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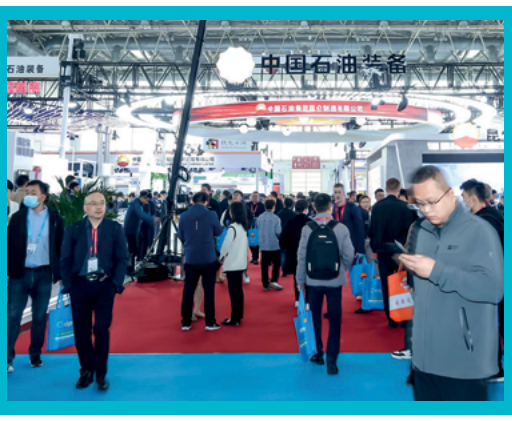

cippe 2025

China balances priorities for energy shift

World's largest energy consumer confronting dual challenge of reducing reliance on fossil fuels while ensuring energy security during transition to greener future. Pages 2&3

面对全球形势日趋复杂，中国政府正在调整战略重心，逐步从经济高速增长转向国家安全与稳定，这一转变亦深刻影响着中国的能源发展方向。 P2&3

A worker at a Sinopec facility in China.
Photo: AP/SCANPIX

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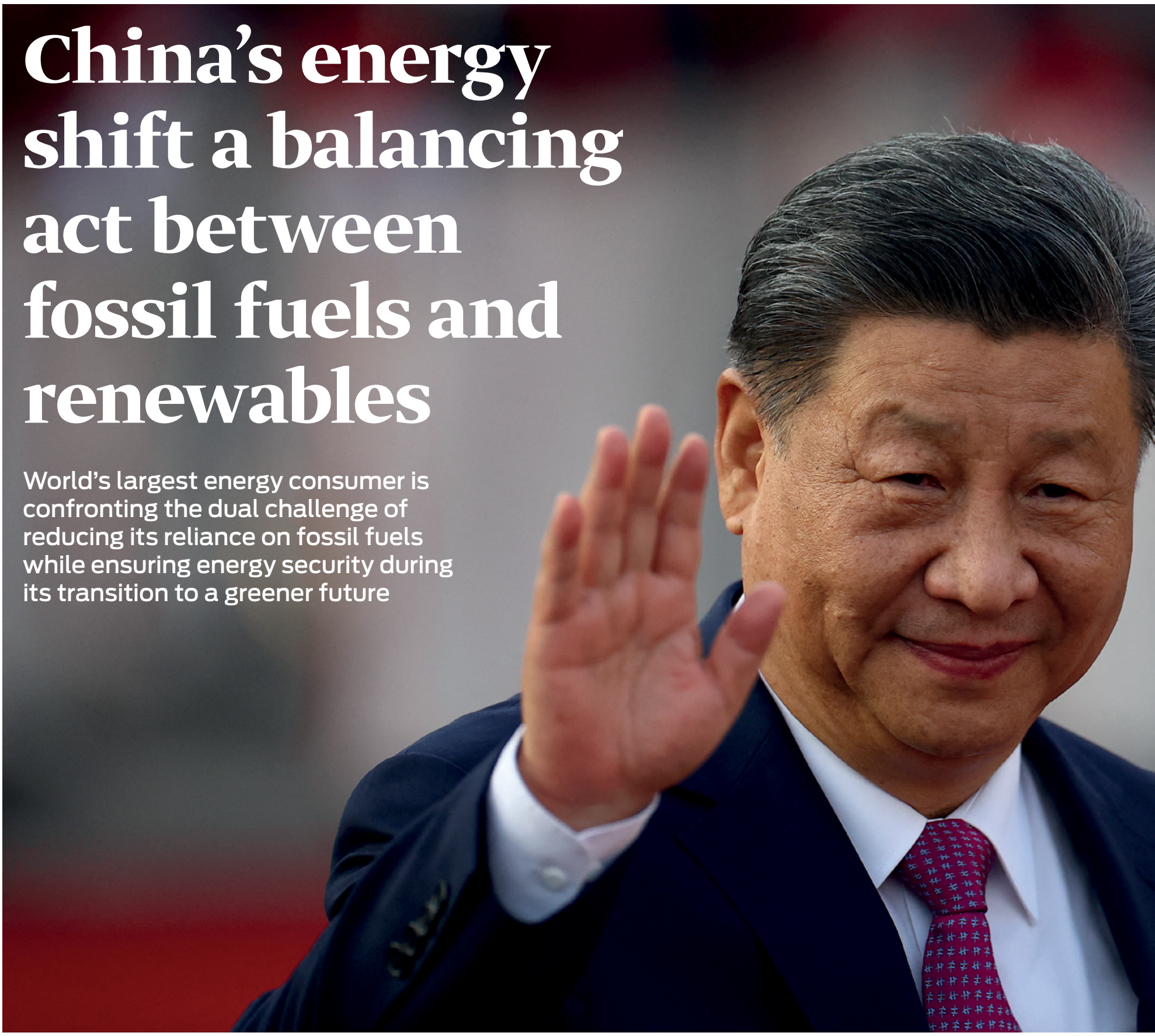
China's energy shift a balancing act between fossil fuels and renewables



World's largest energy consumer is confronting the dual challenge of reducing its reliance on fossil fuels while ensuring energy security during its transition to a greener future

XU YIHE
Singapore

FACED with an increasingly complex global landscape, China's government is changing its focus from rapid economic growth to national security and stability, a shift that also has significant implications for the country's energy strategy.

The change marks a pivotal moment in the country's approach to energy development, with a strong emphasis placed on resilience, sustainability and decarbonisation.

But as China seeks to balance its competing priorities, it faces critical questions about how best to reduce its reliance on fossil energy without jeopardising its economic security.

A significant development in government efforts to manage that shift emerged at the end of 2024 when the country's top legislative body, the National People's Congress, voted to pass the country's first energy law.

The legislation, passed in November and which came into effect on 1 January 2025, has been on the agenda for decades.

It formally incorporates renewable energy into China's power system, but at the same time allows for the clean and efficient use of fossil fuels.

China's energy consumption is expected to peak between 2030 and 2035, surpassing 6.2 billion tonnes of coal equivalent, up from the 5.99 billion tonnes estimated for 2024.

While the country is actively pursuing a transition to non-fossil energy sources, fuels such as coal and gas — which currently account for 80% of the energy mix — will still represent around 30% of the total by 2035. At the same time as it seeks to meet rising energy demand, Beijing is targeting a peak in the country's carbon dioxide emissions between 2026 and 2030 at 10 billion to 10.2 billion tonnes, after which they are expected to decrease at an average annual rate of 4.9%, falling to around 1.7 billion tonnes by 2060, according to the country's second-largest energy company, Sinopec.

Fossil fuels represent a significant part of China's energy landscape, especially in the industrial sector.

Coal remains the "ballast stone" for the country's vast industrial base, which includes steel production, cement manufacturing, and other energy-intensive sectors.

The use of coal, which accounts for 55% of China's current total energy consumption, is projected to peak around 2025 at roughly 4.37 billion tonnes, after which its share of the energy mix will begin to steadily decline.

Oil and natural gas will also continue to play key roles for several decades, particularly in petrochemical industries and in long-distance transportation.

Oil demand is expected to peak between 2025 and 2030 at around 800 million tonnes (5.9 billion barrels), and gradually decline thereafter.

As China continues to develop its electric vehicle manufacturing capacity, future demand for oil is set to be driven by its importance more as a feedstock for the petrochemical industry rather than as a transportation fuel.

By 2060, annual oil consumption is expected to be around 280 million tonnes (2 billion barrels) .

Natural gas, which is projected to peak around 2040, will become increasingly important as part of China's energy mix, especially as a cleaner alternative to coal.

By 2040, natural gas will account for about 13% of the country's primary energy consumption.

However, by 2060, its share is expected to decline to around 9%, as China brings increasing volumes of renewable capacity online.

As a result of the continued use of fossil fuels, a critical element of China's decarbonisation strategy is the expansion of carbon capture, utilisation and storage (CCUS) technologies. Currently, China has around 11 large-scale CCUS projects capturing roughly 1 million tonnes per annum of

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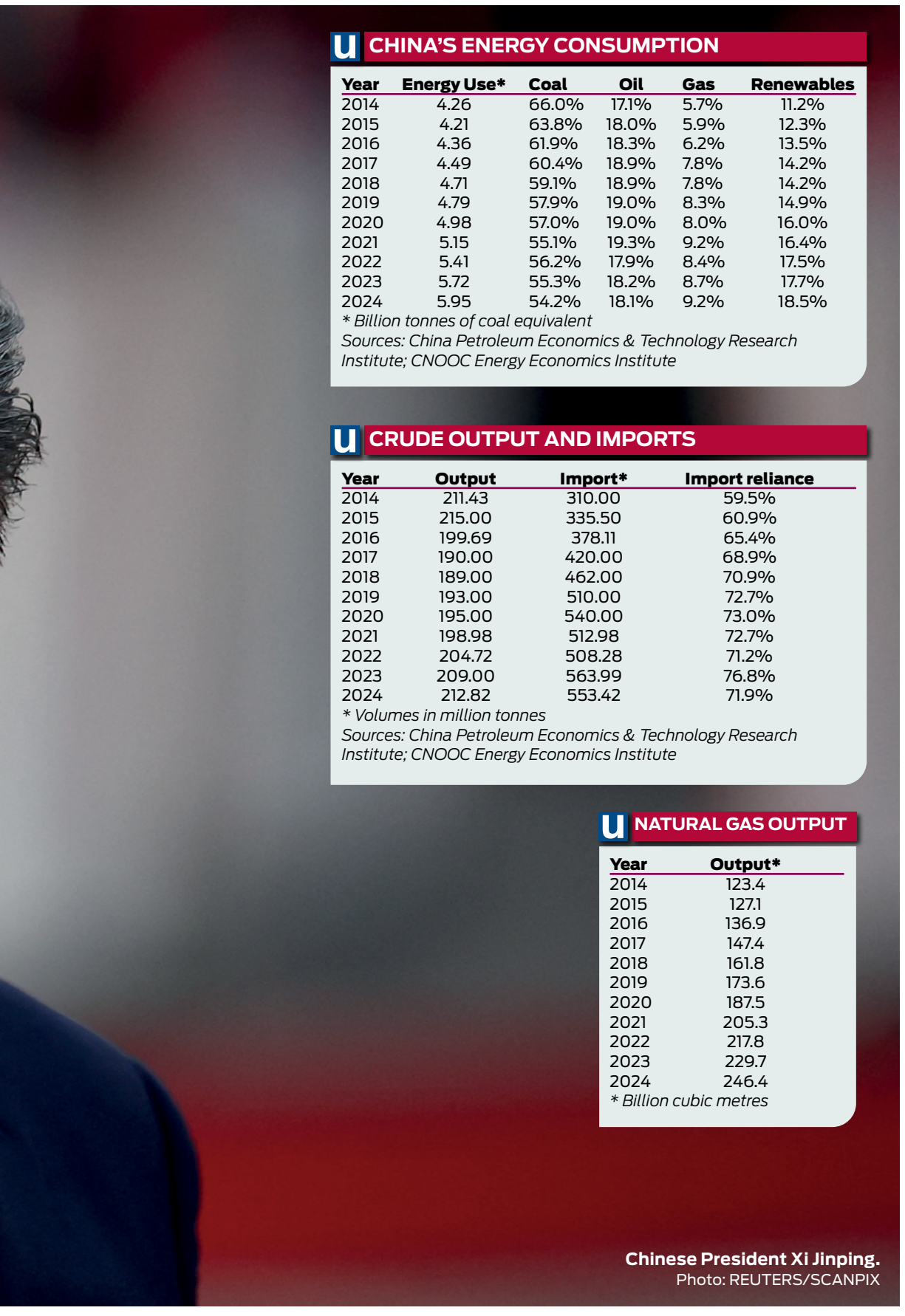


CHINA'S ENERGY CONSUMPTION

Year	Energy Use*	Coal	Oil	Gas	Renewables
2014	4.26	66.0%	17.1%	5.7%	11.2%
2015	4.21	63.8%	18.0%	5.9%	12.3%
2016	4.36	61.9%	18.3%	6.2%	13.5%
2017	4.49	60.4%	18.9%	7.8%	14.2%
2018	4.71	59.1%	18.9%	7.8%	14.2%
2019	4.79	57.9%	19.0%	8.3%	14.9%
2020	4.98	57.0%	19.0%	8.0%	16.0%
2021	5.15	55.1%	19.3%	9.2%	16.4%
2022	5.41	56.2%	17.9%	8.4%	17.5%
2023	5.72	55.3%	18.2%	8.7%	17.7%
2024	5.95	54.2%	18.1%	9.2%	18.5%

** Billion tonnes of coal equivalent*
Sources: China Petroleum Economics & Technology Research Institute; CNOOC Energy Economics Institute

CRUDE OUTPUT AND IMPORTS

Year	Output	Import*	Import reliance
2014	211.43	310.00	59.5%
2015	215.00	335.50	60.9%
2016	199.69	378.11	65.4%
2017	190.00	420.00	68.9%
2018	189.00	462.00	70.9%
2019	193.00	510.00	72.7%
2020	195.00	540.00	73.0%
2021	198.98	512.98	72.7%
2022	204.72	508.28	71.2%
2023	209.00	563.99	76.8%
2024	212.82	553.42	71.9%

** Volumes in million tonnes*
Sources: China Petroleum Economics & Technology Research Institute; CNOOC Energy Economics Institute

NATURAL GAS OUTPUT

Year	Output*
2014	123.4
2015	127.1
2016	136.9
2017	147.4
2018	161.8
2019	173.6
2020	187.5
2021	205.3
2022	217.8
2023	229.7
2024	246.4

** Billion cubic metres*

Chinese President Xi Jinping.
Photo: REUTERS/SCANPIX

CO_2. However, by 2030, the country plans to scale up this capacity to 38 million tpa, with an eventual target of 277 million tpa by 2050.

This expansion is essential to offset emissions from fossil fuels, especially in sectors that are harder to decarbonise such as cement production and steelmaking.

Despite these efforts, CCUS alone will not be sufficient to reach China's ambitious carbon neutrality goals.

The country will also need to rely on natural carbon sinks, such as forests, to absorb an additional 600 million tonnes of CO_2 by 2060, a report by Norwegian classification society DNV predicts.

While CCUS technologies hold promise, their widespread adoption will also depend on cost reductions and technological advances that make large-scale deployment economically viable.

Meanwhile, as China pursues ambitious clean energy goals, the country is making substantial investments in renewable and low-carbon energy to reduce its dependence on coal and fossil fuel resources.

The country aims to boost the percentage of non-fossil sources used for power generation to 39% of the mix by the end of 2025, compared with 36.2% now, and to over 50% of the mix by 2030.

By 2060, the country aims for non-fossil sources to generate more than 93% of its electricity, producing over 16 trillion kilowatt hours per annum.

To meet these goals, China is ramping up investments in wind, solar and hydropower capacity.

By 2025, renewable energy sources, including wind and solar, are expected to account for 33% of total electricity consumption, with non-hydropower renewables making up 18%.

By 2030, China aims to reach 1200 gigawatts of wind and solar capacity, alongside an expansion of approximately 40 GW in hydropower capacity.

In 2023, China marked a significant milestone in its nuclear power industry by commissioning five new nuclear power units, with construction investments reaching 94.9 billion yuan ($12.9 billion), the highest in nearly five years.

By the end of 2024 the country had 26 nuclear units under construction, boasting a total installed capacity of 30.3 million kilowatts, and is consolidating its position as the largest developer of nuclear energy in the world.

China's energy strategy is a complex and ambitious one, designed to address both the immediate needs of energy security and the long-term goals of decarbonisation.

The next few decades will be critical as the country navigates this transition, striving to achieve a balance that supports economic growth, environmental stewardship and energy independence.

中国能源转型：化石燃料与可再生能源的平衡之道

面对全球形势日趋复杂，中国政府正在调整战略重心，逐步从经济高速增长转向国家安全与稳定，这一转变亦深刻影响着中国的能源发展方向。

此举标志着中国能源发展战略的关键节点，重点强调韧性、可持续性和脱碳化。然而，中国在此过程中需权衡多重考量，如何减少对化石能源的依赖而不影响经济安全，成为亟待解决的问题。

2024年底，中国全国人大审议并通过了首部能源法，这标志着政府在引导战略转向方面迈出了关键性的一步。

该法案于2024年11月通过，并于2025年1月1日正式生效，期间历经十几载。这项法案不仅正式将可再生能源纳入中国电力体系，同时也支持化石燃料的清洁高效利用。

预计到2030年至2035年，中国能源消费将达到峰值，超过62亿吨标准煤，高于2024年预计的59.9亿吨。尽管中国正积极推进向非化石能源的转型，但目前占能源结构80%的煤炭和天然气等化石燃料，到2035年仍将占据约30%的比重。

中国第二大能源公司中国石化数据显示，在满足不断增长的能源需求的同时，北京设定了碳排放峰值目标，预计2026年至2030年间碳排放将达到100亿至102亿吨，随后预计以年均4.9%的速度下降，并在2060年降至约17亿吨。

煤炭——“压舱石”

在中国能源结构中，化石燃料依旧占据重要地位，尤其是在工业领域。煤炭依然是中国庞大工业体系的“压舱石”，广泛应用于钢铁生产、水泥制造及其他高能耗行业。

目前，煤炭在中国能源消费中占比55%，预计将在2025年左右达到峰值，达到约43.7亿吨，随后其在能源结构中的占比将逐步下降。

在未来数十年内，石油和天然气仍将在能源体系中占据关键地位，特别是在石化产业和长距离运输方面。

预计中国的石油需求将在2025年至2030年间达到峰值，约为8亿吨（59亿桶），随后将逐步下降。

随着中国电动汽车制造能力不断增强，未来石油需求将更多来自其石化产业原料的属性，而非交通燃料。预计到2060年，年均石油消费量将降至约2.8亿吨（20亿桶）。

天然气预计将在2040年左右达到需求峰值，并作为煤炭的清洁替代能源，在中国能源结构中占据越来越重要的地位。届时，天然气占全国一次能源消费的比例将达到约13%。但随着中国可再生能源装机容量的不断增长，到2060年，其占比预计将降至9%。

由于化石燃料的持续使用，中国脱碳战略的一个关键要素是扩大碳捕获、利用和储存 (CCUS) 技术。目前，中国有大约11个大型CCUS项目，每年捕获约100万吨二氧化碳。

然而，到2030年，中国计划将这一产能扩大到 3800万吨/年，最终目标是到2050年达到2.77亿吨/年。这一扩张对于抵消化石燃料的排放至关重要，特别是在水泥生产和炼钢等较难脱碳的行业。

尽管做出了这些努力，仅靠CCUS还不足以实现中国雄心勃勃的碳中和目标。挪威船级社DNV的一份报告预测，到2060年，中国还需要依靠森林等天然碳汇来吸收额外的6亿吨二氧化碳。

与此同时，中国正在大力投资可再生和低碳能源，以减少对煤炭和化石燃料资源的依赖。

目标是到2025年底将非化石能源发电占总发电量的39%（目前为36.2%），到2030年将这一比例提高到 50% 以上。到 2060 年，该国的目标是非化石能源发电量占总发电量的93% 以上，每年发电量超过16万亿千瓦时。

Wind turbines dot the coastline along a giant solar farm in China's Shandong province. Photo: AP/SCANPIX

China's new Energy Law a landmark for nation

Energy Law mandates major boost in domestic onshore and offshore oil and gas exploration, particularly tight oil, shale oil, shale gas, and coalbed methane

XU YIHE
Singapore

CHINA'S recently enacted landmark Energy Law for the first time enshrines the nation's energy policies within a legal framework, coming at a time when the country seeks to enhance its energy security while steering towards a lower-carbon economy.

The new law, which was passed in November, aims to reduce China's dependence on energy imports, protect against global price shocks and contribute to a sustainable economic model.

While domestically focused, the new law also has potential global implications.

As China scales up renewable technologies and clean fuel alternatives, the country's influence on global energy prices and emissions standards is likely to grow, potentially accelerating the world's transition to a lower-carbon future.

The legislation, which was approved by the National People's Congress, the country's top legislative body, took effect on 1 January.

The law has a strong focus on renewables — underscoring the country's aims to boost the share of non-fossil energy in its energy mix — but it also mandates significant expansion in the exploration and development of domestic oil and natural gas resources, seen as critical to ensuring China's energy independence.

The approach is meant to help to reduce reliance on imported fuels, a priority amid escalating global energy market volatility and geopolitical tensions.

The legislation specifically emphasises onshore and offshore exploration, incentivising exploring unconventional resources such as tight oil, shale oil, shale gas and coalbed methane.

Given the challenges of depleting conventional oil and gas reserves, unconventional resources offer an essential alternative to meet China's growing energy demand.

Shale gas, in particular, has seen significant investment and development, especially in the Sichuan basin, where it has become a central component of China's natural gas strategy.

At the same time, the law underscores China's commitment to reducing its carbon footprint, prioritising renewable energy development as the country aims to peak its carbon emissions by 2030 and achieve carbon neutrality by 2060.

The law reflects a diversified renewables energy strategy, promoting rapid development of wind, solar, biomass, ocean and geothermal energy.

By advancing both centralised and distributed renewable energy projects, including offshore wind and solar thermal power, the legislation allows for flexibility to adapt to regional conditions and optimise resource use.

To mitigate environmental impacts, the law imposes controls on small-scale hydropower projects to protect ecological systems, while still allowing for hydropower growth where feasible.

Meanwhile, nuclear power development will continue under strict safety measures, balancing energy needs with public and environmental safety considerations. The law also signals an evolution in China's coal policy, emphasising cleaner, more efficient utilisation to manage emissions and support the energy transition.

By advocating for clean coal technologies and promoting circular economy initiatives in mining areas, the law maintains coal as a stabilising force in the energy system while aiming to minimise its environmental footprint.

Coal is currently the bedrock of China's energy supply, accounting for over 50% of its electricity generation, and it provides a reliable and cost-effective energy source that supports industrial output and economic stability.

Coal also plays a regulatory role in stabilising the energy supply, especially during peak demand or when renewable sources are unable to meet the grid's needs due to intermittent production.

The legislative push aligns with China's ambitions to lead in energy innovation and secure competitive advantages in emerging green technologies.

《能源法》颁布！国家安全与可再生能源发展“两手抓”

全国人民代表大会批准最近批准了《中华人民共和国能源法》，于1月1日正式生效，标志着中国首次将能源政策纳入法律框架，此举适逢中国加强能源安全，并迈向低碳经济的历史进程。

该法于去年11月通过，旨在减少中国对进口能源的依赖，应对全球能源价格波动，推动可持续经济模式。

尽管《能源法》侧重于中国本土，但其影响可能波及全球。随着中国加速推进可再生能源和清洁燃料的应用，其在全球能源价格和排放标准上的话语权或将提升，从而有望推动全球低碳转型进程。

《能源法》对可再生能源给予高度关注，体现了中国提升非化石能源比重的目标，同时也要求大力推进国内石油和天然气的勘探开发，以保障国家能源自主，同时降低中国对进口燃料的依赖，尤其是在全球能源市场日益动荡、地缘政治局势紧张的背景下，可见这项法案的颁布意义非凡。

《能源法》重点强调陆上与海上能源勘探，鼓励开发致密油、页岩油、页岩气和煤层气等非常规资源。面对常规油气储量日益枯竭的挑战，非常规资源成为满足中国能源需求增长的重要替代选项。

尤其是页岩气领域，近年来投资与开发力度显著增强，其中四川盆地已成为中国天然气战略的关键布局区域。

该法律同时体现了中国对碳减排，优先发展可再生能源的坚定承诺，力争2030年前实现碳达峰、2060年前实现碳中和，反映了多元化的可再生能源战略，推动风能、太阳能、生物质能、海洋能和地热能的加速发展。

cippe 振威国际石油展 | 25周年

cippe2025 kicks off in Beijing, showcasing industry trends and innovations

The 25th China International Petroleum & Petrochemical Technology and Equipment Exhibition (cippe2025), one of the world's premier events for the oil and gas industry, officially opens today in Beijing.

Spanning an exhibition space of 120,000 square metres, cippe2025 brings together approximately 2,000 exhibitors from 75 countries and regions, reinforcing its status as a global industry hub.

Once again, cippe attracts leading domestic and international enterprises, including CNPC, Sinopec, CNOOC, CSSC, CASIC, NORINCO, Schlumberger, Caterpillar, Transneft, and Danfoss.

These industry giants will showcase cutting-edge equipment and technologies while engaging in high-level networking, knowledge sharing, and discussions on industry transformation.

The presence of organizations such as the American Petroleum Institute (API) and the German Mechanical Engineering Industry Association (VDMA), which will provide updates on global industry standards, technical advancements, and regulatory insights, further enhances the authority and professionalism of the event.

The exhibition covers the entire oil and gas value chain, including petroleum, petrochemicals, natural gas, pipelines, offshore engineering, urban gas, shale gas, coalbed methane, trenchless technology, explosion-proof electrical systems, safety equipment, automation, instrumentation, digitalization, soil remediation, and emerging energy sectors such as hydrogen and geothermal energy.

Amid profound shifts in the global energy landscape, the integration of oil and gas with new energy sources is becoming an industry imperative.

Reflecting this trend, cippe2025 features dedicated exhibition zones for hydrogen energy, energy storage, offshore wind power, and underwater robotics.

These specialised areas not only highlight the event's forward-looking vision but also offer new insights and pathways for the future of energy.

A series of high-profile events will be held alongside the exhibition, including the cippe2025 Gold Innovation Award Selection, the Presidents' Forum of Petroleum Technology and Equipment Institutes, and the International Petroleum & Natural Gas Conference.

Additional forums will explore key topics such as hydrogen energy, offshore wind power, pipelines, trenchless technology, and gas compressors.

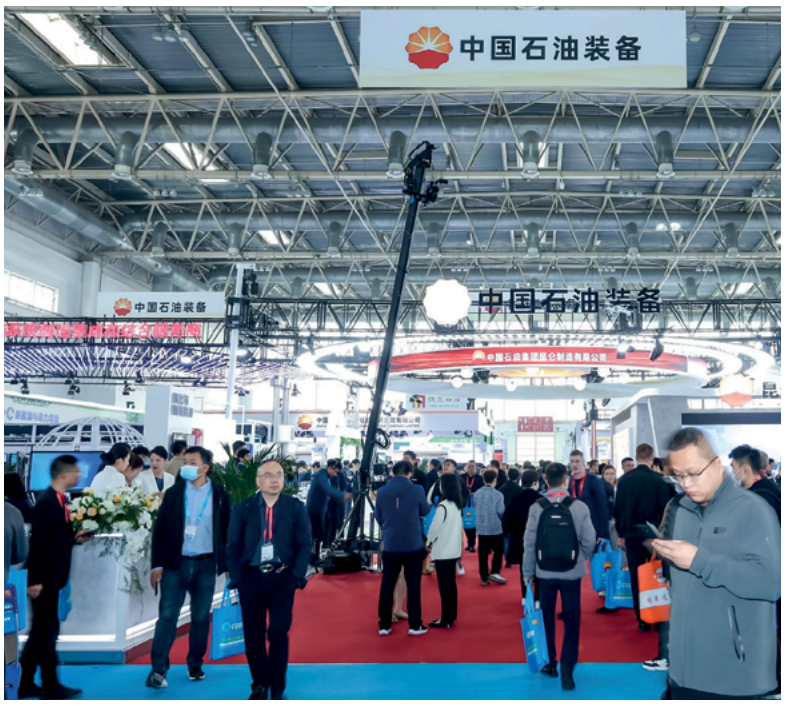
International sessions focused on Argentina, Canada, Kazakhstan, Russia, and other countries will facilitate business matchmaking and global collaboration.

Moreover, a lineup of technical seminars will provide in-depth discussions on industry advancements.

Government officials, industry experts, senior executives, and technical professionals will gather to interpret policies, analyse market trends, and drive innovation and digital transformation in the sector.

Live coverage of cippe2025 will be available via online platforms, live-streaming sessions, and exclusive interviews with industry leaders.

Join us at cippe2025 from March 26 to 28 and discover new opportunities in the evolving energy landscape.



cippe2025 is building on the success of previous events

Photo: cippe

引领行业新风向 cippe2025今日盛大启航

世界石油天然气装备领域的年度盛会——第二十五届中国国际石油石化技术装备展览会（cippe2025）于3月26日在北京·中国国际展览中心（新馆）开幕。

今年，cippe再次聚集众多国际石油巨头精彩亮相，其中包括中石油、中石化、中海油、中国船舶集团、航天科工、中国兵器工业集团等国内行业领军企业，以及斯伦贝谢、卡特彼勒、俄罗斯国家石油管道运输公司、丹佛斯等国际知名企业。这些行业巨擘将全方位展示行业内最前沿的石油装备与技术，并与来自全球的专业采购商、行业专家及企业代表共同探讨油气行业的发展与转型之路。同时，美国石油学会（API）、德国机械设备制造业联合会等国际行业组织的加入，进一步提升了展会的权威性和专业性。

cippe2025以前瞻性的眼光，精心布局16大产业板块，涵盖石油石化、天然气、油气管道、油气数字化、海洋工程、海洋石油、页岩气、燃气、氢能、煤层气、地热能、非开挖、防爆电气、安全防护、自动化仪器仪表、土壤修复等领域。

3月26至28日，让我们相约北京，共同见证cippe2025的现场精彩，携手推动油气行业高效发展！

cippe2025 Satellite events

CING
第十五届北京国际天然气技术装备展览会

CIPE
第二十五届北京国际石油天然气管道与储运技术装备展览会

CIMT 北京海工展
第十五届北京国际海洋工程技术与装备展览会

cioo
第二十五届北京国际海洋石油天然气展览会

cisge
第十五届北京国际页岩气技术与装备展览会

GAS
2025北京国际燃气应用与技术装备展览会

HEIE 国际氢能展
北京国际氢能技术装备展览会

No-Dig CITTE
2025北京国际地下工程建设及非开挖技术装备展览会

Expec
第二十五届北京国际防爆电气技术设备展览会

cieca
北京国际石油和化工自动化技术装备及仪器仪表展览会

cipse
北京国际石油和化工安全防护技术及设备展览会

cigee
北京国际地热能开发技术装备展览会

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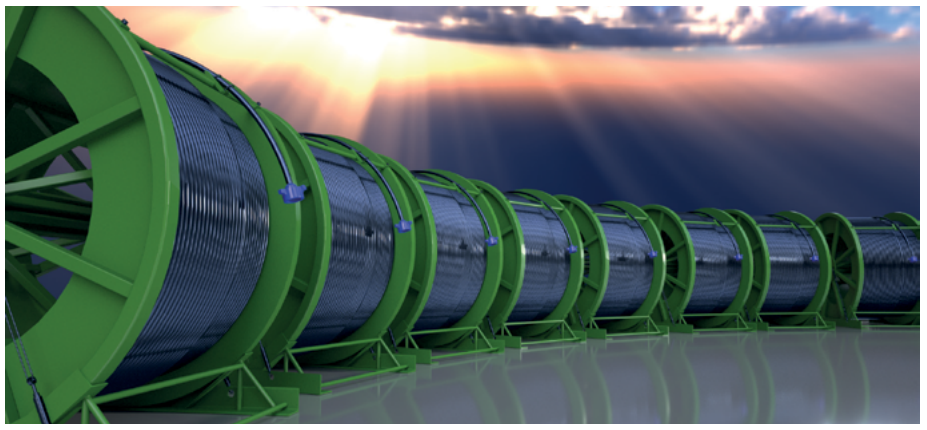
cippe2025 同期活动日程安排
cippe2025 Concurrent Events Schedule

	时间 TIME	地点 VENUE	主题 EVENT TOPICS	主办公司 HOSTS
26 March	09:45-11:50	W-201会议室 Conference Room W-201	第二十五届中国国际石油石化技术装备展览会& 第三届石油技术与装备院校长论坛暨第十七届国际石油天然气产业大会开幕式 Opening Ceremony of cippe2025 & The Third Presidents Forum of Petroleum Technology and Equipment Institutes & The 17th International Petroleum & Natural Gas Conference	中国国际石油石化技术装备展览会 (cippe) 组委会 石油技术与装备院校长论坛暨国际石油天然气产业大会组委会 西安石油大学 China International Petroleum & Petrochemical Technology and Equipment Exhibition (cippe) Organizing Committee Presidents Forum of Petroleum Technology and Equipment Institutes Organizing Committee Xi'an Shiyou University
	13:30-16:30	W-201会议室 Conference Room W-201	第三届石油技术与装备院校长论坛暨第十七届国际石油天然气产业大会 The Third Presidents Forum of Petroleum Technology and Equipment Institutes & The 17th International Petroleum & Natural Gas Conference	中国国际石油石化技术装备展览会 (cippe) 组委会 石油技术与装备院校长论坛暨国际石油天然气产业大会组委会 西安石油大学 China International Petroleum & Petrochemical Technology and Equipment Exhibition (cippe) Organizing Committee Presidents Forum of Petroleum Technology and Equipment Institutes Organizing Committee Xi'an Shiyou University
	09:30-12:00	二层东花园会议室 East Garden Conference Room, 2nd Floor, E2-E3 Corridor	智慧管道，连通未来 — 2025 北京油气管道供应链合作与采购对接会 Smart Pipeline, Connecting the Future — 2025 Beijing Oil & Gas Pipeline Supply Chain Cooperation and Matchmaking Conference	北京国际石油天然气管道与储运技术装备展览会组委会 北京振威展览有限公司 CIPE Organizing Committee Beijing Zhenwei Exhibition Co., Ltd.
	09:45-16:30	W4馆展区 W4580 Hall W4-W4580	氢能未来之路：全球领袖对话 绿色氢能：中国-巴西通向 COP30 的合作 德国氢能 B2B 平台演讲 The Future Path of Hydrogen Energy: Global Leaders Dialogue Topic: Green Hydrogen: Brazil and China Cooperation on the Road to COP30 Speech on German Hydrogen B2B Platform	中国能源研究会 北京振威展览有限公司 China Energy Research Society Beijing Zhenwei Exhibition Co., Ltd.
	14:00-16:00	展馆 Exhibition Hall	cippe探馆直播 cippe Discoveries Livestream	中国国际石油石化技术装备展览会(cippe) 组委会 China International Petroleum & Petrochemical Technology and Equipment Exhibition (cippe) Organizing Committee
	09:20-15:40	展馆 Exhibition Hall	cippe2025企业新产品新技术推介会 cippe2025 Enterprise New Product and New Technology Promotion Conference	中国国际石油石化技术装备展览会(cippe) 组委会 China International Petroleum & Petrochemical Technology and Equipment Exhibition (cippe) Organizing Committee
	09:30-16:30	W4馆 Hall W4	HEIE氢能探馆直播 HEIE Discoveries Livestream	北京国际氢能技术装备展览会 HEIE 组委会 Beijing International Hydrogen Technology & Equipment Exhibition (HEIE) Organizing Committee
	10:00-16:00	W4馆 Lucky 区 W4266 W4 Lucky Zone W4266	幸运石油人 cippe Lucky Draw - Lucky Oilman	中国国际石油石化技术装备展览会 (cippe) 组委会 北京振威展览有限公司 China International Petroleum & Petrochemical Technology and Equipment Exhibition (cippe) Organizing Committee Beijing Zhenwei Exhibition Co., Ltd.
	13:00-17:00	二层东花园会议室 East Garden Conference Room, 2nd Floor, E2-E3 Corridor	CITTE 2025 城市基础设施更新与防灾减灾论坛暨标准宣贯会 CITTE 2025 Urban Infrastructure Renewal and Disaster Prevention and Mitigation Forum and Standards Publicity and Implementation Conference	中国标准化协会城镇基础设施分会 中国灾害防御协会城镇基础设施防灾减灾工程专业委员会 北京城市管理科技协会 中质通（北京）标准技术服务有限公司 北京国际地下工程建设及非开挖技术装备展览会组委会 北京振威展览有限公司 Urban Infrastructure Branch of China Association for Standardization Urban Infrastructure Disaster Prevention and Mitigation Engineering Committee of China Association for Disaster Prevention Beijing Association of Urban Management Science and Technology Quality Tong (Beijing) Standard Technical Service Co., Ltd. Organizing Committee of Beijing International Underground Engineering Construction and Trenchless Technology and Equipment Exhibition Beijing Zhenwei Exhibition Co., Ltd.
	13:00-16:30	W-202会议室 Conference Room W-202	驱动未来：油气压缩机的高效创新与零碳转型 2025年油气压缩机论坛 Innovation & Decarbonization in Oil & Gas Compressors - 2025 Forum	北京国际天然气技术装备展览会 CING 组委会 北京振威展览有限公司 Beijing International Natural Gas Technology & Equipment Exhibition (CING) Organizing Committee Beijing Zhenwei Exhibition Co., Ltd.
	13:00-14:00	W-103会议室 Conference Room W-103	俄罗斯认证专题讲座 Russian Certification Seminar	赛恩认证(黑龙江)有限公司 Sercons Certification (Heilongjiang) Co., Ltd
	14:00-16:00	W4馆 Matching 区 W4 Matching Zone	cippe2025 采购对接会 – 阿根廷专场 cippe2025 Business Matchmaking Meeting - Argentina Session	中国国际石油石化技术装备展览会 (cippe) 组委会 北京振威展览有限公司 China International Petroleum & Petrochemical Technology and Equipment Exhibition (cippe) Organizing Committee Beijing Zhenwei Exhibition Co., Ltd.
	14:00-15:00	W-104会议室 Conference Room W-104	1 :石油化工行业中压力容器的全球准入要求 2:防爆设备出海法规解读 3: IEC60079-14最新版标准的应用及分享 4:检测认证助力防爆电气高质量发展 5:防爆电气产品全生命管理要点	1 :张彦超， (TÜV莱茵项目经理） 美国ASME授权检验师，IWE国际焊接工程师 2:王石为， (TÜV 莱茵高级经理) 3: 靳鑫 (TÜV 莱茵资深项目经理)全国机械安全标准化技术委员会防爆粉尘通风工作组 (SAC/TC208/WG12)成员ATEX指令现场防爆专家 4:郭雪景，中国质量认证中心产品五部 防爆业务负责人 5:王家政，沈阳电气传动研究所 检测中心副主任
		注：以上活动日程或有调整，以展会现场公布为准。		Note: The final agenda will be announced by the Organizing Committee on-site

cippe2025 同期活动日程安排
cippe2025 Concurrent Events Schedule

	时间 TIME	地点 VENUE	主题 EVENT TOPICS	主办公司 HOSTS
26 March	09:45-16:30	W4馆–W4527展位 Hall W4-W4527	氢启未来：绿色氢能与低碳发展论坛 Hydrogen Ignites the Future: Forum on Green Hydrogen Energy and Low Carbon Development	北京振威展览有限公司 湖南省氢能产业技术创新联合体 Beijing Zhenwei Exhibition Co., Ltd. Hunan Hydrogen Energy Industry Technology Innovation Alliance
	14:10-15:10	W-103 会议室 Conference Room W-103	永磁电机在石油石化领域的应用 The Applications of Permanent-Magnetic Motors in the Petroleum and Petrochemical Industry	安徽明腾永磁机电设备有限公司 Anhui Mingteng Permanent-Magnetic Machinery & Electrical Equipment Co., Ltd.
27 March	09:00-12:00	W-201 会议室 Conference Room W-201	第三届石油技术与装备院校长论坛暨第十七届国际石油天然气产业大会 分论坛一：向“深”挑战 油气勘探开发关键技术分论坛 The Third Presidents Forum of Petroleum Technology and Equipment Institutes & The 17th International Petroleum & Natural Gas Conference Sub-Forum 1: Challenging the Depth - Key Technologies for Oil and Gas Exploration and Development	中国国际石油石化技术装备展览会 (cippe) 组委会 石油技术与装备院校长论坛暨国际石油天然气产业大会组委会 西安石油大学 China International Petroleum & Petrochemical Technology and Equipment Exhibition (cippe) Organizing Committee Presidents Forum of Petroleum Technology and Equipment Institutes Organizing Committee Xi'an Shiyou University
	09:00-12:00	W-103 会议室 Conference Room W-103	第三届石油技术与装备院校长论坛暨第十七届国际石油天然气产业大会 分论坛二：向“数”发展 数字化、智能化暨高端装备技术分论 The Third Presidents Forum of Petroleum Technology and Equipment Institutes & The 17th International Petroleum & Natural Gas Conference Sub-Forum 2: Advancing in Digital - Digitalization, Intelligence, and High end Equipment Technology	中国国际石油石化技术装备展览会 (cippe) 组委会 石油技术与装备院校长论坛暨国际石油天然气产业大会组委会 西安石油大学 China International Petroleum & Petrochemical Technology and Equipment Exhibition (cippe) Organizing Committee Presidents Forum of Petroleum Technology and Equipment Institutes Organizing Committee Xi'an Shiyou University
	09:00-12:00	W-104 会议室 Conference Room W-104	第三届石油技术与装备院校长论坛暨第十七届国际石油天然气产业大会 分论坛三：向“新”进阶 能源转型与绿色低碳发展分论坛 The Third Presidents Forum of Petroleum Technology and Equipment Institutes & The 17th International Petroleum & Natural Gas Conference Sub-Forum 3: Towards New Energy - Energy Transition, Green and Low-Carbon Development	中国国际石油石化技术装备展览会 (cippe) 组委会 石油技术与装备院校长论坛暨国际石油天然气产业大会组委会 西安石油大学 China International Petroleum & Petrochemical Technology and Equipment Exhibition (cippe) Organizing Committee Presidents Forum of Petroleum Technology and Equipment Institutes Organizing Committee Xi'an Shiyou University
	09:00-12:00	E-201 会议室 Conference Room E-201	防爆论坛 Explosion-proof forum	国家防爆检验中心 National explosion-proof inspection Center
	10:00-16:30	W4馆展区 W4580 Hall W4-W4580	氢能多元化应用研讨会 Seminar on Diversified Applications of Hydrogen Energy	中国能源研究会 北京振威展览有限公司 China Energy Research Society Beijing Zhenwei Exhibition Co., Ltd.
	09:45-16:30	W4馆–W4527展位 Hall W4-W4527	氢启革命：技术创新与产业突破研讨会 Hydrogen Revolution: Seminar on Technological Innovation and Industrial Breakthrough	北京振威展览有限公司 湖南省氢能产业技术创新联合体 Beijing Zhenwei Exhibition Co., Ltd. Hunan Hydrogen Energy Industry Technology Innovation Alliance
	10:00-11:30	展馆 Exhibition Hall	cippe探馆直播 cippe Discoveries Livestream	中国国际石油石化技术装备展览会(cippe) 组委会 China International Petroleum & Petrochemical Technology and Equipment Exhibition (cippe) Organizing Committee
	09:20-15:40	展馆 Exhibition Hall	cippe2025企业新产品新技术推介会 cippe2025 Enterprise New Product and New Technology Promotion Conference	中国国际石油石化技术装备展览会(cippe) 组委会 China International Petroleum & Petrochemical Technology and Equipment Exhibition (cippe) Organizing Committee
	10:00-16:30	W4馆 Matching 区 W4 Matching Zone	cippe2025 采购对接会 cippe2025 Business Matchmaking Meeting	中国国际石油石化技术装备展览会 (cippe) 组委会 北京振威展览有限公司 China International Petroleum & Petrochemical Technology and Equipment Exhibition (cippe) Organizing Committee Beijing Zhenwei Exhibition Co., Ltd.
	10:00-12:00	二层西花园会议室 West Garden Conference Room, 2nd Floor, W2-W3 Corridor	中加油气设备与技术交流会 Canada-China Oil & Gas Equipment & Services Forum	加拿大驻华大使馆 Embassy of Canada in Beijing
	10:00-16:00	Lucky 活动区 Lucky Zone	幸运石油人 cippe Lucky Draw - Lucky Oilman	中国国际石油石化技术装备展览会 (cippe) 组委会 北京振威展览有限公司 China International Petroleum & Petrochemical Technology and Equipment Exhibition (cippe) Organizing Committee Beijing Zhenwei Exhibition Co., Ltd.
	13:00-17:00	W-201 会议室 Conference Room W-201	海上风电装备产业链发展论坛 Forum on Offshore Wind Power Equipment Industrial Chain	中国船舶工业行业协会 北京振威展览有限公司 China Association of the National Shipbuilding Industry (CANSI) Beijing Zhenwei Exhibition Co., Ltd.
	13:00-16:30	W-105 会议室 Conference Room W-105	API标准与认证更新：从质量管理到可持续发展 API Standards and Certification Updates: From Quality Management to Sustainable Development	美国石油协会 API Americian Petroleum Insititute (API)
	13:30-16:30	二层西花园会议室 West Garden Conference Room, 2nd Floor, W2-W3 Corridor	哈萨克斯坦与中国在石油化工领域的合作：趋势与机遇 Cooperation between Kazakhstan and China in the Petrochemical industry: Trends and Opportunities	哈萨克斯坦石油天然气委员会 中国国际石油石化技术装备展览会 (cippe) 组委会 北京振威展览有限公司 Kazakhstan Oil and Gas Council «PetroCouncil» China International Petroleum & Petrochemical Technology and Equipment Exhibition (cippe) Organizing Committee Beijing Zhenwei Exhibition Co., Ltd.
		注：以上活动日程或有调整，以展会现场公布为准。 Note: The final agenda will be announced by the Organizing Committee on-site		

SHINDA: leading manufacturer of coiled tubing



Huatong Group is a global leader in intelligent oil and gas solutions, operating a comprehensive marketing and service network spanning over 100 countries across six continents.

As a key subsidiary of Huatong Group, Shinda specialises in the research, development and manufacturing of coiled tubing, CRA coiled tubing, hydraulic control tubing, umbilical cables, and cable-alloy pipes.

Shinda's coiled tubing meets API Spec 5ST standards, verified through rigorous inspection by CNPC Tubular Goods Research Institute (TGRI).

Shinda's groundbreaking ultra-length umbilical tube extends up to 3,000 metres without girth welding, ensuring superior structural integrity and operational reliability.

Designed to eliminate conventional seamless tube defects such as internal welding burrs and groove corrosion, the Super Duplex 2507 Seamless Tube effectively prevents welding issues like partial welding and lack of weld fusion, enhancing durability and performance in critical applications.

Shinda's patented heat treatment technology precisely controls the intermetallic phase in duplex steel, significantly improving local corrosion resistance.

This innovation enables the tube to withstand extreme environments, including high-temperature/high-pressure conditions and high hydrogen sulphide/carbon dioxide exposure.

Developed to tackle the toughest offshore challenges, Shinda's 3,000-metre ultra-length seamless tube provides an advanced solution for high-temperature, high-pressure, and extreme corrosion environments.

By eliminating internal welding burrs, groove corrosion, and welding defects, this innovation dramatically enhances product lifespan and reliability, delivering substantial cost savings and efficiency benefits for customers.

Shinda's coiled tubing is manufactured as a continuous jointless tube by welding multiple flexible tubing sections using advanced butt or inclined welding techniques.

Available in lengths ranging from hundreds of metres to several kilometers, it is wound on reels for specialised downhole applications, including workovers, drilling, perforation, stimulation, well completion, and logging.

For operations in acidic environments, Shinda offers high-chromium corrosion-resistant alloy coiled tubing and titanium alloy coiled tubing.

Shinda's encapsulated cables are engineered to withstand the harshest oil and gas field conditions.

Utilising stainless steel and nickel-based alloy materials, these cables offer superior protection against downhole pressure and corrosion.

Polymer encapsulation provides additional mechanical reinforcement.

The product range includes PDC/TEC and Flat Pack configurations, ensuring optimal performance in demanding reservoir development and production environments.

Visit Shinda at Booth E2070 to explore our cutting-edge solutions and learn how we can support your operations with advanced engineering and technology.

Booth: E2070

信达科创——专业连续油管生产商

华通线缆 (展位号：E2070) 是一家集科研、生产、销售、服务为一体的智能油气解决方案提供商，拥有完善的全球营销和服务网络，业务范围涵盖全球六大洲的100多个国家和地区。作为其子公司，信达科创（唐山）石油设备有限公司，专业研发和生产连续油管、耐蚀合金连续油管、液压控制管和连续管缆等，其连续油管经中国石油管材研究所检验符合API Spec 5ST要求。

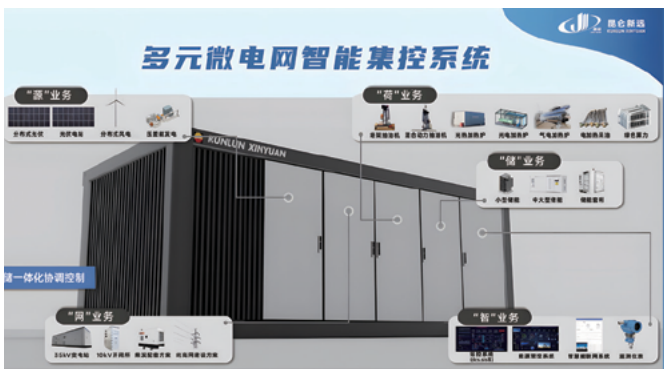
信达超长脐带管3000 米无环焊

采用超级双相钢2507无缝管专利设计，可有效解决常规无缝管潜在的焊接内毛刺和沟槽腐蚀问题，避免了偏焊、漏焊等焊接缺陷。

信达建立了服役环境适应性的材料设计与专利热处理技术，有效控制双相钢材料有害相析出，大幅提升了抗局部腐蚀能力，满足高温高压、高含H2S/CO2等苛刻作业环境。

信达3000米超长无环焊无缝管

信达3000米超长无环焊无缝管，可应对深海超高温、超高压、超腐蚀的严峻作业环境，有效解决常规无缝管潜在的焊接内毛刺和沟槽腐蚀问题。



Kunlun Xinyuan: one-stop service for green, digital oil & gas well sites

Hebei Xiong'an Kunlun Xinyuan New Energy Technology Co., Ltd. is the first PetroChina internal enterprise backed by CNPC Kunlun Capital Co., Ltd.

As PetroChina's pioneering technological achievement incubation project, it also stands as the first new energy technology R&D entity established by Jidong Oilfield in the Xiong'an New Area.

Guided by the principles of innovation, coordination, sustainability, openness, and collaboration, Kunlun Xinyuan leverages the industrial expertise of Jidong Oilfield and Kunlun Capital to position itself as a premier one-stop service provider for green, digitally intelligent oil and gas well sites.

The company is committed to advancing the development and application of sustainable energy solutions, driving the transformation of the oil and gas sector towards a greener and smarter future.

Booth: E1365

昆仑新远——绿色数智油气井场一站式服务管家

河北雄安昆仑新远新能源科技有限责任公司(展位号：E1365)是中国石油昆仑资本有限公司投资的首家中国石油内部企业、首个内部科技成果孵化项目，也是中国石油冀东油田在雄安新区布局的首家新能源技术研发主体。昆仑新远秉承“创新、协调、绿色、开放、共享”的新发展理念，依托冀东油田和昆仑资本产业链资源，以“绿色数智油气井场一站式服务管家”为定位，致力于绿色能源开发应用。

Hongda Valve welcomes you to Booth E2122

Hongda, established in 1998, is dedicated to the innovation and production of sophisticated oil and gas drilling, extraction, and well control equipment, focusing on the advancement of petroleum machinery technology.

With a product range encompassing more than 30 varieties across categories such as drilling, oil and gas extraction, and well logging, Hongda serves areas of oil and gas E&P and transportation.

Its main products include wellhead equipment, choke and kill manifolds, ultra-high-pressure fracturing large-bore manifold systems, ultra-high-pressure gas testing and production full-process equipment, air storage equipment, and various medium-to-high-pressure valves, totaling over 200 products.

These products are certified with API 6A, 16A, 16C, and 5CT monograms and hold Special Equipment Manufacturing Licenses for ultra-high-pressure vessels.

Booth: E2122

鸿达阀门诚邀您莅临E2122展位

鸿达公司创建于1998年，专注于油气钻采井控高端装备的研发及制造。公司产品涉及钻井、油气开采、测井等大类30多个品种，服务对象涵盖石油勘探开发、油气输送等业务领域。主要产品采油(气)树井口装置、节流压井管汇、超高压压裂大通径管汇系统装备、超高压试气排采全流程装备、空气储能装备、各类高中压阀门等200余种产品取得API 6A、16A、16C、5CT等会标使用权，特种设备制造许可(超高压容器A6、高压容器A2、压力元件B),175Mpa系列阀门等井控产品，达到世界先进水平。

Jinxing Group – leading supplier of hydrogen & clean energy equipment

Jinxing Group is a premier provider of hydrogen energy and clean energy equipment, offering comprehensive solutions across the entire industry chain, from design and manufacturing to sales.

Clean Energy Equipment:
Jinxing's clean energy solutions are widely applied in natural gas and shale gas purification, liquefaction, deep processing, and terminal applications.

Hydrogen Energy Equipment:
Jinxing delivers cutting-edge solutions for hydrogen production, transportation, hydrogenation, and utilization.

90MPa Hydrogenation Sub-Station Diaphragm Compressor:
Jinxing's hydrogen press for 90MPa hydrogenation sub-stations is a high-pressure diaphragm compressor designed for superior efficiency, safety, and purity.

High Pressure & Efficiency:
With a maximum outlet pressure of 90MPa, this compressor meets the needs of high-pressure hydrogen storage and transportation. It adopts two-stage compression and high-efficiency cooling system, with high compression efficiency and low energy consumption.

Booth: W4510

金星集团–氢能装备、清洁能源装备专业供应商

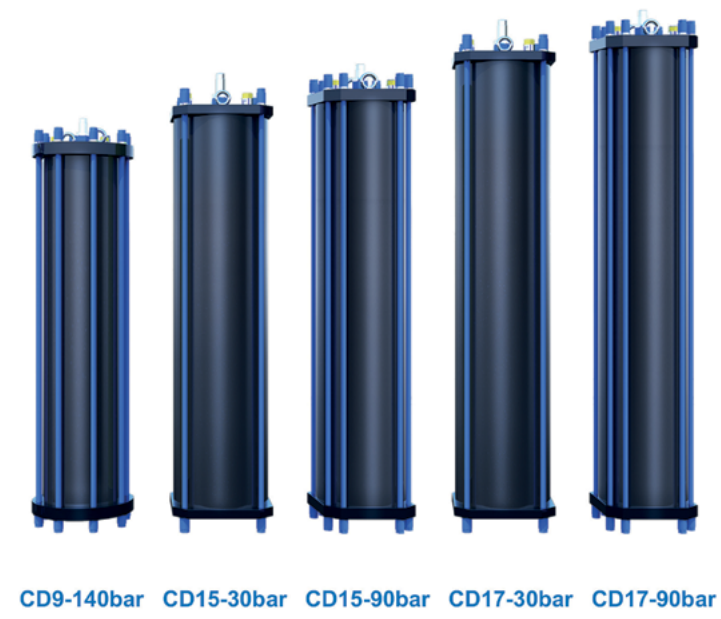
金星集团(展位号：W4510)是一家集氢能装备、清洁能源装备,设计制造销售于一体的全产业链技术装备制造企业，是行业头部企业,形成了两大产品系列。清洁能源装备：应用于天然气、页岩气开采后的净化、液化等深加工及终端应用技术装备；氢能装备：应用于制氢、输氢、加氢、用氢环节的综合应用技术装备。公司是国家重点专精特新“小巨人”企业,国家质检总局、全国压缩机标准化技术委员会成员单位,中国通用机械工业协会压缩积分会副理事长单位,为四川省机械工业50强企业。

其90MPa加氢子站用氢压机是联合高校开发的一种专为高压氢气压缩设计的隔膜式压缩机，具有无泄漏、高纯度、高效率等特点。

氢压机最大出口压力可达90MPa，满足高压氢气储运需求。采用两级压缩和高效冷却系统，压缩效率高，能耗低。

本设备采用金属膜片将压缩气体与润滑油完全隔离，确保压缩氢气零污染、零泄漏。压缩腔体采用特殊材料和表面处理工艺，有效防止氢气渗透，保证氢气纯度 ≥99.99%。

NEWA – Innovative Wastewater Treatment for Heavy Oil Extraction



CD9-140bar CD15-30bar CD15-90bar CD17-30bar CD17-90bar

In 2021, Yantai Jinzheng Eco-Technology Co., Ltd. (NEWA) developed a high-temperature-resistant RO membrane module, marking its entry into the petrochemical liquid treatment industry.

This advanced membrane technology addresses challenges in treating high-temperature, high-salinity, and high-hardness wastewater, promoting green, low-carbon solutions.

Key Applications:
NEWA's technology is widely used in wastewater treatment for:
- Heavy oil extraction
- Coal chemical processing
- Power generation
- Paper manufacturing
- Biomedical water treatment
- Food processing
- Printing, dyeing, and textiles

Product Advantages:
1. Cutting-Edge R&D: NEWA's proprietary membrane materials and production methods surpass traditional RO membranes, which operate only at or below 45 degrees Celsius.
2. High-Temperature Performance (Up to 80 degrees Celsius): Operates efficiently in brine up to 80 degrees Celsius with a sodium chloride desalination rate of or above 98%.
3. Superior Pressure Resistance: Withstands high pressure and wear, maintaining a flux loss rate of or less than 5% after one year at 90 bar and 80 degrees Celsius.
4. Energy Efficiency: Unlike conventional evaporation processes, NEWA's high-temperature membrane allows direct desalination, reducing energy consumption.

Visit Booth E3546 to explore cutting-edge wastewater treatment solutions. **Booth: E3546**

金正环保特种耐高温反渗透膜——成功攻克稠油开采高温、高盐、高硬度污水资源化系列难题

2021年，烟台金正环保科技有限公司(展位号：E3546)自主开发出低流阻、强湍流的耐高温反渗透膜组件，正式进军多年被欧美发达国家所垄断的石油化工行业液体处理行业。金正环保特种耐高温反渗透膜具有极强的耐高温稳定性，攻克油田开采中高温、高盐、高硬度污水资源化系列难题，对于推动高温、高盐废水低成本资源化处理的绿色、低碳发展具有重要意义，典型应用于石油石化行业–稠油开采、煤化工炼化行业、电力行业、造纸行业、生物医药用水、食品加工行业、印染纺织行业等其他高盐、高硬度的高温水。

CDSR – China's First Offshore Oil Hose Manufacturer

Jiangsu CDSR Technology Co., Ltd. is a leader in marine and dredging hose manufacturing, with over 50 years of expertise in rubber product design and production.

As China's largest producer of marine hoses (GMPHOM 2009) and dredging hoses, CDSR continues to push industry boundaries with its innovative solutions.

The CDSR brand, short for China Danyang Ship Rubber, traces its origins to the Danyang Ship Rubber Factory, established in 1971.

The company entered the dredging hose market in 1990 and, in 1996, became the first in China to develop floating discharge hoses.

In 2004, CDSR pioneered the country's first oil suction and discharge hoses for offshore moorings (OCIMF-1991, Fourth Edition) and secured a national patent.

This achievement was followed by BV certification of its first marine hose prototype in 2007 and dual certification for single and double carcass hoses under OCIMF-GMPHOM 2009.

CDSR supplied its first marine hose string in 2008 and, in 2016, delivered its first self-branded marine hose string to CNOOC.

A year later, the company was recognised as the "Best Contractor of HYSY162 Platform" by CNOOC.

As China's first and only offshore oil hose manufacturer with such credentials, CDSR remains at the forefront of marine hose innovation.

Visit Booth W1435 to discover CDSR's advanced solutions for the offshore industry. **Booth: W1435**

CDSR——中国首家原油外输软管制造商

江苏西沙科技有限公司(展位号：W1435)前身为1971年成立的丹阳市船舶橡胶厂，拥有50多年的橡胶技术研发和生产经验，是一家专注于服务全球石油和疏浚行业的技术型企业，集研发与制造于一体。

作为国内领先且规模最大的输油软管（GMPHOM 2009）和疏浚软管制造商，公司旗下品牌"CDSR"代表"中国、丹阳、船舶、橡胶"，致力于为全球客户提供高质量的产品和技术解决方案。

High-pressure fluid transfer solutions for oil drilling – flexible hoses

Founded in 1993, Shandong Longkou Special Rubber Hose Co., Ltd. has been a leader in the research and manufacturing of high-performance hoses for the oil and gas industry.

The company specialises in Rotary, Vibrator, Mud, Cement, Flexible Choke and Kill, Frac, and BOP hoses.

Building on its expertise in swaged coupling technology, Longkou has introduced the Bonded Coupling construction to meet the demanding conditions of marine oil drilling operations.

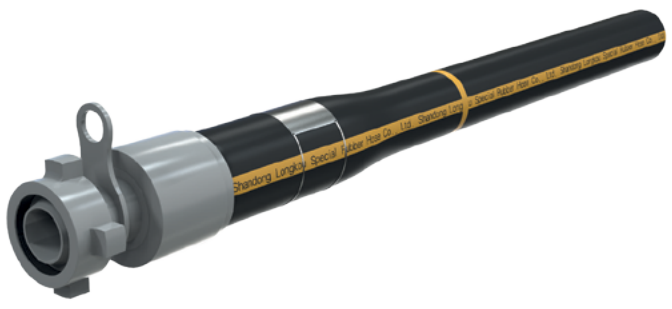
Both swaged and Bonded coupling constructions are widely used in oil drilling worldwide, yet they differ significantly in performance.

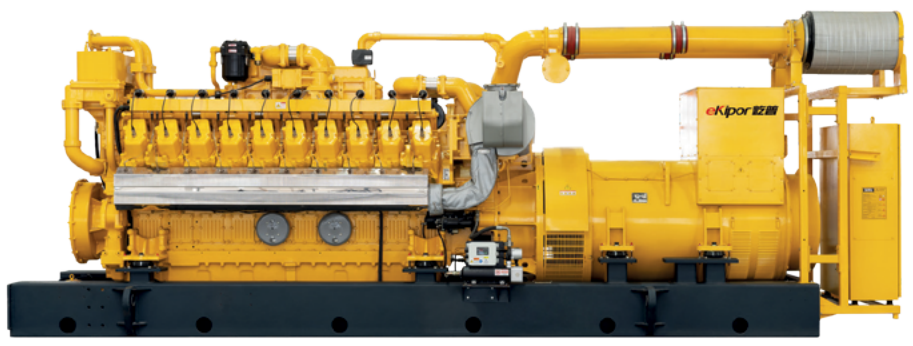
The Bonded Coupling offers superior technical advantages, particularly in transferring efficiency, service life, and safety.

Additionally, Longkou's Frac hoses, designed for high-pressure fracturing fluid transfer, are renowned for their outstanding abrasion resistance, high-pressure capability, extended service life, and excellent field handling, making them a top choice for demanding oilfield operations. **Booth: W1345**

石油钻井领域高压流体输送解决方案——柔性胶管

山东龙口特种胶管有限公司(展位号：W1345)成立于1993年，始终致力于研发和生产水龙带、减震胶管、泥浆胶管、固井胶管、柔性节流压井胶管、井控胶管和海洋输送胶管。已经取得了美国石油协会API Spec 7K、API Spec 16C和API Spec 16D认证及ISO9001：2015和API Spec Q1质量管理体系认证。在扣压式胶管基础上，为了满足更加复杂的海上石油钻井工况，公司推出了全流量的整体硫化式结构胶管，两者在钻井作业中均被广泛接受和使用，但有明显不同。





Comprehensive Power Solutions from a Single Source

eKipor is a pioneering force in engine technology that has achieved significant growth and innovation since its inception.

With strategic investments from HUA Capital, Richland Capital, and three publicly listed companies — Galaxy Electronics, Liance Electromechanical Tech, and Linyang Energy — eKipor has established itself as a leader in the power industry.

The company has made breakthroughs in multiple technical domains, launching an extensive range of gas engines and generator sets that cater to diverse power needs.

As a cutting-edge enterprise, eKipor Power specialises in the development and manufacturing of high-power, high-speed off-road engines and advanced power systems.

These products are designed for various applications, including natural gas, coal mine gas, field gas, and landfill gas, and have garnered widespread praise and preference from users worldwide.

Driven by a commitment to technological excellence and product quality, eKipor continues to innovate, providing reliable and efficient power solutions for customers around the globe. **Booth: W1955**

源自同一制造商的完整电力解决方案

苏州屹普动力科技有限公司(展位号：W1955)总部坐落于苏州高新区，同时在张家港经济技术开发区建有一座占地14,000平方米的现代化制造基地。公司获得了多家知名投资机构的青睐，包括元禾璞华、沃衍资本以及上市公司林洋能源（股票代码：601222）旗下的CVC林洋与君基金、联测科技（股票代码：688113）和银河电子（股票代码：002519）等。

作为行业领先的动力系统解决方案提供商，公司专注于兆瓦级大功率高速燃气机、发动机（柴发）、甲醇新能源发动机及其发电系统的研发与制造。

Huana Chemistry – leading manufacturer of dorbitan esters & polysorbates

华纳化工——乳化剂司盘、吐温专业生产商

广东华纳化工有限公司(展位号：E2261)是植根中国，布局全球，拥有巨大市场优势及发展潜力的专业化工企业，是一家拥有自主研发团队集工贸一体的集团公司。

华纳化工始于1993年，旗下广东润华化工有限公司专业生产乳化剂司盘、吐温系列产品，年产能5万吨以上。

Guangdong Huana Chemistry Co., Ltd. is a globally recognised chemical engineering company specialising in the production of sorbitan esters and polysorbates since 1993.

With dedicated teams in R&D, manufacturing, procurement, trading, marketing, and sales, Huana is committed to delivering world-class quality products and customised solutions to its global partners.

Its subsidiary, Guangdong Runhua Chemistry Co., Ltd., serves as an advanced production base, certified under ISO9001 and FSSC22000.

Equipped with cutting-edge technology and fully automated production lines, the facility achieves an annual output of over 50,000 tons, ensuring efficiency, consistency, and high-quality standards in every product. **Booth: E2261**

Rising to the challenge in the South China Sea

CNOOC deploying innovative technologies and tailored approaches to meet output targets

XU YIHE
Singapore

CNOOC Ltd discovered the deepwater Lingshui 36-1 gas field in the South China Sea's Qiongdongnan basin. Photo: CNOOC Ltd

AS China National Offshore Oil Corporation (CNOOC) accelerates its quest to tap into the vast deepwater oil and gas resources in the South China Sea, the state-owned energy giant is encountering an escalating series of challenges.

Greater depths, harsher sea conditions and complex reservoir characteristics encountered in deepwater regions are pushing CNOOC to invest heavily in cutting-edge technologies and innovative solutions to ensure the continued success of its operations.

The South China Sea holds some of China's richest hydrocarbon reserves, with a total of 17 large and medium-size sedimentary basins spanning its offshore territory, and is home to CNOOC's only deepwater operations.

These basins, which contain both oil and gas, represent nearly 30% of the country's total hydrocarbon reserves.

Although natural gas constitutes the majority of these resources, the region's oil reserves are also significant.

According to Zhou Shouwei, former president of CNOOC and an academic at the Chinese Academy of Engineering, the South China Sea is estimated to contain around 250 billion barrels of oil equivalent in place, with gas comprising 60% of the total.

CNOOC chairman, Wang Dongjin, recently highlighted the company's progress in the South China Sea, noting that the company has already accumulated an estimated 800 billion cubic metres of natural gas reserves.

The success has spurred CNOOC to set ambitious targets for its future gas production, aiming to increase annual output to 35 Bcm in 2025, with plans to further ramp up to 45 Bcm per annum by 2035.

These targets are significant, with the 2025 goal representing a 26% increase from the company's domestic gas production of 27.8 Bcm in 2023, and contributing as much as 35% to CNOOC's overall oil and gas production mix.

One of the most recent deepwater developments is the Shenhai-1 Phase 2 gas development project, also known as Lingshui 25-1, located in the Qiongdongnan basin of the South China Sea.

Situated about 132 kilometres off the coast of Hainan province, the field is being developed by a fixed production platform and three centralised subsea wellheads, with plans to eventually drill up to 12 development wells.

The project features 12 subsea trees supplied by Baker Hughes, and is connected via 116 kilometres of subsea pipelines to the newly established YC13-1 PAP wellhead platform.

CNOOC's most recent deepwater discovery is the Liwan 4-1 structure in the Pearl River Mouth basin of the South China Sea, which marked a milestone in China's exploration of ultra-deepwater carbonate plays.

Located in the Baiyun Trough — China's largest hydrocarbon-rich sag — the discovery is situated around 300 kilometres southeast of Shenzhen in a water depth of nearly 1640 metres.

The discovery well at Liwan 4-1 flowed 430,000 cubic metres per day of natural gas, making it the first major exploration success in this challenging deepwater carbonate play.

The well was drilled to a vertical depth of around 3000 metres, encountering approximately 650 metres of horizontal gas pay.

While these discoveries represent significant successes, they also signal the growing complexities of deepwater oil and gas development in the region.

The more CNOOC moves into remote and deeper waters, the more complex the operational challenges become, requiring sophisticated solutions and high levels of investment.

Fields located in water depths exceeding 1500 metres pose particular technical difficulties due to extreme weather conditions, including frequent typhoons, high wind speeds and powerful ocean currents.

According to An Weizheng, a CNOOC official, the South China Sea experiences an average of 11 typhoons annually, with winds reaching speeds of up to 66 metres per second and wave heights often exceeding 23 metres.

These conditions increase the risks faced by offshore production facilities, subsea pipelines and construction operations.

In addition to the harsh weather, deeper water fields are often located further from shore, requiring substantial investment in subsea infrastructure.

These challenges are further compounded by the technical difficulties associated with low-pressure reservoirs, which require advanced systems to boost production flow and pressure. Subsea boosting technologies are vital to overcoming these issues, allowing for greater recovery rates and longer-lasting production.

Some fields also present unique challenges due to high carbon dioxide or water content, which require advanced separation and reinjection technologies to manage them efficiently, according to An.

To navigate these hurdles, CNOOC has focused heavily on the development of new technologies. The company has made strides in improving subsea control systems, dynamic pipelines and mooring riser systems.

These innovations are designed to withstand the complex interactions between floating platforms, strong ocean currents and deep water.

In particular, CNOOC is placing a strong emphasis on creating decoupling risers and high-performance installation technologies to address the unique challenges of deepwater environments.

These risers are critical for connecting offshore platforms to subsea reservoirs, and their performance is essential for maintaining the safety and efficiency of deepwater operations.

The company has also prioritised development of domestic subsea production equipment to reduce reliance on foreign technology.

CNOOC is working on designing and testing 1500-metre subsea christmas trees and associated control systems.

With offshore development costs escalating as operations move into deeper waters, CNOOC is exploring innovative ways to reduce expenditure.

The company is researching the development of dry-tree cylindrical floating production systems and floating liquefied natural gas vessels — both of which are designed to operate efficiently in deepwater environments while minimising costs.

To support these deepwater projects, CNOOC is also adapting field development models to suit the specific conditions of each field.

For instance, at the Liuhua 16-2 and Liuhua 11-1/ 4-1 fields, CNOOC is using FPSOs designed to withstand extreme weather conditions, such as typhoons.

直面挑战，深耕南海

中国海洋石油集团（下称“中海油”）正在加速开发南海深水油气资源，但与此同时，也面临着越来越多的各项挑战。

由于深水区域深度更大、海况更严苛，加之储层特性更复杂，中海油正加大投资尖端技术和创新解决方案，以保持运营的稳步推进。

作为中国油气资源最为丰富的区域之一，南海海域共分布着17个大中型沉积盆地，是中海油唯一的深水作业基地。

这些沉积盆地蕴藏着油气资源，总量占中国油气储量的近30%。这些资源主要以天然气为主，但石油储量同样相当可观。

据中海油气前总裁、中国工程院院士周守为估算，南海的油气资源储量约为2500亿桶油当量，其中天然气占比达60%。

近期，在谈及南海进展时，中海油董事长汪东进指出，公司已累计探明约8000亿立方米的天然气储量。受此鼓舞，中海油制定更高的天然气产量目标，计划2025年年产量达350亿立方米，并于2035年进一步提高至450亿立方米。

这些目标极具战略意义，中海油2025年国内天然气目标产量较2023年278亿立方米提升26%，预计将占公司油气总产量的35%。

“深海一号”二期天然气开发（即陵水25–1）是中海油最新的深水开发项目之一，位于南海琼东南盆地。

该气田位于海南省东南约132公里海域，采用固定式生产平台与三口集成式水下井口进行开发，最终预计钻探多达12口开发井。

荔湾4–1构造是中海油最新的深水发现，位于南海珠江口盆地，标志着中国在超深水碳酸盐岩油气勘探领域取得重要突破。

该发现位于白云凹陷——中国最大油气富集凹陷区，距深圳东南约300公里，水深接近1640米。

CNOOC Ltd holds a stake in Guyana's Stabroek block, where the Liza Unity FPSO is producing. Photo: EXXONMOBIL

CNOOC Ltd sets out plan for 2025 production rise

Company targeting 8.3% production increase, with key investments in domestic fields, as well as major international projects in Guyana and Brazil

XU YIHE
Singapore

CHINESE offshore operator CNOOC Ltd is aiming for a production boost in the year ahead, despite planning a slightly lower capital expenditure for 2025 than 2024.

The company has allocated between 125 billion yuan and 135 billion yuan (between $17 billion and $18.5 billion) for 2025, slightly lower than the 132 billion yuan spent in 2024, with lower range represents a 5.5% decrease and the upper range suggests a modest 2.2% increase.

A significant portion of the capital — 61% — is allocated for development, with 20% earmarked for production, 16% for exploration and 3% for other business activities.

CNOOC Ltd will direct 86% of its spending domestically, with the remainder focused on international ventures.

The company anticipates a production increase of between 5.6% and 8.3% over the previous year, with estimated output ranging between 760 million and 780 million barrels of oil equivalent.

Of this total, 69% is expected from domestic fields and the remaining 31% from international operations.

CNOOC Ltd's domestic strategy is to maintain stable production levels while targeting growth in key regions.

In Bohai Bay, the company is focusing on stabilising output. The Kenli 10-2 Phase 1 project in the region is advancing rapidly, benefiting from standardised engineering practices that have shortened project timelines, CNOOC Ltd noted.

Once fully developed, output is expected to peak at 22,300 barrels of oil equivalent per day, supported by both a central processing platform and an unmanned platform.

CNOOC Ltd is also stepping up developments in the South China Sea, targeting both shallow and deepwater areas, as well as ramping up exploration in the East China Sea and Yellow Sea.

CNOOC Ltd chairman Wang Dongjin. Photo: CNOOC LTD

Onshore, progress is being made in developing deep coalbed methane and tight gas reserves.

CNOOC Ltd stated that its exploration activities for 2025 include plans to drill 330 wells, a decrease from the 350 planned for 2024.

Of the 330 exploration wells, 214 will be offshore, while 116 will target onshore CBM reserves.

The company will also reduce its 3D seismic survey coverage to 10,900 square kilometres in 2025, compared with 13,300 square kilometres the previous year.

Meanwhile, CNOOC Ltd continues to expand its presence in key international markets.

The company holds a 25% stake in Guyana's offshore Yellowtail project, which includes a floating production, storage, and offloading vessel and is set to produce 250,000 barrels per day.

CNOOC Ltd's long-term plans for Guyana involve eight projects in the prolific Stabroek block expected to be operational by 2030, with a potential combined production capacity of 1.7 million bpd.

In Brazil, CNOOC Ltd holds a 7.34% stake in the Buzios 7 project, which aims to produce 225,000 bpd.

The company is also pursuing 11 additional projects at Buzios, with plans to bring them online by 2027, aiming to surpass 2 million bpd in output.

中国海油制定2025年增产计划

中国海洋石油有限公司（下称“中海油”）计划在未来一年提高产量，尽管2025年的资本支出略低于2024年。

2025年，中海油计划投资1250亿至1350亿元人民币（约170亿至185亿美元），较2024年的1320亿元，其中最低额度减少5.5%，最高额度则小幅增长2.2%。

其中开发占据61%的资金，生产占20%，勘探占16%，其余3%用于其他业务。

中海油计划将86%的投资支出用于国内，其余资金用于海外项目。

预计产量同比增长5.6%至8.3%，总产量预计在7.6亿至7.8亿桶油当量之间。预计国内油田贡献69%的产量，其余31%来自国际业务。

中海油计划维持国内产量稳定，并在关键区域实现增长。

在渤海湾，中海油致力于稳定产量。垦利10-2一期项目进展迅速，并受益于标准化工程实践，有效缩短了项目周期。项目完全开发后，预计峰值产量可达日均2.23万桶，由中央处理平台和无人平台提供支持。

中海油正在加强南海开发，覆盖浅水及深水区，并加速推进东海与黄海的勘探工作。

陆上资源方面，该公司正在推进开发深层煤层气和致密气资源。

中海油指出，2025年勘探计划包括钻探330口井，较2024年的350口有所下降。该计划中，海上钻井数量为214口，陆上煤层气井数量为116口。

公司还将在2025年将其3D地震勘测覆盖范围从上年的13,300平方公里缩减至10,900平方公里。

与此同时，中海油继续扩大其在主要国际市场的影响力。公司持有圭亚那海上Yellowtail项目25%的股份，该项目包括一艘FPSO，预计日产25万桶。

中海油在圭亚那的长期计划涉及Stabroek区块的八个项目，预计将于2030年投入运营，总产能可能达到170万桶/日。