Asia-Pacific Economic Cooperation

APERC Asia Pacific Energy Research Centre

10.a. EGEDA Chair Report

The 66th Meeting of APEC Energy Working Group (EWG66)
29-30 November 2023 (UTC+7) – Bangkok, Thailand

Glen SWEETNAM
Chair, EGEDA
Senior Vice President, APERC

Outline

- Data collection update
- APEC workshop on energy statistics
- EGEDA training courses
- International cooperation
- 35th EGEDA meeting

Data collection

Regular APEC energy data collection

- The secretariat completed collection of the **2021 annual energy supply and demand data**
  - **APEC Energy Statistics 2021,** which will be published **online** and **APEC Energy handbook 2021,** which will printed are now being drafted.
  - The secretariat will start collecting 2022 annual energy supply and demand data from member economies soon.
- Other data collection
  - Annual energy prices
  - Annual GHG emissions
    - CO_2, CH_4 and N_2O emissions from energy combustion and fugitive emissions
    - CO_2 transported and stored
  - Energy efficiency indicators
  - Monthly oil and gas supply and demand (JODI)
  - Quarterly energy supply

Smiley faces of JODI Oil in APEC (January to June 2023)

Economy	Sustainability	Timeliness (M-1 & M-2)	Completeness (%)	Sustainability	Timeliness	Completeness (%)
Brunei Darussalam	6	6	100%	☺	☺	☺
China	6	4	67%	☺	😐	😐
Hong Kong, China	6	6	100%	☺	☺	☺
Indonesia	6	6	100%	☺	☺	☺
Malaysia	6	6	52%	☺	☺	☹
Papua New Guinea	6	2	69%	☺	☹	😐
Peru	0	0	0%	☹	☹	☹
Philippines	3	0	100%	☹	☹	☺
Russia	3	3	14%	☹	☹	☹
Singapore	6	6	52%	☺	☺	☹
Chinese Taipei	6	6	100%	☺	☺	☺
Thailand	6	6	100%	☺	☺	☺
Viet Nam	2	1	0%	☹	☹	☹
		Number of	☺	9	7	6
			Compared to Jan – Jun 2022	-2	-1	No change
			Compared to Jul – Dec 2022	No change	+1	-1

Smiley faces of JODI Gas in APEC (January to June 2023)

Economy	Sustainability	Timeliness (M-1 & M-2)	Completeness (%)	Sustainability	Timeliness	Completeness (%)
Brunei Darussalam	6	6	100%	☺	☺	☺
China	6	6	64%	☺	☺	😐
Hong Kong, China	6	6	100%	☺	☺	☺
Indonesia	6	6	100%	☺	☺	☺
Malaysia	6	6	61%	☺	☺	😐
Papua New Guinea	0	0	0%	☹	☹	☹
Peru	0	0	0%	☹	☹	☹
Philippines	6	6	100%	☺	☺	☺
Russia	6	6	27%	☺	☺	☹
Singapore	6	6	64%	☺	☺	😐
Chinese Taipei	6	6	100%	☺	☺	☺
Thailand	6	6	91%	☺	☺	☺
Viet Nam	0	1	73%	☹	☹	😐
Number of	☺			10	10	6
Compared to Jan – Jun 2022				-1	No change	No change
Compared to Jul – Dec 2022				No change	+1	No change

APEC workshop on energy statistics

21st APEC workshop on energy statistics

- **12-14 September 2023** in Tokyo
- **Objective**: Enhance participants' knowledge of **hydrogen**, **district cooling**, **grid-scale electricity storage**, **electric vehicles (EVs)** and other emerging new energy technologies, in order to facilitate data collection.
- **Participants**
  - No. of participants – **57**
  - No. of economies – **14** (BD, CHL, PRC, HKC, INA, JPN, MAS, PNG, PE, PHL, CT, THA, USA, VN);
  - EGs/Fora – **EGECFE, EGNRET, APERC**
  - Experts and Speakers – **IEA, IRENA, APEC TPTWG, UNEP and METI**

- **Agenda**
  - Data requirements for energy transition
  - Hydrogen/ammonia/e-fuels
  - District cooling
  - Grid-scale electricity storage
  - Electricity consumption of EVs and PHEVs
  - Fugitive GHG emissions / carbon transport & storage

Session 1 – Data requirements for energy transition

Points of consensus

- Member economies in general acknowledge that new and emerging technologies will play a significant role in energy transition and meeting carbon neutrality goals.
- Having reliable and complete data is important for decision-making processes.
- Data collection templates need to modified to capture new and emerging technologies.

Open issues

- A variety of data are increasingly available for collection and reporting, yet the frameworks/guidance for collection and reporting lag.
- Legal frameworks that require mandatory collection and reporting of energy statistics of existing technologies are lacking.

Member economies will continue collaborating with international fora (IEA, APERC, APEC Working Groups, UNEP, etc) to identify gaps and opportunities for improving data collection and reporting for existing and emerging technologies.

Session 2 – Hydrogen, ammonia and e-fuels

Points of consensus

- Participating member economies agreed on collecting hydrogen data at this workshop.
- EGEDA, IEA and EUROSTAT will continue to work together to improve their hydrogen data collection templates.

Open issues

- EGEDA secretariat will continue to improve the proposed hydrogen data collection template.
- Plan to collect by energy source and process, including CCS.

EGEDA Secretariat will send the finalized version of the hydrogen data collection template by the end of 2023 along with a reporting instruction manual.

Session 3 – District cooling system

Points of consensus

- Cooling data in energy statistics would provide better information for analysis of the potential for energy efficiency improvement, increasing renewable energy share and expanding district cooling supply.
- District cooling data to be collected includes energy inputs, chilled water output, and quantity sold.

Open issues

- Some member economies that introduced the District Cooling System (DCS) have yet to report their data and are considering how to collect them.
- Legal frameworks that require mandatory data collection will be effective in collecting these data by collaborating with DC producer enterprises.

Inclusion of district cooling data in the Energy Balance Table and updates discussed with international fora will be shared by the EGEDA secretariat to the members.

Session 4 – Grid-scale electricity storage development in APEC

Points of consensus

- All members agree on the importance of electricity storage in addressing risks in grid stability and for clean energy transition.

Open issues

- Different member economies/organizations/institutions have different definitions and methods for reporting data. Some economies are still behind on the regulatory framework despite having already implemented electricity storage systems.
- Member economies shall continue to work with local authorities and power provider enterprises for effective data collection and standardization in the future.

For the collection of 2022 annual data, EGEDA secretariat will revise the annual electricity and heat questionnaire to collect electricity storage and capacity data.

Session 5 – Energy consumption of EVs, PHEVs and FCEVs

Points of consensus

- Economies plan to increasingly electrify road transport. Some are considering the use of advanced meter infrastructure (AMI), including smart meters collection of EV charging.
- The methodology in estimating EV consumption introduced by APERC and Chinese Taipei could be used to estimate electricity consumption in the road sector.

Open issues

- Currently, in most economies, electricity charging is not yet separated from the electricity consumption of the sector where the EVs are charged. Consumption of electric bicycles that are charged in the residential sector are also not accounted in the transport sector.
- EVs as storage technologies was not discussed in the workshop.

EGEDA secretariat requests member economies to submit the electricity consumption data (measured or estimated) for EVs.

Session 6 – Fugitive methane emission and CO2 sequestration

Points of consensus

- The EGEDA secretariat revised the data collection template to include methane, nitrous oxide emissions and transport and storage of CO_2, in response to the proposed new APEC goals of a 50% reduction in methane emission and increasing the shared of zero-carbon electricity.
- For economies that do not submit data, the secretariat will estimate emissions using energy balance data.

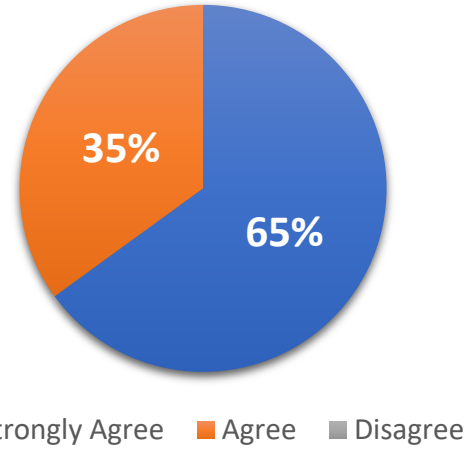
Open issues

- There are considerable uncertainties in the calculation of fugitive GHG emissions. There are also significant differences between fugitive methane emissions calculated via IPCC Tier 1 methodology and the fugitive emissions submissions from some APEC economies.

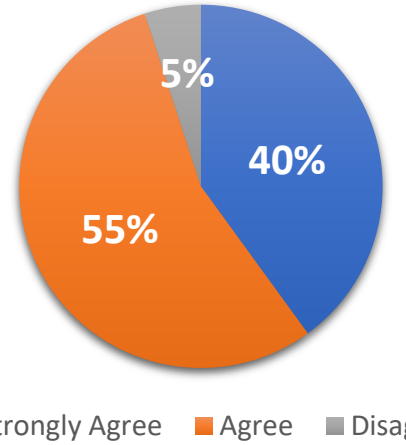
The EGEDA secretariat will request that economies submit additional data: CH_4, N_2O and transport/storage of CO_2.

Evaluation by participants

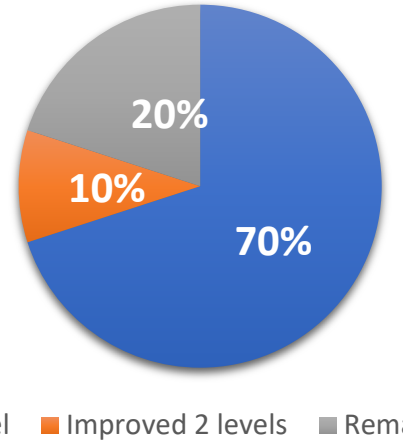
Workshop achieved its objective



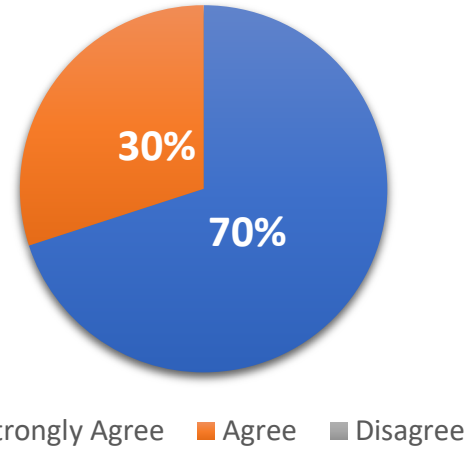
Sufficient time allocation



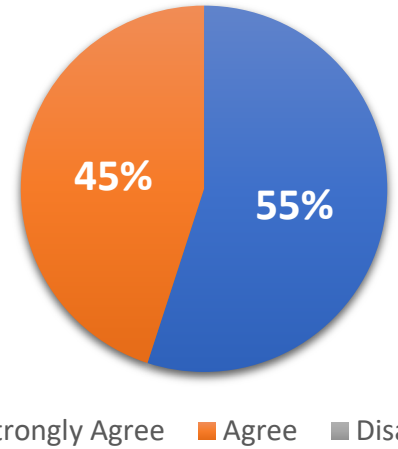
Level of knowledge & skills improvement



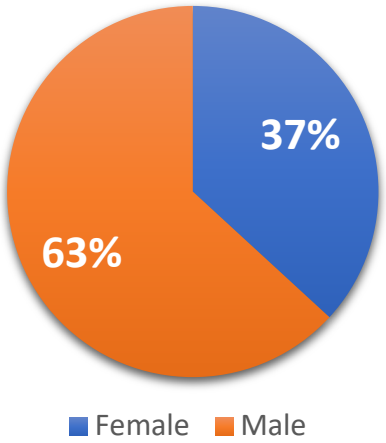
Relevance of agenda items and topics



Workshop well-organized & easy to follow



Gender balance



EGEDA training courses

EGEDA's training courses (1)

Held in Tokyo

- **EGEDA Short term course (6 – 16 Feb 2023)**
  - No. of economies – 9 (BD; INA; CHL; MAS; PNG; PHL; SGP; THA; VN)
  - No. of participants – 12
  - Consultant/Trainers - 6
- **Objectives**
  - Increase understanding of APEC energy data base by APEC economies.
  - Improve reliability of the APEC energy database.
  - Enhance understanding of end-use energy consumption and energy efficiency indicators.
  - Develop human resource network between APEC economies and APERC.

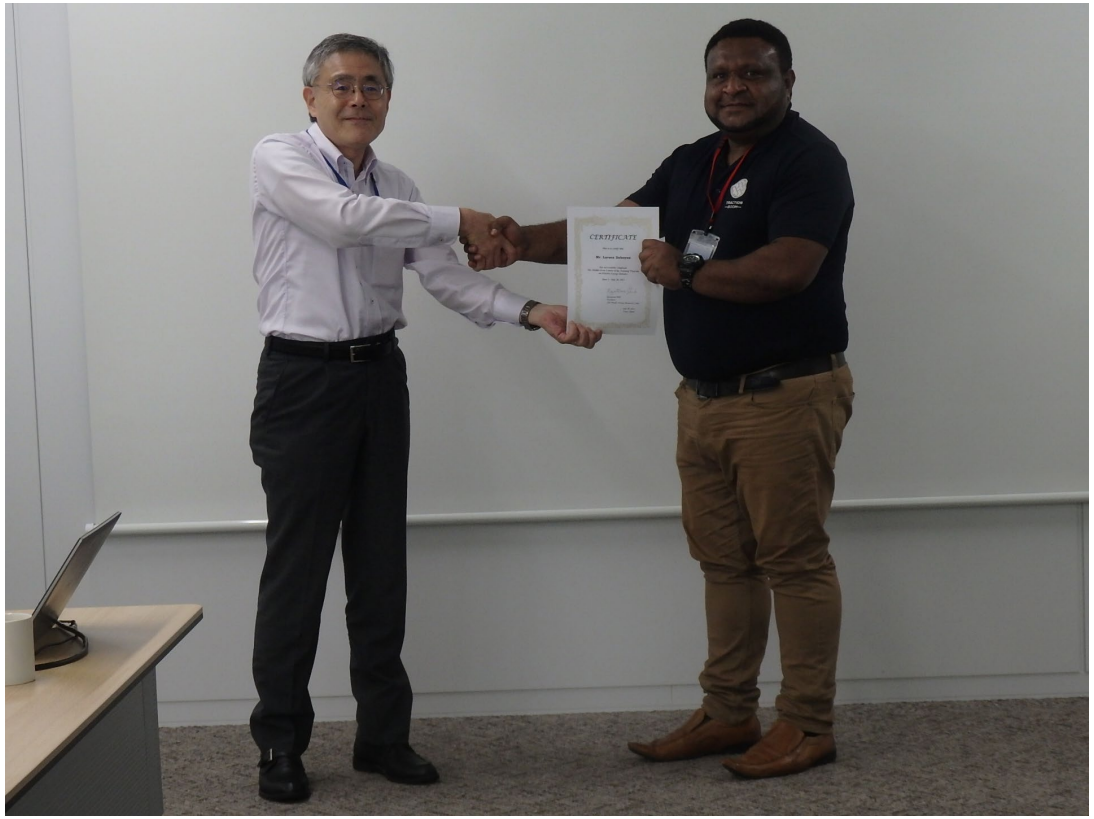
EGEDA's training courses (2)

Held in Tokyo

- **Special training course for Viet Nam (27 Feb – 3 Mar 2023)**
  - 7 participants from 5 agencies in VN (EREA, OGCD, IEVN, MLTPD, GSO)
  - Others-OJT, long-term trainee, APERC-VN
  - Trainers – 5
- Enhance capability to collect, process and report energy data and statistics and complete questionnaires using Viet Nam data.
- **Workshop -** identify challenges encountered in data collection.
- **Proposed solution**- create an MOU for inter-agency collaboration.

EGEDA's training courses (3)

- On-the-job training for 8 weeks at APERC
- **5 June to 28 July 2023**
- Energy analyst from Papua New Guinea
- Topics
  - Energy products and flows, unit conversions, energy balance table, CO2 emissions, estimating renewable energy data, and JODI
  - Review and revision of annual energy, socio-economic, and energy-related data
  - Identification of energy data sources and designing energy consumption survey templates/questionnaires
  - Estimates of end-use energy consumption and decomposition analyses
  - Energy efficiency templates



International cooperation

Secretariat's participation in international meetings (1)

Task Team for the Revision of Standard International Energy Classification (TT-SIEC) under International Energy Statistics Working Group (InterEnerStat)

- ❑ Discussed revisions to SIEC with the ongoing revisions of Central Product Classification (CPC) and International Standard Industrial Classification (ISIC)
- ❑ Monthly online meetings scheduled until December 2023
- ❑ Progress
  - Majority of TT-SIEC members agree that **hydrogen and ammonia should have their own classifications as energy products (**separated from "Other hydrocarbons").
  - Distinction between LNG and CNG; classification of wet gas in addition to processed (dry) gas
  - Revision of definition of primary coal products
  - **General agreement for including "cooling" as energy product;** continued discussion on sources of ambient cooling such as sea/lake water cooling, stored snow, etc.

Secretariat's participation in international meetings (2)

IEA's Energy Statistics Development Group (ESDG, **23-24 November 2023**)

- ❑ New hydrogen data collection template
- ❑ Revised electricity questionnaire, including electricity storage capacities
- ❑ Collection of district cooling data in APEC
- ❑ Energy efficiency indicators in APEC

35th EGEDA meeting

35th EGEDA meeting

Host : **Hong Kong, China**

Date : **17-19 January 2024**

Draft Agenda

- ❑ APEC Secretariat, EWG, EGEEC, EGNRET, EGCFE and APERC updates
- ❑ EGEDA updates
  - Overview and analysis of APEC 2021 energy supply and demand data
  - Report on EGEDA energy statistics training courses
  - Report on the 21st APEC workshop on energy statistics
  - Progress toward the APEC energy goals
  - Hydrogen, CCUS, electricity and other new data collection
- ❑ JODI updates
- ❑ APERC research activities
- ❑ Energy efficiency indicators
- ❑ Decarbonisation and methane emission statistics

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Thank you.

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