描述檢討招聘慣例的措施以避免童工及強制勞工。	Pages 71–73 71至73頁
B4.2	Description of steps taken to eliminate such practices when discovered. 描述在發現違規情況時消除有關情況所採取的步驟。	Pages 71–73 71至73頁

# Index of the HKEX ESG Report Guideline

## 聯交所ESG指標索引

Subject Areas, Aspects, General Disclosures and KPIs 環境、社會及管治範疇與一般披露及關鍵績效指標 (KPI)		Response 所在頁碼
<b>Operating Practices</b> 操作規程		
B5: Supply Chain Management 供應鏈管理  General Disclosure 一般披露 Policies on managing environmental and social risks of the supply chain. 管理供應鏈的環境及社會風險政策。		Pages 69–70 69至70頁
B5.1	Number of suppliers by geographical region. 按地區劃分的供應商數目。	Pages 69–70 69至70頁
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. 描述有關聘用供貨商的慣例，向其執行有關慣例的供貨商數目，以及相關執行及監察方法。	Pages 69–70 69至70頁
B5.3	Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored. 描述有關識別供應鏈每個環節的環境及社會風險的慣例，以及相關執行及監察方法。	Pages 69–70 69至70頁
B5.4	Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored. 描述在揀選供貨商時促使多用環保產品及服務的慣例，以及相關執行及監察方法。	Pages 69–70 69至70頁

# Index of the HKEX ESG Report Guideline

## 聯交所ESG指標索引

Subject Areas, Aspects, General Disclosures and KPIs 環境、社會及管治範疇與一般披露及關鍵績效指標 (KPI)		Response 所在頁碼
B6: Product Responsibility 產品責任 General Disclosure 一般披露 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. 有關所提供產品和服務的健康與安全，廣告，標籤及私隱事宜以及補救方法的：		Pages 62–66 62至66頁
B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons. 已售或已運送產品總數中因安全與健康理由而須回收的百分比。	Not Applicable 不適用
B6.2	Number of products and service related complaints received and how they are dealt with. 接獲關於產品及服務的投訴數目以及應對方法。	Pages 62–66 62至66頁
B6.3	Description of practices relating to observing and protecting intellectual property rights. 描述與維護及保障知識產權有關的慣例。	Pages 62–66 62至66頁
B6.4	Description of quality assurance process and recall procedures. 描述質量檢定過程及產品回收程序。	Not Applicable 不適用
B6.5	Description of consumer data protection and privacy policies, and how they are implemented and monitored. 描述消費者資料保障及私隱政策，以及相關執行及監察方法。	Not Applicable 不適用

# Index of the HKEX ESG Report Guideline

## 聯交所ESG指標索引

Subject Areas, Aspects, General Disclosures and KPIs 環境、社會及管治範疇與一般披露及關鍵績效指標 (KPI)		Response 所在頁碼
B7: Anti-corruption 反貪污 General Disclosure 一般披露 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. 有關防治賄賂、勒索、欺詐及洗黑錢的： (a) 政策；及 (b) 遵守對發行人有重大影響的相關法律及規例的資料。		Pages 67–68 67至68頁
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. 於匯報期內對發行人或其僱員提出並已審結的貪污訴訟案件的數目及訴訟結果。	Pages 67–68 67至68頁
B7.2	Description of preventive measures and whistle-blowing procedures, and how they are implemented and monitored. 描述防範措施及舉報程序，以及相關執行及監察方法。	Pages 67–68 67至68頁
B7.3	Description of anti-corruption training provided to directors and staff. 描述向董事及員工提供的反貪污培訓。	Pages 67–68 67至68頁
<b>Community</b> 社區		
B8: Community Investment 社區投資 General Disclosure 一般披露 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. 有關以社區參與來了解營運所在社區需要和確保其業務活動會考慮社區利益的政策。		Pages 85–87 85至87頁
B8.1	Focus areas of contribution (e.g. education, environmental concerns, labor needs, health, culture, sport). 專注貢獻範疇(如教育、環境事宜、勞工需求、健康、文化、體育)。	Pages 85–87 85至87頁
B8.2	Resources contributed (e.g. money or time) to the focus area. 在專注範疇所動用資源(如金錢或時間)。	Pages 85–87 85至87頁



# Feedback

## 讀者意見反饋表

Dear Reader:

Thank you for your interest and support in AAG Energy's sustainable development commitments. In order to deliver professional and valuable ESG information to you, as well as to further improve our Sustainable Development Report, your suggestions and feedback are very much appreciated.

1. Are you satisfied with this report? Please feel free to share your comments.
2. Does this report give you full visibility on our CSR platform?
3. Are you able to find the information that you were seeking in this report?
4. What are your suggestions for this report?

尊敬的讀者：

非常感謝您對亞美能源可持續發展的關注和支持，為向您提供我們更專業、更有價值的環境、社會及管治信息，進一步提升亞美可持續發展報告的質量，歡迎您回答意見反饋表中的相關問題。

1. 您對報告是否滿意？請作出您的評價。
2. 您認為我們履行社會責任的情況是否得到了完整披露？
3. 您希望了解的信息在報告中是否被完整披露？
4. 您對報告有哪些改進建議？

Your contact information 您的信息：

Name 姓名 \_\_\_\_\_

Company 工作單位 \_\_\_\_\_

Title 職務 \_\_\_\_\_

Fax 傳真 \_\_\_\_\_

Phone Number 聯繫電話 \_\_\_\_\_

E-mail 電子郵件 \_\_\_\_\_



AAG

亞美能源控股有限公司  
AAG Energy Holdings Limited