





新加坡能源转型与 新加坡国际能源周2025

Singapore Energy Transition and Singapore International Energy Week (SIEW) 2025





AGENDA

- 1. Overview of Role of EMA
- 2. Singapore Energy Transition
- 3. SIEW





ROLE OF ENERGY MARKET AUTHORITY 新加坡能源管理局职责

行业监管者 INDUSTRY REGULATOR

电力系统运营者 POWER SYSTEM OPERATOR

行业开发者 INDUSTRY DEVELOPER Regulate Singapore's electricity and gas industries as well as district cooling services.

监管新加坡的电力和天然气行业以及区域供冷服务。

Ensure the security, reliability and adequacy of electricity supply. 确保电力供应充足,安全可靠。

Advance manpower capabilities, promoting innovations and establish energy thought leadership.

提升劳动力素质,推动创新发展,在能源领域确立思想领导地位。

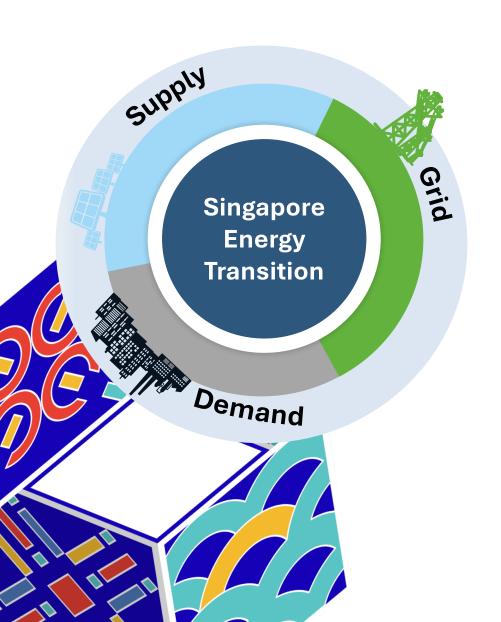
Promote residential energy efficiency. 提高住宅能源效率。

Operate the power system of Singapore to ensure reliable supply of electricity.

运营新加坡电力系统,确保电力可靠供应。

Oversee the electricity transmission system and generators in power stations and the operation of the natural gas transmission system. 监管发电站输电系统和发电机及天然气输送系统的运营。

SINGAPORE ENERGY TRANSITION 新加坡能源转型



The Singapore Energy Transition is a multi-pronged strategy that outlines the key paths for Singapore's transition towards a more sustainable future.

It aims to reduce the power sector's emissions, through supply, grid, and demand measures while ensuring that Singapore's power system remains secure, reliable, and sustainable.

新加坡能源转型规划,旨在推动新加坡迈向更加可持续的能源未来。该计划通过优化能源供应、提升电网效率及调整能源需求来减少电力行业的碳排放,同时确保国家电力系统的安全性、可靠性和可持续性。







Natural Gas

Mainstay, continue to diversify our gas sources and improve efficiency of power generation

Solar

Maximise solar deployment and use ESS to manage solar intermittency





Regional **Power Grids**

Pursue electricity imports to access cleaner and costeffective energy beyond Singapore's borders

Pacing of Demand

Growth

Actively manage

growth of energy

demand to better

manage rollout of low

carbon options and

keep costs affordable

Hydrogen

Develop the use of low-carbon hydrogen for power generation



Other Low-Carbon **Alternatives**

Pre-position Singapore for new low-carbon supply alternatives such as carbon capture, utilisation and storage, geothermal

Carbon Credits

Leverage international carbon markets to address residual and hardto-abate carbon



GRID





Decentralisation

Create a multi-layered grid to manage the growth of distributed energy resources and improve grid reliability

Leverage digital technologies to enhance grid planning and operations

Digital Solutions



Shaping of Consumption Patterns

Shape end user consumption patterns to optimise the power system



DEMAND



1ST SWITCH: DIVERSIFY NATURAL GAS SOURCES FOR EFFICIENT POWER GENERATION 实现天然气来源多元化,提高发电效率



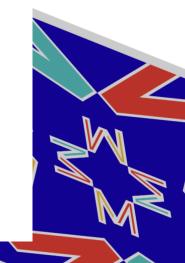
~95% of Singapore's electricity is generated using imported natural gas today.

新加坡约95%的电力是通过进口天然气发电的。

Singapore will develop a second LNG terminal to meet energy needs and enhance energy security.

As the cleanest burning fossil fuel, natural gas will remain a key energy source before other low-carbon energy sources become viable. 天然气作为最清洁的化石燃料,在其他低碳能源尚未普及前,仍将是重要的能源来源。

New natural gas power plants must be hydrogen ready. 新的天然气发电厂必须具备氢能适用性。



2ND SWITCH: MAXIMISE SOLAR DEPLOYMENT AND GRID RESILIENCE WITH ESS SUPPORT 借助储能系统,最大程度增加太阳能部署和电网弹性

- Solar is our most promising renewable energy source, creatively deployed in our in land-scarce city. 太阳能是新加坡最具前景的可再生能源,以创新方式部署于土地资源紧张的城市。
- Singapore has achieved our 2025 target of deploying 1.5GWp of solar and on track to meet our target of at least 2GWp by 20230.
- However, intermittency from rain and cloud cover in our tropical climate challenges solar energy. Daytime harvesting limits availability.
- Energy Storage Systems (ESS) address this by managing electricity supply-demand mismatches, ensuring grid reliability, and regulating second-to-second power fluctuations.

储能系统可通过管理电力供需错配、确保电网可靠性及监管每秒电力波动,妥善解决该问题。

By 2025

1.5 GWp of solar, which can power around 260,000 households

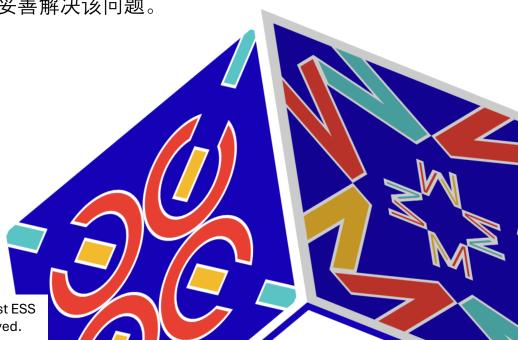


By 2030

At least **2 GWp of solar**, which can power around 350,000 households



The 285MWh Sembcorp ESS is Southeast Asia's largest ESS and is the fastest in the world of its size to be deployed.



3RD SWITCH: IMPORT REGIONAL ELECTRICITY FOR CLEAN ENERGY 引进区域电力,发展清洁能源



- EMA targets to import around 6GW of low-carbon electricity by 2035, which is around one-third of our energy supply then. 能源市场管理局计划2035 年进口约6吉瓦的低碳电力,届时将占 全国能源供应的约三分之一。
- While Singapore has limited renewable energy resources, we are able to access low-carbon electricity that is abundant in the region by connecting to regional power grids.
- EMA has launched Request for Proposals for large-scale electricity imports.
- To date, EMA has issued Conditional Approvals to ten projects to import low-carbon electricity from Australia, Cambodia, Indonesia and Vietnam.

截至目前,能源市场管理局已向十个项目发出有条件批准,以从澳大利亚、柬埔寨、印度尼西亚和越南进口低碳电力。

4TH SWITCH: POSITION SINGAPORE FOR LOW-CARBON SUPPLY ALTERNATIVES 探索新加坡低碳供能的替代能源

As an alternative energy-disadvantaged country, we are investing early in early low-carbon technologies for future commercial viability.

Carbon Capture, Utilisation and Storage (CCUS) 碳捕集、利用与封存 (CCUS)

Singapore is exploring carbon capture and storage to decarbonise the economy starting with a
CCS project to capture and aggregate CO2 emissions. 新加坡正在探索碳捕集与封存技术,以
推动经济低碳化,首个 CCS 项目将用于捕集和汇集二氧化碳排放。



Low-Carbon Hydrogen低碳氢能

• We will develop local H₂ capabilities and infrastructure for future commercial viability integration. 我们将努力发展当地氢能和相关基础设施,确保其未来顺利整合至商业化应用中。

Geothermal地热能

• We will assess our deep geothermal resource potential for power generation at depths of up to 10km. 我们将探测至多 10 公里深度的地热能,评估可用于发电的深层地热资源。

Nuclear核能

• We will monitor advanced nuclear technologies' progress to keep energy options open and assess their implications. 我们将密切关注核能技术的前沿发展,始终对能源选项持开放态度, 评估其可能带来的影响。





ABOUT







新加坡国际能源周

The Singapore International Energy Week (SIEW) is an official trademarked event by the Energy Market Authority of Singapore (EMA). It is an annual platform for energy professionals, policymakers and commentators to discuss and share best practices and solutions within the global energy space.

新加坡国际能源周 (SIEW) 是由新加坡能源市场管理局 (EMA) 官方举办的大型活动。作为一年一度的行业盛会, 该活动为能源专业人士、政策制定者以及评论员提供了广阔平台, 共同探讨和分享全球能源领域的最佳实践和解决方案。

The 18th edition of SIEW will be held from 27 – 31 October 2025 in Singapore.

第 18 届 SIEW 将于 2025 年 10 月 27 日至 31 日在新加坡举行.

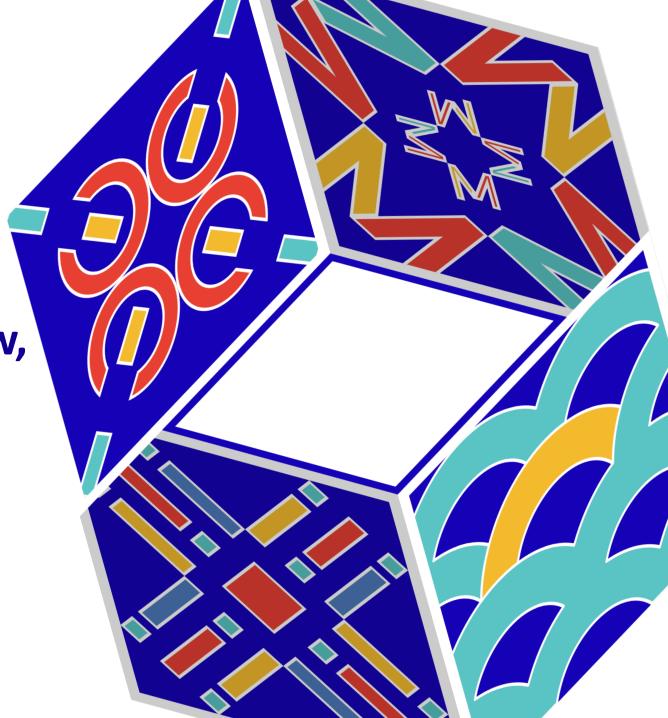
SIEW AT A GLANCE

Monday 27 Oct	Tuesday 28 Oct	Wednesday 29 Oct	Thursday 30 Oct	Friday 31 Oct
SIEW Summit	Singapore-IEA Forum	SIEW Energy Insights	SIEW Thinktank Roundtables	
		SIEW TechTable		
	Singapore-IRENA High Level Forum	Asia Gas Markets Conference		SIEW Thinktank Roundtables
		Asian Downstream Summit/ Asian Refining Technology Conference/ Ammonia & Carbon Capture Asia		
	Asia Clean Energy Summit + Asia Carbon Summit			
	Conference on Electric Power Supply Industry (CEPS			SI)
SIEW Summit Gala Reception	SIEWConnects	SIEWConnects	SIEWConnects	Youth@SIEW
SG60@SIEW Energy Showcase				



Envisioning Energy Tomorrow, Building Systems Today

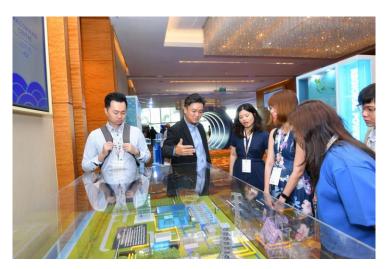
展望能源未来,建设今日体系



EVENT HIGHLIGHTS







SG60@SIEW Energy Showcase & Gala Reception

 Highlighting energy innovations and Singapore's energy transition plan towards 2065

SIEW Academy

 A network of distinguished global energy thought leaders who will shape the discourse and chart new pathways for our energy future

Conversations on Future-Ready Technologies

 Deep dives into Nuclear Energy, CCUS, Artificial Intelligence applications, Biomethane and other emerging technologies



SIEW SUMMIT THEMES 峰会主题





THE NEXT ENERGY
BREAKTHROUGH: SCALING
FUTURE ENERGY
TECHNOLOGIES
扩展未来能源技术



THE FUTURE OF ENERGY:
NATURAL GAS' STRATEGIC
ROLE IN GRID STABILITY

天然气在电网稳定中的战略 作用



FINANCING OUR
ENERGY FUTURE

未来能源的投资展望





DISCUSSION AREAS 讨论课题

- 1. Strengthening regional interconnectivity 加强区域互联互通 advancing power grids and energy systems integration across borders
- 2. Fostering collaboration in energy research 推动能源研究领域的合作
 - sharing knowledge and collaborating on energy solutions
- 3. Development and deployment 开发与部署
 - implementing new energy technologies and infrastructure
- 4. The role of natural gas as a transition fuel 天然气在能源转型中的关键作用
 - leveraging natural gas to bridge the shift to a sustainable energy future
- 5. Building a people-centric system 以人为本,推动系统发展
 - ensuring energy solutions address community's needs and aspirations
- 6. Resilient energy system 灵活且稳定的能源系统
 - creating robust and adaptable energy infrastructure

PAST SPEAKERS AT SIEW 历届论坛演讲嘉宾



Lawrence Wong
Prime Minister and Minister
for Finance
Republic of Singapore



H.E. Zhang Jianhua Administrator, National Energy Administration, People's Republic of China



H.E. Ban Ki-moon
Secretary-General of the
United Nations



H.E. Dr Kao Kim Hourn Secretary General ASEAN



Dr Fatih Birol
Executive Director
International Energy Agency
(IEA)



Francesco La Camera
Director-General
International Renewable
Energy Agency (IRENA)



H.E. Armida Salsiah
Alisjahbana
Under-Secretary General
UNESCAP



Xin Baoan
Chairman, Global Energy,
Interconnection
Development and
Cooperation Organisation



Pang Xiaogang
President, State Grid
Corporation of China



Li Rui,Chief Executive Officer,
Guangzhou Power Supply
Bureau

PARTNER EVENTS 共同主办的专业会议



The 12th edition of Asia Clean Energy Summit will take place on 28-30 October 2025 at Marina Bay Sands Expo. As Asia's leading event focused on clean energy technology, policy and finance, the Asia Clean Energy Summit provides a common platform for regional thought leaders in both the public and private sectors to collaborate on critical issues and opportunities in harnessing clean energy for the future. The 2nd Asia Carbon Summit's programme will discuss how Asia is positioning itself at the forefront of global climate action while creating substantial economic opportunities for stakeholders across the region.

S&P Global

Commodity Insights

Asia Gas Markets Conference

The Asia Gas Markets Conference, a premier two-day industry gathering, brings together energy leaders to explore Asia's evolving gas markets, focusing on regional trends, strategic partnerships, and sustainable energy transition. The programme covers critical topics from geopolitical impacts and market dynamics to future energy innovations, including hydrogen integration and carbon capture.



Asian Downstream Summit/ Asian Refining Technology Conference/ Ammonia & Carbon Capture Asia is Asia's most influential downstream refinery and petrochemical event. This year's edition will be held from 29-30 October at Marina Bay Sands Singapore.



The 25th Conference of Electric Power Supply Industry (CEPSI), a flagship event of the Association of the Electricity Supply Industry of East Asia and Western Pacific (AESIEAP). Hosted by SP Group in conjunction with SIEW 2025, the event will bring together regional participants to build on strategic conversations and collaborative efforts toward the energy transition.

SPONSORSHIP OPPORTUNITIES 赞助与合作机会



THOUGHT LEADERSHIP 战略思维引领

BRAND RECOGNITION 品牌塑造

MARKETING AND MEDIA PROFILING 传播媒体

NETWORKING AND BUSINESS DEVELOPMENT 商务拓展与市场增长

Get in touch with Hayden to explore sponsorship opportunities and craft a tailored package that maximises value for your organisation.

Hayden Lee

Email: hayden_lee@ema.gov.sg | Phone: +65 6376 7479

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REGISTER FOR SIEW 登记参加

FIND OUT MORE ABOUT SIEW 2025

了解相关信息

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Registration opens in July. Scan the QR code above to register your interest. 报名将于七月开放。请扫描上方二维码登记您的兴趣。



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SINGAPORE INTERNATIONAL ENERGY WEEK 27 - 31 OCTOBER 2025 | MARINA BAY SANDS

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IN CELEBRATION OF



BUILD CONNECTIONS



SIEWConnects: Your gateway to global energy leaders and industry insights

Register your interest for our upcoming sessions:

• Washington DC, United States (June)

