



APSEC Updates

for The Joint Meeting of Four Expert Groups

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The Joint Meeting of Four Expert Groups of the APEC Energy Working Group
8 to 11 April 2025, Hong Kong, China

Outline

- i. Update on Projects & Activities**
- ii. Update of APSEC's Term of Reference**
- iii. Proposed Work Plan with EGs & Members**

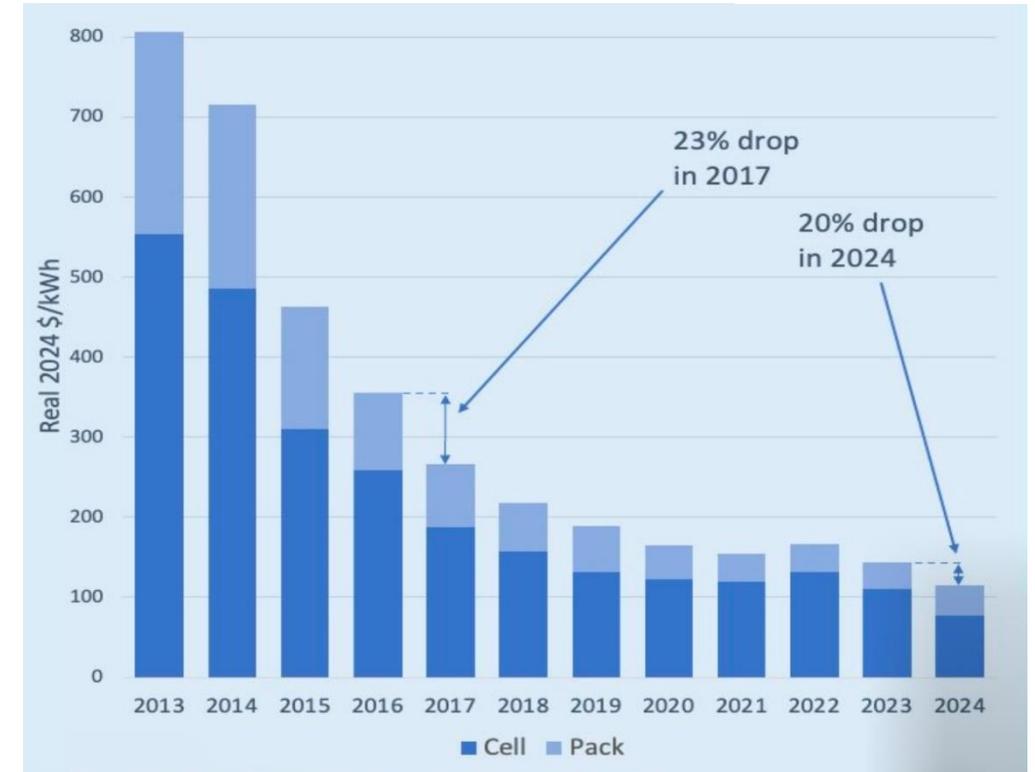
❑ EWG 03 2024S Research on energy storage to enable energy transition in APEC cities

Project summary

- **Role of energy storage in the changing energy landscape**
- **Cities** count for 56% of the world population and for about 70% energy consumption and associated carbon emissions.
- **Technology** development: battery, BESS
- **Resilience of the system**
- Aims at researching into the **development and applications** of energy storage technologies, the approach **to support the deployment of storage**, and **formulating strategies and policies** to accelerate energy transition in APEC cities.

Activities, milestones and deliverable:

- Research and investigation
- Workshop on Deployment of Energy Storage Technologies, in line with the 10th Anniversary Forum of APSEC, Nov, 2024
- Project report



- The average price of a **lithium-ion battery pack** fell by 20 % in 2024 to \$115 per kWh -- the biggest drop since 2017.
- The global average cost for **turnkey storage systems (BESS)** falls to \$165/kWh in 2024, 40% drop compared to 2023.

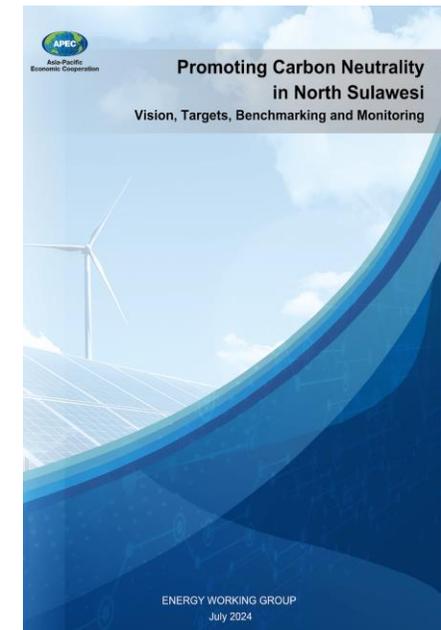
APEC Project

❑ EWG 04 2022A Data Driven Carbon Neutral Disaster Resilient Cities

- Co-sponsored by AUS, CHL, HKC, INA, JPN, PHL, SGP, THA

Project summary

- **Training of Trainers (ToT)** empowered 67 local planning officers of APEC municipalities from 10 APEC economies (Canada, Chile, China, Hong Kong China, Indonesia, Korea, the Philippines, Thailand, USA, Viet Nam) to collect energy and climate data in cooperation with local stakeholders;
- A 6-day **multi-stakeholder dialogue (MSD)** held in **Manado, Indonesia**, brought together 102 participants from 10 APEC economies (Australia, Chile, China, Hong Kong China, Indonesia, Korea, the Philippines, Thailand, USA, Viet Nam) to elaborate a carbon neutrality **vision** and for setting three specific 2030 **targets for the North Sulawesi Province**.
- The **Final Report** “Promoting Carbon Neutrality in North Sulawesi – Vision, Targets, Benchmarking and Monitoring”, has been endorsed by EWG and published by APEC Publications in October 2024



❑ EWG 05 2022S: Practical Experience and Prospect of Energy Access in APEC Region

Project Information

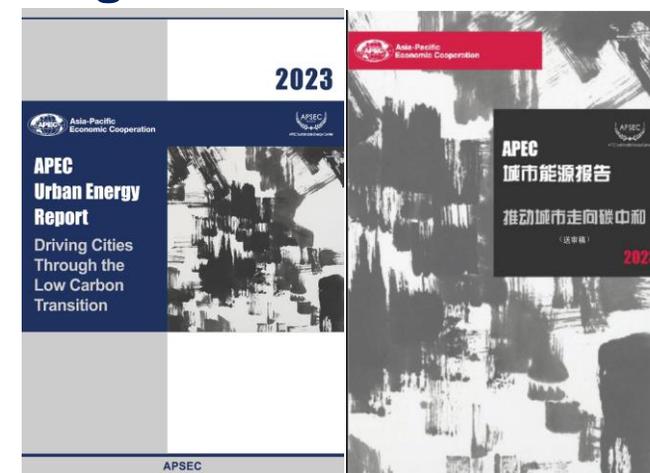
- The project reviews the most recent advancements and best practices in energy access within the APEC region, and investigates strategies to enhance energy accessibility throughout the area.
 - Information collection & analysis work have been done.
 - The completion report has been submitted.
- ◆ The project workshop has been successfully held on the 10th anniversary of APSEC.
 - ◆ Over 20 experts and scholars from four APEC economies participated in the workshop.
 - ◆ Nine experts from three economies, China, Malaysia and Papua New Guinea, present on key topics including APEC regional energy transition policies and advancements, new energy technologies, international cooperation to enhance energy access, energy technology assessments, environmental evaluations, and progress in energy access.

□ **Three Thematic Reports 2023 – 2025 on Urban Energy, each in English and Chinese languages, altogether six reports**

■ **APEC Urban Energy Report 2023 – Driving Cities through the Low-Carbon Transition (published)**

- APEC Urban Energy Report 2023 - Driving Cities Through the Low Carbon Transition

<https://www.apec.org/publications/2024/06/apec-urban-energy-report-2023---driving-cities-through-the-low-carbon-transition>



■ **APEC Urban Energy Report 2024 – Storage Enables Transition (ongoing)**

- The English version is the report of self-funded project Research on Energy Storage to Enable Energy Transition in APEC Cities (EWG 03 2024S), to be published in early 2025

■ **APEC Urban Energy Report 2025 – Research on Urban Heating and Cooling (launching)**

APSEC's 10th Anniversary Celebration Event



APEC Sustainable Energy Center



The Tenth Asia-Pacific Energy Sustainable Development Forum

The 10th Anniversary Celebration Event of APEC Sustainable Energy Center, APSEC

- APSEC's 10th Anniversary Celebration Event was successfully held from 5th Nov-8th Nov, 2024 in Tianjin, China. Over 300 delegates from governments, businesses, research institutes and international organizations participated the event, representing 15 APEC member economies and 16 international organizations. EGEEEC63 and APERC seminar were also held during the forum, amplifying the synergistic cooperation effect in the energy field under the APEC mechanism.



Workshops and Meetings



“The practical experience and prospect of energy access in the APEC region” project workshop



8th Workshop on Sustainable Cities: “Urban Energy Security in the Context of Carbon Neutrality”, co-organized with the North Sulawesi Province of Indonesia



Workshop on the Tech Deployment & Policy Support for Energy Transition and Security in the Asia Pacific Region, co-organized with CHN Energy, Asean Centre for Energy (ACE) and Agora Energy Transition China.



Asia-Pacific Energy Transition Solutions Sub-forum: “Establishing New Energy Systems: Approaches and Actions towards Carbon-neutral Future”



- APSEC attended the **61st Meeting of APEC Expert Group on New and Renewable Energy Technologies (EGNRET 61)** held on January 16-17, 2025 by Chinese Taipei, and reported related progress in daily work and APEC projects.
- APSEC is also collaborating with partners to promote EWG strategy and strengthen cooperation among APEC economies, e.g. we are working with the China Energy Investment Group (CHN Energy) to conduct research and activities via the Future Clean Energy Technology Center (CET); We also plan to collaborate with the State Power Investment Corporation (SPIC) to potentially work on the Energy Smart Community and Nuclear Energy Technology.

APSEC's TOR update

- ❑ Under the guidance of APEC Secretariat, and based on the 2015 version, APSEC updated its Term of Reference (TOR) .

- ❑ The update reflects the current situation and APSEC's future development plan.

- ❑ E.g. we've updated the vision, missions, aims and activities, to enable us to better serve APEC economies and contribute to EWG's deliverables, as the global energy transition accelerates.

APSEC's TOR update

APEC Sustainable Energy Center Terms of Reference

March 2025
APSEC

Objectives

APEC Sustainable Energy Center (APSEC) was established at the 11th APEC Energy Ministers' Meeting in 2014, operated by Tianjin University.

The primary objective of APSEC is to **make contributions to the carbon neutral and sustainable energy development in APEC region** through ways like policy exchange, information sharing, capacity building, collaborative research and technology cooperation **to seek to advance APEC's goals** as outlined in APEC's other guiding documents – the Putrajaya Vision 2040, the Aotearoa Plan of Action, APEC Leaders' Declarations and Ministerial Statements, in particular Energy Ministerial Statements.

APEC Sustainable Energy Center Terms of Reference

June 2015
APSEC

Objectives

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APSEC's TOR update

Activities

The main areas of APSEC's activities are the following:

- (1) Build an information platform and regularly release publications on sustainable energy development among APEC economies;
- (2) Build cooperative networks and hold events like Asia-Pacific Energy Sustainable Development Forum;
- (3) Conduct technical exchange, dissemination and application on sustainable energy in the APEC region;
- (4) Conduct research on sustainable cities, energy transition solutions, clean energy technologies and related issues;
- (5) Produce APEC Urban Energy Report every year;
- (6) Organize training courses to representatives from APEC economies, like technical training to complement the technology transfer and pilot projects.

Activities

The main areas of APSEC's activities are as the followings:

- (1) To build an information platform and regularly release publications on sustainable energy development among APEC economies;
- (2) To build an Asia Pacific knowledge network and establish an APEC expert pool on sustainable energy;
- (3) To conduct technical exchange, dissemination and application on sustainable energy in the APEC region;
- (4) To facilitate the participation of APEC economies in APEC-funded research projects, as well as joint industry projects such as sustainable cities projects in China;
- (5) To organize training courses to representatives from APEC economies, like technical training to complement the technology transfer and pilot projects.

APSEC's TOR update

Procedures for Identifying APSEC Activities

- (1) The President of APSEC shall prepare a draft proposal of its activities for the forthcoming fiscal year and submit to the Energy Working Group (EWG).
- (2) The EWG shall discuss and approve APSEC's activities.
- (3) The President shall report the progress and the result of the activities to the EWG.
- (4) In planning and implementing APSEC's activities, APSEC shall maintain close cooperation with the Expert Group on Energy Efficiency and Conservation (EGEEC), New & Renewable Energy Technologies (EGNRET), and other expert groups, and task forces under the EWG.

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APSEC's TOR update

Organizational and Administrative Issues

- (1) Tianjin University (TJU) will be responsible for the daily operation and administrative management of APSEC.
- (2) The President of APSEC shall be in charge of decisions on day-to-day activities.
- (3) The President shall report to the EWG on important administrative issues.

Organizational and Administrative Issues (note: organization chart attached)

- (1) APSEC is an affiliate to the National Energy Administration (NEA), P. R. China.
- (2) Tianjin University (TU) will be responsible for the daily operation and administrative management of APSEC, by signing the agreement with the NEA.
- (3) TU needs to carry out the daily operation and administrative management of the APSEC strictly according to the items of the agreement. The President of APSEC shall be in charge of decisions on day-to-day activities. TU needs to report to the NEA on a regular basis, especially when there are important issues.

APSEC's TOR update

Researchers

- (1) APSEC aims to receive one researcher from each APEC economy.
- (2) APSEC recruits researchers through close cooperation with **member governments and academic units**.
- (3) The initial contract of a researcher shall be one year, however, subsequent extensions are encouraged to provide continuity of research.

Researchers

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Work Plan & Proposals

- <Urban Energy Report> 1st Series are supposed to complete at the end of this year, and research theme for the next round is to be determined. Also, APSEC is going to make another FIVE year work plan 2025-2030. ASPEC would like to receive valuable inputs for improvements and cooperation from members and experts.
- For the flagship report 2025, APSEC would like to have cases sharing, and cooperative research for renewable-based urban heating and cooling.
- For the Potential New APEC goals on Energy, APSEC is willing to continuously deeply and effectively participate. APSEC has attended the previous discussions and provided some thoughts.
- APSEC is happy to continue to work with our Peruvian counterparts and other interested partners to conduct research on Green Hydrogen.
- APSEC expressed our willingness to have more policy dialogues with our Korean counterparts and provide necessary support for their relevant work under the APEC mechanism.
- APSEC is working on the possible approaches and supportive conditions for recruiting visiting scholars/senior researchers from abroad to join in APSEC.

Looking Forward to More Collaboration~



THANK YOU!