Summary Record of the 14th APEC Workshop on Energy Statistics

23-25 February 2016

Tokyo, Japan

The 14th APEC Workshop on Energy Statistics was held in Tokyo, Japan on 23-25 February 2016. The workshop was organized by the Energy Statistics and Training Office (ESTO) of the Asia-Pacific Energy Research Centre (APERC). Mr. Masazumi Hirono, Head of APERC ESTO and Acting Chair of the APEC Expert Group on Energy Data and Analysis (EGEDA) presided over the meeting. Mr. Takato Ojimi, President of APERC delivered the opening remarks and Mr. Shinji Ishii, Director for Natural Resources and Energy Research, Agency of Natural Resources and Energy, METI welcomed the participants in the workshop. Representatives from Australia; Brunei Darussalam; China; Hong Kong, China; Japan; Malaysia; Mexico; Peru; Philippines; Russia; Singapore; Chinese Taipei; United States of America and Viet Nam attended the workshop. Representatives from the International Energy Agency (IEA), International Energy Forum (IEF), International Renewable Energy Agency (IRENA), United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) also attended the workshop while representative from Cambodia and Lao People's Democratic Republic attended as observers. The list of participants in the Workshop is provided in Annex 1.

The workshop agenda is as follows:

1. Improving the Current Situation of Annual Energy Data of APEC Member Economies
2. Sharing of Experiences in Energy Consumption Surveys
3. International Developments on Energy Statistics
4. Uses of Energy Statistics and Additional Requirements by Data Users
5. Monitoring APEC Energy Intensity Reduction and Renewable Energy Doubling Goals

Summary of Discussions

Opening Session

APERC president, Mr. Ojimi, delivered the opening remarks. He related a short history of the EGEDA functions and how it was transferred to APERC/ESTO and touched upon the role that APERC/ESTO played in statistics and data collection in APEC. He appreciated the cooperation of the APEC member economies and the collaboration with other international statistical agencies. He also strongly encouraged the participants to give any comments on improving the workshop, e.g. format, location or timing.

The welcome remarks was delivered by Mr. Shinji Ishii of METI. He highlighted the importance of statistics and reiterated the challenging directives of the energy leaders on energy intensity and

doubling renewable goals. He assured APERC and the participants of METI's full support to EGEDA's activities.

Session 1: Improving the Current Situation of Annual Energy Data of APEC Member Economies

The first four presentations in the morning session came from ESTO, common issues raised after the presentations were as follows:

- APERC ESTO presentations highlighted the need to revise data for consistency with other relevant international organizations' reporting formats and units;
- It will be challenging for the member economies to provide ESTO with data earlier than 1990 as these would no longer be available;
- Providing demand by end-use will also be very challenging, especially for economies which do not collect information on these;
- IRENA expressed the importance of transparency of data; a need to show how they were estimated or where these were obtained;
- IEF posted a question to the participants on the consistencies of conversion factors used by each economies;
- IEA likewise posted a query if old data are still confidential, as this has been a standing issue in the past;
- It was suggested to ensure consistency with the data and its details, there should be ESTO guidelines to follow, as well as setting a good timing when the data from the economies will be ready and available;
- The use of water chillers was raised as to how it could be reported in the energy balance table, this is particularly common in Hong Kong China, Malaysia and Singapore. IEA does not treat chilled water as an energy product and suggested that its impact would be on energy efficiency improvement. This probably needs to be looked into further in the future.
- APERC ESTO presented its plan to adopt an internet-based data submission system. Chinese Taipei suggested that those submitting the data online should be able to see how the data appear in the data formats after submission and should be able to carry out consistency and time series checks. APERC ESTO should provide guidelines and rules between data administrators and encoders such as when the data should be submitted and how data should be revised.
- Singapore presented its online energy data collection system of its Energy Management Authority (EMA) which are the Online Survey System (OSS) for oil and gas returns, the Energy Information Submission Portal (EIMP) for electricity and gas regulatory returns and the Secure File Transfer Protocol (SFTP) for large volume data. This system was very beneficial that Singapore reduced man hours by 65% and also led to the early publication of Singapore Energy Statistics by 4 months.

- IEA gave a presentation on its online reporting tool, the Energy Data Management Centre (EDMC). This system enables cross-questionnaire checking and facilitates more efficient cooperation with EuroStat. Member countries can automate data submission in a more secure way. The online systems of Singapore and IEA are good examples that APERC ESTO could learn from when developing APEC's system.
- APERC reiterated the goal of using APEC data in the next energy demand and supply outlook edition. As APERC is tasked to monitor and report the energy intensity progress in EWG, it is preferable to use APEC energy data. The APEC data will also be used in monitoring the renewable energy doubling goal of APEC.

Session 2: Sharing of Experiences in Energy Consumption Surveys

The next session was economy presentations showing how energy data are collected, processed, disseminated and used in APEC member economies: The following were the summary and issues raised:

- Brunei Darussalam presented its first comprehensive household energy consumption survey which aimed at identifying energy efficiency policies that has the greatest influence on the current energy consumption pattern. An issue was raised on the electricity consumption of air-conditioners that if reporting is not correct, consumption will be overestimated. In response, Brunei Darussalam mentioned that capacity factors based on actual data were used to avoid overestimating consumption.
- Chinese Taipei delivered a presentation on legal bases and how energy statistics are collected and validated in the economy. Despite the already strong legal basis in support of energy data collection, the economy still needs to amend the Energy Management Law as there is no legal basis for monthly end-use data collection.
- China gave a presentation on the result of the third economic census on energy supply and consumption in China. The survey was conducted via the internet for industrial and non-industrial enterprises above designated sizes but a manual survey was used for industrial enterprises below the designated sizes. Data on coal, gas and other energy were adjusted accordingly as a result of this third economic census.
- Malaysia presented on the Energy Consumption Survey on the Manufacturing Sector in Peninsular Malaysia. Chinese Taipei suggested that further breakdown is needed for some sub-sectors for a more precise result and commented that the sample size was not enough for the classification by region to conclude the result.
- The Philippines gave a presentation on the Energy Profile of the Philippines Household Sector. From the survey results, there will be an adjustment in the methodologies for calculating biomass consumption in the future. The Philippines also proposed that a workshop on how to prepare energy consumption surveys should be undertaken in APEC to increase the capacity of energy statisticians in this field.

- The USA gave a methodological and statistical insight on the energy consumption surveys for residential (RECS), commercial buildings (CBECS) and manufacturing (MECS) that are conducted periodically via various and mixed modes, including the internet. The USA's considerable experience in energy consumption surveys would be very good examples that other economies can base on.
- Hong Kong, China presented on the Energy End-Use Data in Hong Kong. Although the economy does not have legislation for data collection, there are no difficulties in collecting energy consumption data as there is a good cooperation between the private companies and government agencies. Hong Kong, China emphasized that when collecting data, it is important to convert the data into useful information.
- Peru, Chile, Russia, Cambodia and Lao PDR presented on how energy data are collected in their respective economies. The general directorates of the Ministry of Energy and Mines in Peru collect information for building the economy's national energy balance but turnover of staff sometimes delays the process of data compilation. Chile has a good energy data collection and dissemination system on which energy data are made available to the public on a daily basis. Russia has strong laws that support data collection. In Cambodia and Lao PDR, various government bodies collect energy statistics resulting in excellent supply data. However, data on final energy consumption is still weak.

Session 3: International Developments on Energy Statistics

- There were four presentations in this session. The first was IEA's presentation on the additional data that it would collect to meet the needs of data users. However, IEA will conduct trial collections first to look into approaches that would ensure that evolution of statistics is provided at the least cost.
- APERC ESTO introduced the International Recommendations on Energy Statistics (IRES) on UNSD's behalf. The presentation covered the reason why IRES was prepared, a summary of the recommendations and the need for an Energy Statistics Compilers Manual (ESCM) to supplement IRES. In the ensuing discussion, Australia mentioned that it would not yet be able to follow certain recommendations in the short term. Russia commented on the importance of knowledge dissemination in different languages conducted by international organizations, for example the publication of IEA Energy Statistics Manual in Russian language. Singapore inquired on which between IEA and UNSD would be the ultimate authority on energy statistics should there be differences in the IRES and IEA. IEA mentioned that if ever there are differences, we should look at the commonalities which are more significant.
- IRENA gave a presentation on its data collection to monitor energy sector transformation and focused on the challenges brought about by energy sector transformation, its approaches to data collection, energy products and definitions and energy balance. IRENA cited other data that give hints on increasing renewable energy use such as trade data. An example is the increase in the imports of Japan of agricultural waste products which could have been used for energy purposes.

- IEF presented on the developments of the Joint Organizations Data Initiative (JODI). The report showed that there were increases in the number of countries/economies participating in both JODI Oil and JODI Gas from the year ago level. IEF also reported on its plan to hold regional training workshops in China for the Asian countries/economies and in Russia for the Commonwealth of Independent States (CIS).

Session 4: Uses of Energy Statistics and Additional Requirements by Data Users

- Key developments on Japan's energy policy, in particular energy efficiency and conservation policy and data needs were presented. It was emphasized that data is essential to measure energy efficiency improvement and CO2 emission. IEF inquired on how the data can be made available to identify energy efficiency performance. It was explained that Japan has established a system for data collection in residential and transport sector but not in commercial sector. The Energy Conservation Centre of Japan monitors and evaluates data within a period of 6 months. It was also explained that a new system will be introduced from April 2016 where each company will be classified based on the company's energy savings achievements. This system will provide incentives and guidance to industry and encourage energy savings.
- APERC presented its "wish list" or APERC's additional data requirements and explained the types of data needed for modelling the energy outlook. It was also mentioned in the presentation APERC's desire on using APEC's data for the next edition of APEC Demand and Supply Outlook (7th Edition). On modelling the assumptions, it was suggested by Hong Kong, China and the Philippines to match or harmonize methodologies on forecasting the driving factors used in modelling the energy outlook such as crude oil price assumptions and GDP forecasts.

Session 5: Monitoring APEC Energy Intensity Reduction and Renewable Energy Doubling Goals

- APERC gave a presentation on APEC's energy intensity reduction and renewable energy doubling goal on a modelling perspective. It was mentioned in the presentation that the energy intensity goal may not be achieved in the business-as-usual scenario (BAU). Therefore, more aggressive energy efficiency policies should be pursued by governments to achieve this goal. Regarding the renewable energy doubling goal, hydro will still be the prominent technology to be developed but much of the increases will be in solar, wind and liquid biofuels.
- UNESCAP's presentation highlighted on the Sustainable Development Goals (SDG). It is worthy to note that APEC's goals are aligned with ESCAP goals, though in terms of definition, ESCAP's is more specific. The presentation also mentioned that the UN renewable energy doubling goal is tracked using final energy consumption and all types of renewable energy are included. This is a good information in the discussion on how APEC should track is own renewable energy doubling goal.

- There was an issue on accounting the export of bio-ethanol of which it is not certain how the importing countries utilize this ethanol. IEA and IRENA shared their experiences and how it is treated in their respective energy statistics.
- Australia's presentation showed a very good estimation and accounting of RE statistics. Australia was requested to assist or share with some member economies their estimation methodologies. Australia provides subsidies to household which uses PV as well as to solar companies. For every capacity installed there is an equivalent subsidy for each type of technology, feed-in-tariff (FiT) in Australia guarantees return on investment to RE users.

Session 6: Summary Session

- The EGEDA Acting Chair expressed his gratitude for the active participation in the member economies. He reiterated the need to revise or improve energy data as well as the need for additional requirements by APERC in time for the next Outlook edition which APERC prepares.
- The Philippines suggested that APERC hold a training workshop on sectoral energy consumption survey especially in the design of questionnaire to capture more energy data in industry, transport and commercial sectors, and to include gender statistics. However, the EGEDA Acting Chair mentioned that APERC ESTO cannot hold a third workshop in addition to the regular workshop on energy statistics and EGEDA meeting.
- IEA mentioned that it will hold another InterEnerStat meeting (International Energy Statistics) in September and hopes to arrive at an agreement on a common format for data collection on energy indicators which can help in monitoring member economies' energy efficiency improvement. As regards survey questionnaires, IEA mentioned that it has a collection of survey questionnaires from IEA member countries and will share the link to participants.
- Australia expressed its strong support to whatever workshop or training in the future on how to improve and harmonize energy statistics.
- The Acting Chair, presented the way forward after the workshop such as the timing of EGEDA meeting which is traditionally once a year. He also mentioned that ideally he wants to continue the workshop once a year as also traditionally planned and in Tokyo.
- The EGEDA Vice Chair thanked APERC ESTO for organizing the workshop. For forthcoming issues, firstly, while he agrees that holding too many workshops without proper preparation will not yield good result, he suggested that there's still a need for the members to meet prior to a meeting or EGEDA meeting to discuss and agree on some issues like discussing the new questionnaire format or the additional data requirement for the APEC Demand and Supply Outlook. Hence for the upcoming EGEDA meeting in Malaysia, the members can report some progress on the data collection. Secondly, he commended IEA's information and data collection and capability enhancement program so he believes that a workshop on conducting survey for the member economies is worth considering especially to collect energy efficiency indicators information.

Annex 1: List of Participants

	Economy/Organization	Name
1	Australia Office of the Chief Economist	Ms. Allison Ball
2	Australia Australian Embassy - Tokyo	Mr. Trevor Holloway
3	Australia Australian Embassy - Tokyo	Ms. Masako Yoda
4	Brunei Darussalam Brunei National Energy Research Institute	Mr. Muhammad Nabih Fakhri Matussin
5	Chile Ministry of Energy	Mr. Juan Antonio Campos
6	China National Bureau of Statistics	Ms. Wang Xiaohui
7	China National Bureau of Statistics	Mr. Xie Xin
8	Hong Kong, China Electrical and Mechanical Services Department	Mr. Cho-Yee Ip
9	Japan Ministry of Economy, Trade and Industry	Mr. Shinji Ishii
10	Japan Institute of Energy Economics, Japan	Ms. Naoko Doi
11	Malaysia Energy Commission	Ms. Noor Aizah B. Abdul Karim
12	Mexico Instituto Nacional de Estadistica y Geografia	Prof. Miguel Del Avellano Jaramillo
13	Peru Ministry of Energy and Mines	Mr. Félix Alcides Bernabel
14	Philippines Department of Energy	Ms. Victoria Magdalena Bautista Capito
15	Russia Federal State Statistics Service	Ms. Natalia Ignatova
16	Singapore Energy Market Authority	Mr. Wei Chian Poh
17	Singapore Energy Market Authority	Ms. Lindy Tan
18	Chinese Taipei Taiwan Research Institute	Mr. Jen-Yi Hou
19	Chinese Taipei	Ms. Su-Fang Chen

	Bureau of Energy	
20	Chinese Taipei Taiwan Research Institute	Mr. Chuan-Wei Wang
21	United States Energy Information Administration	Mr. Hiroaki Minato
22	Viet Nam General Directorate of Energy	Mr. Duong Manh Cuong

	Economy/Organization	**Name**
23	International Energy Agency (IEA)	Mr. Duncan Millard
24	International Energy Forum (IEF)	Mr. Yuichiro Torikata
25	I International Renewable Energy Agency (IRENA)	Mr. Adrian Whiteman
26	United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP)	Mr. Sergey Tulinov
27	Cambodia Ministry of Mines and Energy	Mr. Chandareth Sok
28	Lao People's Democratic Republic Ministry of Energy and Mines	Mr. Phaysone Phouthones
29	Lao People's Democratic Republic Ministry of Energy and Mines	Mr. Outhone Singdala
30	APERC	Mr. Takato Ojimi
31	APERC	Ms. Cecilia Tam
32	APERC	Mr. Choong Jong Oh
33	APERC	Mr. Martin Miguel Brown-Santirso
34	APERC	Mr. Alexey Kabalinsky
35	APERC	Mr. Michael Sinocruz
36	APERC	Mr. Luis Camacho Bea
37	APERC (ESTO)	Mr. Masazumi Hirono
38	APERC (ESTO)	Mr. Edito Barcelona
39	APERC (ESTO)	Ms. Elvira Torres Gelindon
40	APERC (ESTO)	Mr. Goichi Komori
41	APERC (ESTO)	Mr. Takuya Miyagawa
42	APERC (ESTO)	Ms. Dk Nur Afifah Atikah Pg Hj Ismail
43	APERC (ESTO)	Ms. Takako Hannon