

The 67th Meeting of the APEC Expert Group on Energy Efficiency and Conservation (EGEEC 67)

Shenzhen, China | 29-31 July 2026

Meeting Summary

1. Introduction

The 67th Meeting of the APEC Expert Group on Energy Efficiency and Conservation (EGEEC 67) was held in Shenzhen, China on 30 July 2026, under the theme "Advancing System-Level Energy Efficiency: Policy Harmonization and Innovative District Energy Services in APEC." The meeting was preceded by the APEC Capacity Building Workshop for Energy Efficiency and Conservation Policy (CBWS/EECP) Phase 2 on 29 July 2026, and followed by a technical visit to Qianhai district energy facilities on 31 July 2026.

Delegates from nine member economies participated in the meeting, including China; Hong Kong, China; Japan; Malaysia; Mexico; Papua New Guinea; the Philippines; Russia; and Chinese Taipei. A total of 44 participants attended the meeting.

Representatives from seven organizations and cross-fora groups also participated, including the APEC Energy Working Group (EWG) Secretariat, the Asia Pacific Energy Research Centre (APEREC), the APEC Sustainable Energy Center (APSEC), the APEC Expert Group on Energy Data and Analysis (EGEDA), the APEC Expert Group on Clean Fossil Energy (EGCFE), the International Energy Agency (IEA), and the UNEP Copenhagen Climate Centre.

2. Opening Session

The meeting commenced with Welcome Remarks by Mr. LI Xiang from the National Energy Administration (NEA), China. Mr. LI welcomed delegates to Shenzhen and noted China's role as the 2026 APEC host economy. He introduced the three core priorities for the APEC energy sector "Energy for All," "AI + Energy," and "Synergistic Cooperation" and linked system-level energy efficiency to the Putrajaya Vision 2040 and the Aotearoa Plan of Action.

Dr. LIU Meng, EGEEC Chair, delivered opening remarks, thanking the host economy and outlining the day's agenda. He noted that system-level energy efficiency, policy harmonization, and innovative district energy services are pressing challenges for APEC economies. A group photo was taken before the coffee break.

3. Chair Presentation: AI + Energy Data Centre

Ms. Jovian CHEUNG, EGEE Vice-Chair, delivered a presentation on “AI + Energy Data Centre.” The presentation surveyed the evolving policy landscape around AI-driven data center energy consumption across nine APEC economies, tracing the development of regulatory frameworks and identifying emerging cross-economy patterns.

From 2009 to 2026, over 60 policies related to AI and data center development were enacted across nine economies, with approximately 70% adopted after 2023. The analysis highlighted a shift from open promotion and facilitation to binding regulatory measures, including mandatory PUE limits, energy audits, and tariff or rate restructuring. The year 2026 marking the most intensive wave of policy intervention.

The nine economies were examined individually: the United States (characterized by a federal-state “tug of war”, with federal executive orders seeking to remove regulatory barriers while some states introduced moratoriums on new data centers and consumption-based taxes); Canada (where provincial initiatives such as Quebec Bill 69 and British Columbia Bill 31 have moved ahead of federal coordination, establishing local frameworks for data center energy management); China (demonstrating highly synchronized, top-down integration, with the 15th Five-Year Plan directing 4 trillion yuan of grid investment and NDRC/MIIT enforcing PUE limits of 1.5 by 2025 for existing facilities and 1.25 for new large facilities); Japan (transitioning from a permissive, market-led framework to reactive regulation with legally binding PUE targets of 1.4 for large facilities under the Energy Conservation Act Amendment); Korea (explicitly linking AI and energy security through the AI Basic Act and a nuclear baseload strategy to support data center expansion); Singapore (practicing strict gatekeeping through a data center moratorium and PUE limits of 1.25 for new facilities under the Green Data Centre Roadmap); Australia (maintaining a predominantly market-driven expansion model, supported by voluntary frameworks and guidelines rather than binding regulation); Chinese Taipei (enforcing strict approval procedures with mandatory energy audits and PUE limits for data centers over 5 MW); and Viet Nam (currently in a pre-regulatory development phase with rapid data center build-out ahead of comprehensive energy regulation).

One key analytical finding was the “Regulatory S-Curve” — economies typically move from pre-regulatory growth to binding regimes within 3 to 7 years, driven by grid congestion and local capacity constraints. Across the member economies, PUE standards ranged from 1.25 (China, Singapore for new large facilities) to 1.5 (China, for existing facilities), with most economies converging toward PUE level of 1.3–1.4 for new large facilities.

The presentation proposed several possible APEC EWG actions including (1) organizing regular workshops on AI and energy-efficiency data centers; (2) developing a cross-economy “AI+ Energy Data Centre Guide” comparing policies, PUE standards, and best practices, as well as (3) initiating AI+ pilot projects pairing data centers with AI-driven energy efficiency measures, district energy systems, and clean energy integration.

4. Keynote Speech: Qianhai District Cooling System and AI Integration

Dr. ZHU Chunguang from Shenzhen Qianhai Energy Technology Development Co., Ltd. delivered the keynote on “Qianhai’s Approach to the Coordinated Development of District Cooling System (DCS) and Artificial Intelligence under the New Energy Policy Framework.” He covered three areas: China’s district energy policy and market developments, DCS-AI integration technologies, and the Qianhai DCS case study.

Regarding the policy framework, Dr. ZHU described China's three-level support system for DCS: national-level strategic direction (centered on the 14th Five-Year Comprehensive Work Plan for Energy Conservation and Emission Reduction), provincial-level policy support (Guangdong Province's special action plan with time-of-use electricity price discounts), and municipal-level standard implementation (Shenzhen's nation-first "Technical Specification for District Cooling Systems" SJG 151-2024, supported by green and low-carbon industry subsidy policies). A three-level standard system covering design, construction, operation, maintenance, and evaluation has been established at the national, industry, and local levels.

Dr. ZHU presented the Qianhai DCS as the first case in China to incorporate district cooling into municipal facilities. The system is planned with 10 plants, a total capacity of 400,000 RT (refrigeration tons), approximately 90 kilometers of municipal cooling pipeline, and a cooling service area of about 15 million square meters, making it the largest centralized cooling system planned in the world. To date, 6 plants have been constructed with over 20 kilometers of pipeline completed, approximately 5.82 million square meters have signed access contracts, and the cooling service area has exceeded 2.2 million square meters. The system has achieved over 3,300 days of continuous, uninterrupted cooling operation since commissioning in 2017.

The presentation detailed an eight-component AI+DCS integration framework: (1) data-driven load forecasting; (2) chiller group control optimization; (3) pipeline hydraulic balance optimization; (4) multi-objective AI optimization; (5) optimal design of intelligent control; (6) coordinated optimal control of "source-network-load-storage"; (7) optimization of interconnected scheduling for multiple cooling

stations; and (8) AI inspection robots and intelligent fault diagnosis. All components were 100% independently developed.

The application of this framework achieved an average energy consumption reduction of 8.1% compared to the original operation. Qianhai DCS meets Shenzhen's Class I energy efficiency standards for chilled plants. Qianhai Energy won the WGDO International Contribution Award for Green Design, the first recipient from China's district energy sector. The system also demonstrated significant social, economic, and ecological benefits, including urban heat island reduction of 0.8 to 1.5 degrees Celsius compared to other Shenzhen CBDs, ultra-quiet operation (daytime noise of 60 dB or below), and 50% of electricity carrying green energy certificates by 2025.

Dr. ZHU also outlined future prospects for district energy, including “source-network-load-storage integration” and multi-energy complementation (wind, PV, hydrogen, natural gas, sewage waste heat, cold energy), with targets of at least 8% local renewable energy share and a minimum annual carbon reduction of 52,000 tons.

5. Member Economy Presentations on Meeting Theme

Six member economies presented their experiences and practices under the meeting theme. Topics ranged from district cooling systems and energy efficiency policy updates to centralized heat supply and system-level optimization.

5.1 Hong Kong, China

The presentation from the Electrical and Mechanical Services Department (EMSD) shared the case of the District Cooling System (DCS) at the Hong Kong Kai Tak Development. The system, built on the former Kai Tak airport site, comprises three DCS plants plus a seawater plant, supplying chilled water to various buildings with a total cooling capacity of 462 MW.

The presentation highlighted the high control complexity of the system, which includes multiple cooling towers, chillers, pumps, and underground pipes serving various building types including metro stations, a cruise terminal, shopping malls, offices, government buildings, schools, and hospitals. The system provides round-the-clock services and a committed water supply temperature of 5 degrees Celsius.

The system uses AI for cooling demand prediction, drawing on ambient temperature and humidity forecasts from the Hong Kong Observatory, event schedules, and calendars. The presentation highlights three processes for scaling innovative district energy services across APEC: (1) training, (2) forecasting, and (3) optimization. They utilized over 76 million data points from the past two years to train the models, follow by comparing the total power consumption of all combinations and recommending the configuration with the absolute lowest power, thereby ensured that the plant was

always running at peak system-level efficiency. The implementation of AI control resulted in an estimated additional annual energy savings of 1.7 million kWh, equivalent to approximately 520 three-person household annual energy consumption in Hong Kong.

5.2 Japan

Dr. Seonghee KIM from the Institute of Energy Economics, Japan (IEEJ) presented Japan's energy efficiency and conservation policy update. The presentation centered on the 7th Strategic Energy Plan (approved by the Cabinet in February 2025), which sets Japan's fundamental energy policy direction through 2040. The plan places greater weight on energy security and economic efficiency, reflecting the resurgence of energy security risks and expected growth in power demand from AI and data centers.

Japan's energy efficiency and conservation strategies combine regulatory measures (the Top Runner Program, goal setting, periodic reporting, and compliance standards) with support measures (equipment upgrades, energy-saving audits, technical development, and human resource development). The FY2025 supplementary budget established the GX III category, strengthening subsidies for supply chain collaboration initiatives. Subsidy rates range from 1/2 for SMEs to 1/3 for large companies, with maximum amounts up to 1.5 billion yen for factory-wide initiatives. A new GX III category for manufacturers was created, requiring commitments to GHG reduction targets and business growth strategies, with 169 manufacturers having announced their GX commitments as of July 2026.

Regarding data center regulation, the presentation detailed additional measures effective April 1, 2026: data center operators (with annual energy consumption of 1,500 kl crude oil equivalent or more) must expand periodic reporting to include goals, initiatives, and performance; a benchmark PUE target of 1.4 or below by 2030 was set; new data centers built in FY2029 or later must comply with PUE of 1.3 or below; and tenant-type data centers are now incorporated into PUE calculations. Japan also published a Guidebook for Energy Efficiency and Productivity Improvement through Digital and AI Technologies in March 2026, providing practical guidance for leveraging digital and AI technologies.

5.3 Malaysia

The presentation from the Ministry of Energy Transition and Water Transformation outlined Malaysia's approach to system-level energy efficiency through policy harmonization and innovative district energy services. Malaysia's framework operates across three levels: federal (National Energy Efficiency Policy and Action Plan, NEEAP 2026-2035, with renewable energy targets and federal incentive

programs), state (adopting federal mandates into regional energy plans), and local (enforcing building codes and implementing district-level programs). The National Council for Local Government (MNKT) serves as the central body coordinating between federal and state governments.

Innovative district energy services were a focus, with space cooling accounting for 40% to 60% of commercial building energy consumption in Malaysia. Case studies included the KLCC District Cooling (gas-fired cogeneration with thermal energy storage serving the 100-acre KLCC development), Megajana District Cooling in Cyberjaya (Malaysia's first township-wide DCS with off-peak TES charging), Shah Alam urban rejuvenation (a centralized DCS supplied by TNB and PKNS), and KL Sentral District Cooling (transit-oriented development cooling). The presentation also discussed Cooling-as-a-Service (CaaS) as a business model that transforms cooling from CAPEX to OPEX, promoted by ESCOs such as KJTS Group, ENGIE, and Johnson Controls.

Malaysia's implementation strategies include strengthening intergovernmental coordination through MNKT, scaling up the Building Energy Data and Optimization System (BEDOS) and Energy Management Information System (EMIS) for real-time monitoring, investing in district energy pilot projects including solar district cooling and waste heat recovery, and promoting capacity-building programs for data-driven energy management.

5.4 The Philippines

The Department of Energy (DOE) of the Philippines presented on "Advancing System-Level Energy Efficiency in the Philippines." The Energy Efficiency and Conservation Act (Republic Act No. 11285), approved in April 2019, institutionalizes energy efficiency as a national way of life. All 28 provisions under the EEC Act have been issued as policies. The National Energy Efficiency and Conservation Plan (NEECP) and Roadmap 2023-2050 serves as the framework for mainstreaming energy efficiency across all economic sectors.

The Government Energy Management Program (GEMP) aims to reduce monthly electricity and fuel consumption in the public sector by at least 10%. As of 30 June 2026, 5,176 government entities complied, achieving 54,021.45 MWh of electricity savings and 1,662,869.04 liters of fuel savings. The Designated Establishments (DEs) program showed 12,098 registered establishments, with total investment costs of 9.31 billion pesos from EEC projects, resulting in 881.93 GWhe of energy savings and 633,313 tons of CO₂ avoidance.

Other programs include the "You Have The Power!" (YHTP) campaign, which reached 5,724 participants in 2025, and the O.N.E. (Oras Natin sa Efficiency) movement, a

nationwide weekly energy-saving initiative with cumulative savings of 112,106.17 MWh as of July 2026. The Energy Efficiency Excellence Awards recognized 32 awardees from 472 entities in 2025.

5.5 Russia

Dr. Alexey TULIKOV, Director for the Development of Legislation in the Fuel and Energy Sector of the Russian Energy Agency, presented on “Features of System Efficiency in Centralized Energy Supply Systems in the Russian Federation.” Russia is a world leader in hydrocarbon reserves, production, and export, with 38% of electricity generation from nuclear, hydropower, and other renewable sources, and 47% from natural gas.

The presentation described Russia's centralized heat supply system, regulated under Federal Law 190-FZ "On Heat Supply" and Federal Law 261-FZ "On Energy Saving." Key developments include the Strategic Direction for Digital Transformation of Construction and Housing Services through 2030, which introduces IoT and AI technologies. At the end of 2024, 1,416 concession agreements with investment obligations totaling 477.6 billion rubles were in effect in the heat supply sector.

Dr. TULIKOV presented the Digital Fuel and Energy Balance (FEB) as a platform solution for generating actual and forecast fuel and energy balances at municipal, regional, and national levels. The system uses digital twins and electronic models for automatic calculation of optimal modes, predicting system behavior, and real-time efficiency monitoring. The SberCity residential complex was presented as a case study, featuring 80 natural gas power plants managed from a single center, projected to reduce natural gas consumption by 53% by 2030, reduce heat losses by 70%, and reduce CO2 emissions by 165,000 tons.

Dr. TULIKOV suggested that APEC continue to study member economies' experiences in system efficiency, develop best practice descriptions for centralized power supply systems, and strengthen interaction with expert groups on energy efficiency in other international organizations, including the UNECE Group of Experts on Energy Efficiency.

5.6 Chinese Taipei

Chinese Taipei's presentation suggested that the highest equipment efficiency does not necessarily yield the highest system efficiency, since equipment is governed by different technical test standards and hardware specifications must be properly matched.

The presentation outlined policy tools for system efficiency in Chinese Taipei, including: the ESCO Incentive program (eligible for registered legal entities with contract demand over 100 kW and savings above 10%, with system efficiency providing an additional 10% subsidy for HVAC systems with chilled water systems below 0.75 kW/RT, air compressors below 6.8 kW/CMM, and BEMS/AI-enabled optimization); the Designated Energy User (DEU) requirement (for contract demand of 800 kW or above, with annual requirements for energy data reporting, energy manager appointment, and 1% saving target); and system performance reporting (for HVAC systems of 1,000 RT or above and air compressors of 500 hp or above).

Two case studies were presented. The Da-Yeh University case demonstrated system-level energy efficiency through transitioning from isolated retrofits to district-level system optimization, combining 2nd-generation heat pumps (COP 3.8), thermal storage, and smart lighting, with dynamic hot water temperature control (50 to 45 degrees Celsius) achieving over 25% power savings. The Chang Gung Memorial Hospital case showed cross-system integration of DCS, ice storage, and outdoor air intake control, leveraging analytics and dynamic forecasting, with campus microgrid synergy integrating solar PV, boiler waste heat recovery, and ice storage for peak shaving and load shifting.

Challenges identified included high metering costs, building operators prioritizing reliability over energy performance, and limited portability of AI training models across different districts. Future work includes establishing common requirements for meter accuracy and data validation, and standardizing system boundaries and reporting methods for comparable results.

6. Cross-Fora Presentations

6.1 EGEDA

Dr. YANG Chun, EGEDA Vice Chair and Ms. Elvira Torres GELINDON, EGEDA Secretariat, presented updates on EGEDA's activities and the APEC twin goals, respectively. The APEC Energy Statistics 2023 and APEC Energy Handbook 2023 have been published. Processing of the 2024 annual energy supply and demand data is ongoing, with expected completion by September 2026. EGEDA continues regular data collection including monthly oil and gas supply and demand (JODI), quarterly energy supply, major economic indicators, energy efficiency indicators, annual energy prices, and annual GHG emissions.

The 37th APEC EGEDA Meeting was held from 8 to 10 April 2026 in Guangzhou, China, hosted by China Southern Power Grid, with 13 APEC member economies and representatives from APEC Secretariat, EWG Secretariat, EGNRET, EGEEC, EGCFE,

APSEC, IEF, IEA, IRENA, and UNESCAP. EGEDA training activities included the 32nd Seminar on Energy Modelling (2-6 March 2026, Tokyo) with 10 trainees from 7 economies, and the energy statistics course (19-30 January 2026, Tokyo).

On progress toward APEC goals, the final energy intensity has reduced by 29.5% compared to 2005, with the 2023 improvement exceeding two percentage points from 2022, bringing the average annual improvement between 2006 and 2023 to nearly 2%. The APEC goal is a 45% reduction by 2035. Renewable energy share in primary energy supply is 1.4 percentage points away from the goal, while the share in final energy consumption is 1.5 percentage points away. Solar grew at almost 30% CAGR and wind at 18% CAGR between 2010 and 2023. In 2023, APEC accounted for over 60% of global renewable generation capacity.

6.2 EGCFE

Mr. Mitsuhiro TAKADA, APERC Vice President, presented updates on behalf of the EGCFE Chair. The EGCFE 2026 meeting was held on 11 June 2026 in Tomakomai, Hokkaido, Japan, jointly with the 9th APEC Oil and Gas Security Network (OGSN) Forum and a site visit to the Tomakomai CCS Demonstration Facilities. Fifteen economies and 56 participants attended the meeting.

Key activities reported included: APERC Fossil Fuel Reports updates; the APEC Oil and Gas Security Initiative (OGSI) update; endorsement of the Oil and Gas Security Study (OGSS) No. 23 workplan on "Impact of Middle East Tensions on APEC Gas Markets"; a workshop on cleaner and more efficient operation of the fossil energy industry (first workshop held in Tokyo, December 2025; second planned for the United States in December 2026); the APEC Clean and Low-Carbon Hydrogen (CLCH) Policy Convention held in Hong Kong, China in May 2026; and a workshop on CCUS/CCS enabling clean and efficient fossil energy development to be held on 20 August 2026 in Dalian, China.

6.3 APERC

Ms. Jungyeon KIM, Senior Researcher at APERC, presented APERC's ongoing and future activities across five areas. The 9th Edition of the APEC Energy Demand and Supply Outlook was published in December 2025, presenting Reference and Target Scenarios with projections through 2060. The publication cycle will be shortened from three years to two years, with the 10th Edition scheduled for publication in 2027. The APEC Energy Overview 2026 was endorsed and published in June 2026. APERC's topical studies include the APERC Coal Report 2025 (published February 2026), while the Gas Report 2025 and Oil Report 2025 are scheduled for publication in the third quarter of 2026.

APERC held the 32nd Seminar on Energy Modelling in Tokyo from 2 to 6 March 2026, with 10 trainees from 7 economies. The 24th APEC Workshop on Energy Statistics will be held in Tokyo from 30 September to 2 October 2026, focusing on transportation statistics and energy efficiency indicators. Under the Oil and Gas Security Initiative, the 7th Oil and Gas Security Exercise (OGSE) was held in Kuala Lumpur, Malaysia, in May 2026, with preliminary findings to be presented at APEC EWG72 in Beijing in September 2026. The 9th Oil and Gas Security Network (OGSN) Forum was held in Tomakomai, Hokkaido, Japan, from 9 to 11 June 2026, in conjunction with EGCFF 2026. During the Forum, APERC's Oil and Gas Security Initiative (OGSI) activities were reported and discussed. APERC also reported the final draft of Oil and Gas Security Studies (OGSS) No. 22, titled "The Energy Security Implications of Upstream Oil Investment", is planned to be presented at APEC EWG72.

APERC also reported on the APEC Capacity-Building Workshops for Energy Efficiency and Conservation Policy (CBWS/EECP) project, which succeeds the Peer Review on Energy Efficiency (PREE) activities. Phase 1 was held in Seoul, Korea, in November 2025 on the theme "Members' Journey with MEPS." Phase 2 was held in Shenzhen, China, on 29 July 2026 on the theme "AI-Enabled Smart Buildings Policies." The workshop summary report for Phase 1 was published in March 2026. Phase 3 is planned with the theme "Advancing Energy Efficiency in APEC's Industry Sector."

The second APEC Workshop on Cleaner and More Efficient Operation of the Fossil Energy Industry is planned to be held in the United States in December 2026. In addition, the first Clean and Low-Carbon Hydrogen (CLCH) Policy Convention was successfully held on 20-21 May 2026, in Hong Kong, China.

6.4 APSEC

Dr. YAN Zhexing, Researcher at APSEC, presented updates on APSEC's activities across three areas: APEC projects, the APEC Urban Energy Report, and APEC events. APSEC is currently implementing three APEC projects: EWG 06 2025S (Ten Years' Implementation Review of APEC Urbanization Partnership, co-sponsored by Hong Kong, China and Singapore, completing December 2026); EWG 02 2026S (The Energy-AI Nexus, examining AI infrastructure development and renewable energy utilization in AI data centers, running February 2026 to March 2027); and EWG 03 2026S (Long-Term Impact of Renewable Energy on Energy Access, running April 2026 to February 2027).

The 11th Asia-Pacific Energy Sustainability Development Forum (ESDF 11) was held from 16 to 19 September 2025 in Yinchuan, China, with over 240 delegates from 13 APEC member economies and 5 international organizations. The APEC Urban Energy Report series has produced three reports: the 2023 report on "Driving Cities Through the Low Carbon Transition," the 2024 report on "Storage to Enable Energy

Transition," and the 2025 report on "Clean Heating and Cooling." APSEC presented its Five-Year Work Plan (2026-2030) for the APEC Urban Energy Report, with annual themes including AI+Energy (2026), hydrogen energy (2027), urban power systems (2028), zero-carbon cities (2029), and multi-energy integration (2030).

APSEC presented the APEC Cooperative Framework for Jointly Driving Cities towards Zero Carbon, proposed as a key outcome for APEC 2026. The framework aims to implement the Putrajaya Vision 2040 at the city level, with five focus areas: building clean and efficient urban energy systems, enhancing green and zero-carbon urban development, establishing urban economy-energy-carbon accounting systems, empowering cities to leverage green finance, and building a synergistic cooperation platform.

7. Invited Presentations

7.1 IEA — International Energy Agency

Mr. Patrick MCMASTER, China Energy Efficiency Analyst from the IEA Office of Energy Efficiency and Inclusive Transitions, presented on "Global Trends in Energy Efficiency Policy." Global primary energy intensity improved by 1.8% in 2025, compared to 1.0% in 2024, with strong progress in Asia (China +3.2%, India +2.8%, Southeast Asia +2.5%). However, average efficiency progress this decade remains slow, and the world is well off track to achieve the COP28 ambition to double energy efficiency progress by 2030.

Energy efficiency has avoided up to 20% of fossil fuel imports in key Asian economies since 2000. Following the 2026 energy crisis, over 90 governments introduced consumer support measures, roughly 70% of which were untargeted price interventions that can strain fiscal budgets. Today's appliances are often only half as efficient as the best available models, indicating that MEPS have fallen behind technology progress.

Cooling is the fastest-growing end-use in buildings, with AC penetration in India doubling since 2010. Electricity demand is accelerating across all scenarios, with data centers and AI representing significant new loads. Buildings can provide roughly 50% of demand-side flexibility in a net-zero scenario, but digital connectivity is a prerequisite. Policy coverage for AI in energy is still nascent, identified as an opportunity for APEC cooperation. The IEA also noted its policy toolkit with hundreds of case studies in its free online database.

7.2 UNEP Copenhagen Climate Centre

Dr. CHEN Zhuolun, Senior Advisor from the UNEP Copenhagen Climate Centre, presented on “Potential Business Models for Sustainable Cooling and Best Practices.” Global cooling demand is projected to triple by 2050. A “passive-first” approach combined with high-efficiency technologies can reduce emissions by 64% and yield \$43 trillion in total savings.

Dr. Chen outlined business models matched to market segments: ESCO/performance contracts for public hospitals and schools; Cooling-as-a-Service (CaaS) for ports, airports, and commercial clusters (with potential customer cooling-cost savings of 23% and emissions reduction of 49%); district/shared cooling concessions for new urban districts; and solar cooling leases for rural applications. He noted that district cooling requires anchor demand, with bankability depending on demand density, creditworthiness of offtakers, right-of-way, and long-term contracts.

The Global Cooling Pledge (launched at COP28) now has 71 signatory countries, with 50 referencing cooling in their NDCs, 25 having published National Cooling Action Plans (NCAPs), and 53 having MEPS for room air conditioners. The EPIC (Enabling Pledge Implementation for Cooling) Facility was noted as a mechanism to close policy, finance, and implementation gaps. The Beat the Heat initiative, with 211 cities across 40+ countries and 108 partners, was presented as a coordinated global action. Dr. Chen concluded by urging economies to define cooling as infrastructure, reduce demand before supply, use the right model by segment, de-risk early investments, and measure what matters.

8. Project Updates

8.1 EGEEC Projects Overview

The EGEEC Secretariat presented the Projects Update, covering EEC-related APEC projects as of July 2026. The report covered recently completed projects, ongoing projects, and newly endorsed project proposals and concept notes. In Session 1 2026, eight EWG project proposals were endorsed on 23 July 2026, including EEC core-relevant items as well as proposals on fossil energy, critical minerals value chains, just energy transition, new and renewable energy policy, CCUS, and rural energy access. Concept notes for Session 2 2026 were all endorsed on 10 July 2026, with total APEC funding of \$1,348,858.

8.2 APEC CBWS/EECP Phase 2 (EWG_208_2025A)

Ms. Ly TRAN, Researcher at APERC, presented the project update for the APEC Capacity Building Workshop for Energy Efficiency and Conservation Policy (EWG_208_2025A). Phase 1 was held in Seoul, Korea, on 18 November 2025, on the

theme "Members' Journey with MEPS," with 52 participants. The Phase 1 Workshop Summary Report was published in March 2026.

Phase 2 was held in Shenzhen, China, on 29 July 2026, on the theme "AI-Enabled Smart Buildings Policies: Advancing Energy Efficiency in APEC's Buildings Sector." The workshop attracted 36 participants from 10 member economies (China; Hong Kong, China; Japan; Malaysia; Mexico; Papua New Guinea; the Philippines; Russia; Chinese Taipei; and Viet Nam) and 5 APEC fora (EWG Secretariat, EGEEC, EGEDA, EGCFE, APERC), with 5 invited speakers from Imperial College London, IEEJ, Blueprint Energy Solutions, IEA, and UNEP. A pre-workshop survey received 13 responses from 8 economies.

Phase 2 findings: AI and digitalization are growing opportunities for building energy efficiency; AI-enabled BEMS delivers proven operational savings; smart buildings serve as grid flexibility assets; and implementation barriers reinforce the need for capacity building. Recommendations were structured in three tiers: foundational readiness (mandate smart meters, BEMS, and demand response in MEPS), scaling and system integration (mandate open protocols, dynamic pricing, and verified-performance subsidies), and near-term quick wins (public procurement leadership and Smart Readiness Indicators in green codes). Phase 3 is planned with the theme "Advancing Energy Efficiency in APEC's Industry Sector," with tentative completion by early 2028.

8.3 China RAC Project (EWG 107/2026A)

CNIS presented the endorsed project proposal EWG 107/2026A: "Promotion and Deployment of High-Efficiency, Low-Carbon Room Air Conditioners in the APEC Region: Policies, Standards, and Best Practices." The project aims to accelerate the deployment of high-efficiency, low-carbon RACs across the APEC region through comparative analysis of MEPS, labeling, and incentives; cross-economy knowledge exchange; and building a regional policy alignment network.

The project is proposed by China with five co-sponsors (Hong Kong, China; Indonesia; Korea; Thailand; and Viet Nam), funded by the APEC EELCER sub-fund with USD 105,000, running for 14 months from November 2026 to December 2027. Three deliverables are planned: a 60-80 page research report on RAC policies, standards, and best practices; a 1.5-2 day capacity-building workshop with 40-50 participants in hybrid format; and a 40-page guidebook on the promotion of high-efficiency RACs. Key milestones include the draft research report by June 2027, the workshop by August 2027, and the final guidebook by November 2027. The project expects at least 75% of workshop participants to report enhanced capacity and at least 6 economies to express intent to strengthen MEPS following project completion.

8.4 Hong Kong, China — Concept Note Presentation (EWG 01 2026S)

A representative from the Electrical and Mechanical Services Department (EMSD), Hong Kong, China, presented the endorsed concept note EWG 01 2026S: “Mapping the APEC AI-Energy Landscape for Strategic Roadmap Development.” The concept note was endorsed on 10 July 2026 under Session 2 2026, with APEC funding of USD 143,858. The project aims to map the AI-energy landscape across APEC member economies, examining both the energy demand implications of AI deployment and the potential of AI as an optimization tool for energy intensity reduction.

The proposed scope includes a survey of AI-energy policies and initiatives across APEC economies, identification of best practices and gaps, development of a mapping framework, and policy recommendations. Expected deliverables are a research report, a capacity-building workshop, and a policy toolkit.

9. Governance and Administration

The EGEEC Secretariat presented the Governance Report, covering four items: the EGEEC contact list, website, upcoming meetings, and chair election.

The EGEEC Contact List was updated and circulated in December 2025. Member economies are encouraged to nominate experts to join the EGEEC and to regularly update their contact information. The next update will be refreshed after EGEEC 67 to incorporate changes from this meeting.

On the EGEEC Website (<https://www.apec.org/egeec>), meeting documents and summaries for EGEEC 65 (Seoul, Korea) and EGEEC 66 (Thailand) have been uploaded. EGEEC 67 meeting summary will be uploaded after the meeting. Members are invited to send relevant documents, publications, and resources to the Secretariat for posting.

On upcoming EGEEC meetings in 2027, EGEEC 68 has been confirmed for the first half of 2027, to be hosted by Hong Kong, China. For EGEEC 69 in the second half of 2027, the Philippines has submitted an application to host. Additional expressions of interest are welcome.

The election for the EGEEC Chair for the July 2027-June 2029 term will be conducted as the incumbent Chair's term concludes by the end of June 2027. Following EGEEC 67, the Secretariat will circulate a formal call for nominations by email. The election process will then be carried out, and the appointment of the new Chair will be announced in due course.

10. Meeting Outcome

The EGEEC Secretariat presented the Meeting Outcome. The meeting included one chair presentation (AI + energy data centers), one keynote (Qianhai DCS), six member economy presentations, four cross-fora presentations (EGEDA, EGCFE, APERC, APSEC), two invited presentations (IEA, UNEP), two project updates (APERC CBWS/EECP Phase 2 and China RAC project EWG 107/2026A), and one concept note presentation (Hong Kong, China, EWG 01 2026S).

Several concerns recurred across presentations: the shift from single-equipment to system-level efficiency; grid pressure from AI and data center growth; cross-level policy harmonization barriers; and high upfront CAPEX. Common actions included expanding district energy systems and precinct integration, applying digital twins and AI for energy governance, promoting business models such as CaaS and ESCOs, and updating efficiency regulations and mandatory labeling.

Trends across economies pointed to an evolutionary pathway from equipment optimization through system integration to grid resilience; a governance shift from top-down policies toward real-time, data-driven regulation; a rollout strategy starting from public or anchor-load pilots, then standardizing frameworks, then private scaling; and the dual role of AI as both energy consumer and optimization tool.

11. Closing Remarks

Dr. LIU Meng, EGEEC Chair, closed the meeting by thanking all delegates for their participation and the host economy for the organization and hospitality. He thanked the presenters for their contributions and encouraged members to stay engaged between meetings. The next meeting, EGEEC 68, will be held in Hong Kong, China, in the first half of 2027.