



Joint EGNRET and EGEEC Meeting
28 March 2017
Jeju Island, Republic of Korea

EGEDA Update

Edito Barcelona
Asia Pacific Energy Research Centre



**Asia-Pacific
Economic Cooperation**

Outline of Presentation

Background

- APERC
- Creation of ESTO at APERC
- APEC data collection
- Other data collection

Current Situation of APEC Data

- Renewable Energy Share in TFEC in 2014
- Specific economy situation

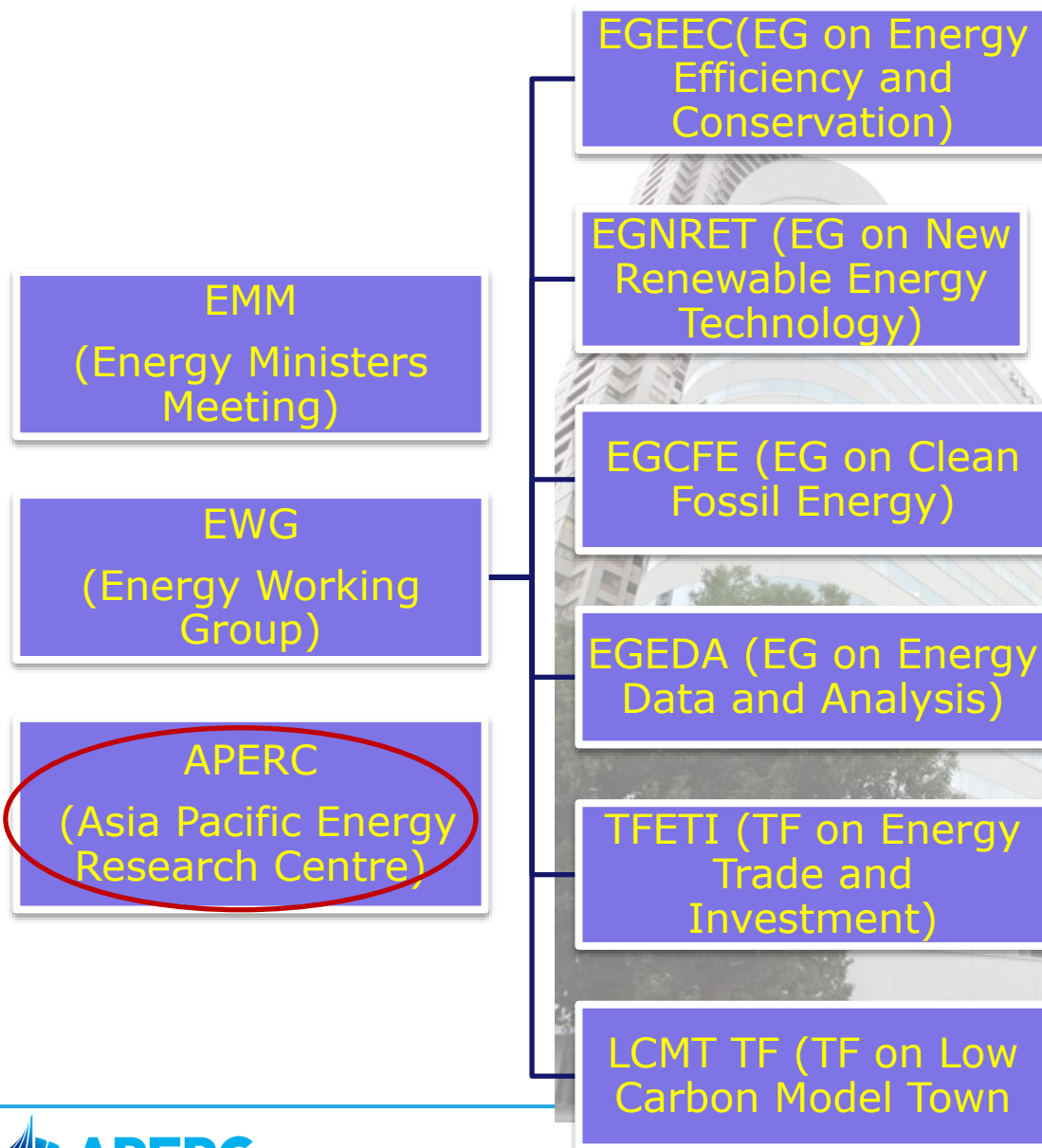
Way Forward



Background



Asia Pacific Energy Research Centre



- Supports the energy activities of APEC with:
 - Research, especially analysis of energy supply and, demand in the APEC Region;
 - Cooperative programs to promote energy efficiency and low-carbon energy.

EDMC of IEEJ until 2015

- ❑ Coordinating Agency of EGEDA was the Energy Data and Modelling Centre of the Institute of Energy Economics, Japan (IEEJ)
- ❑ Data collection
- ❑ Database management
- ❑ Publication
- ❑ Training
 - Short-term (2 weeks)
 - Medium-term (2 months internship at EDMC)



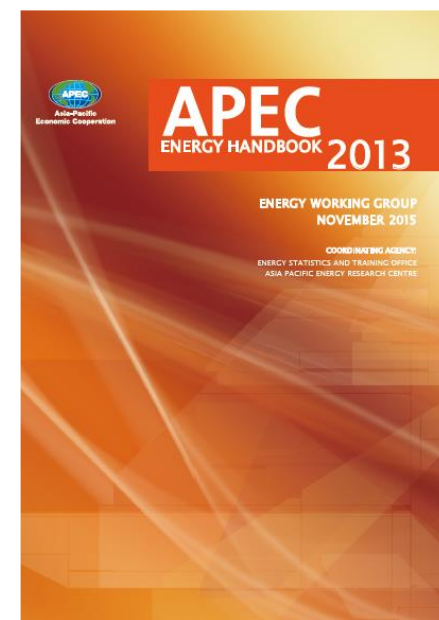
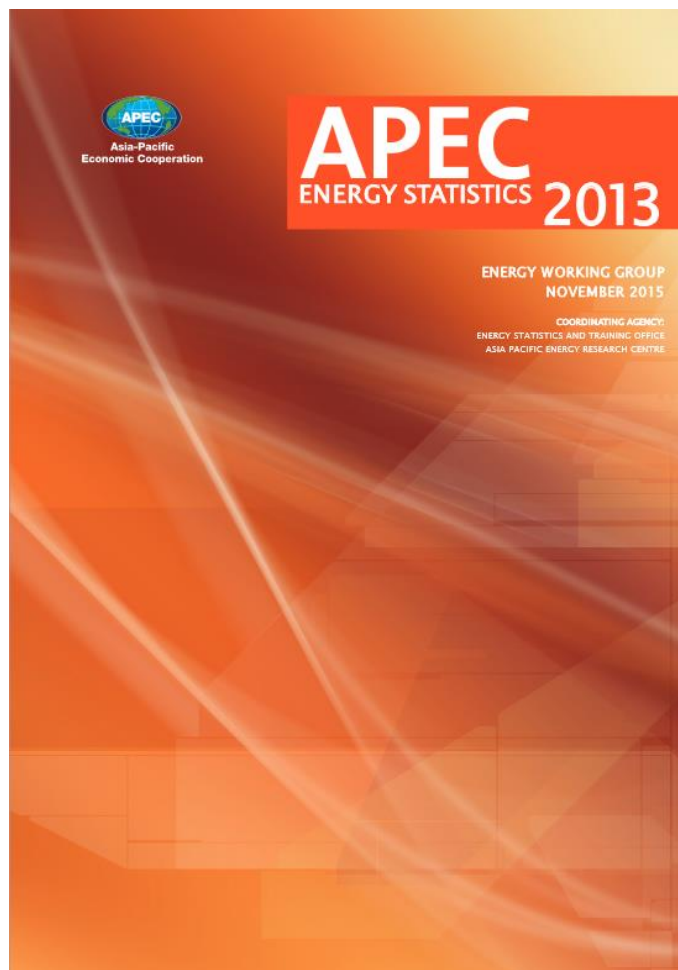
Transferred to APERC in 2015

- ❑ Coordinating Agency was transferred to APERC in 2015 under the Energy Statistics and Training Office (ESTO)
- ❑ Data collection
- ❑ Database management
- ❑ Publication
- ❑ Training
 - Short-term (2 weeks classroom training)
 - Medium-term (2 months internship at ESTO)
 - Energy outlook model building



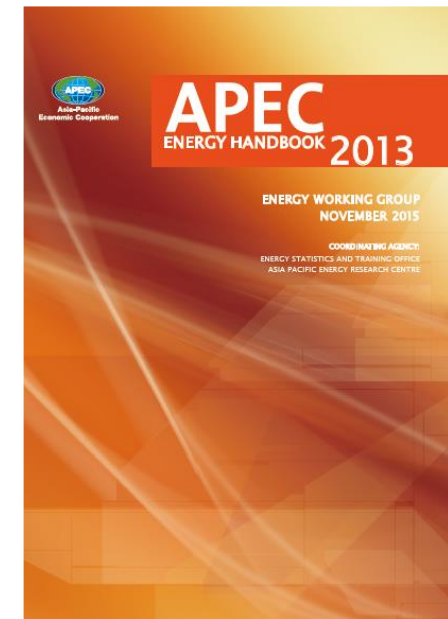
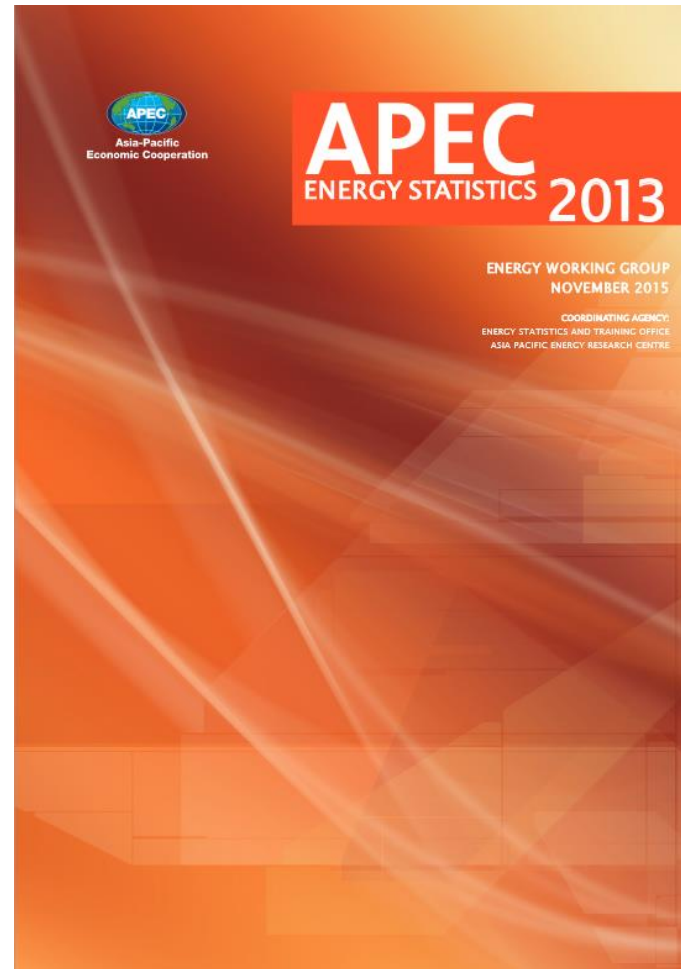
Energy Data

- Monthly (Energy Supply and Demand)
 - Oil and gas (JODI: Joint Organisations Data Initiative)
- Quarterly (Energy Supply)
 - Coal, oil, petroleum products, gas and electricity
- Annual energy supply and demand (energy balance)
 - Coal, oil, petroleum products, gas, electricity/heat, new & renewables



Other Data (Energy Related Annual Data)

- Energy prices
- CO2 emission
- Oil/gas reserves and producing/refining capacity
- Trial collection of **energy consumption by end-use** in the commercial and residential sector



End-use energy consumption template

Commercial and Public Services Sector

Space Heating Space Cooling Other building energy use Non-building energy use	<ol style="list-style-type: none">1. Oil and Petroleum products2. Coal and coal products3. Natural gas4. Combustible renewables and wastes5. Heat6. Electricity7. Others
Ligthing	<ol style="list-style-type: none">1. Electricity2. Others

End-use energy consumption template

Residential Sector

<p>Space Heating Space Cooling Water heating Cooking Other kitchen facilities Other energy use</p>	<ol style="list-style-type: none">1. Oil and Petroleum products2. Coal and coal products3. Natural gas4. Combustible renewables and wastes5. Heat6. Electricity7. Others
<p>Ligthing Refrigerators and freezers Laundry facilities TV/PC/Entertainment</p>	<ol style="list-style-type: none">1. Electricity2. Others

End-use energy consumption template

Activity Indicators

I.	Activity & Structure Indicators	
	Total Population	10 ⁶ pers
	Total Employment	10 ⁶ pers
	Services Employment	10 ⁶ pers
	Total Dwellings	10 ⁶ dw
	Occupied Dwellings	10 ⁶ dw
	New Dwellings	10 ⁶ dw
	Household Occupancy	pers/dw
	Total Dwelling Area (Residential Floor Area)	10 ⁶ m ²
	Annual Heating Degree-Days	dd°C
	Annual Cooling Degree-Days	dd°C
	Private Final Consumption Expenditure (PPP)	\$ PPP
	Total Services Floor Area	10 ⁶ m ²
	New Services Floor Area	10 ⁶ m ²
II.	Gross Domestic Product (from WB WDI)	
	at current prices and current exchange rates	billions of US dollars
	at the price levels and exchange rates of 2005	
	at current prices and 2005 exchange rates	
	at current prices and current PPPs	
	at the price levels and PPPs of 2005	
III.	GDP deflator 2005=100	
	Deflator for GDP at market prices	



Current Situation



General

APEC energy statistics are based on data submitted by APEC* member economies using a set of questionnaires (developed in 2005) for oil, coal, natural gas, electricity and heat, as well as NRE;

Simplified forms of the annual energy questionnaires of the International Energy Agency (IEA) through the harmonisation with APEC;

OECD** member countries and Russia submit annual energy supply and demand data to IEA, APERC accepts data submission using the IEA format, and also downloads the filled-out questionnaires from IEA's Energy Data Centre (EDC);

If submissions are incomplete, obtains data from other sources; such as: JODI-oil and independent sources

Estimates most of the data of PNG;

Uses the conversion factors submitted by the member economies; in cases where conversion factors are not submitted, uses typical values and duly informs the concerned member economy

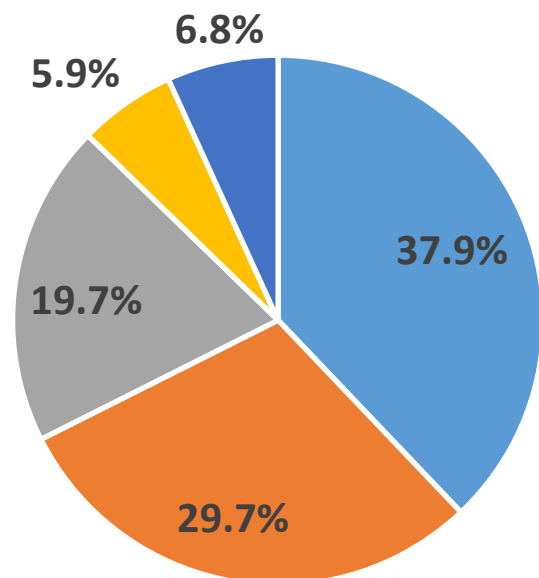
*Those which are not in OECD including Japan

** OECD: AUS, CDA, CHL, KOR, MEX, NZ, USA including RUS

Share of NRE in APEC (2010)

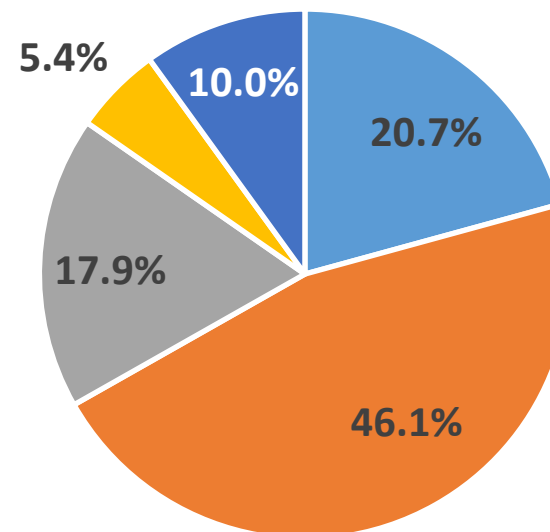
TPES

■ Coal ■ Oil ■ Gas ■ Nuclear ■ NRE



TFEC

■ Coal ■ Oil ■ Gas ■ Heat ■ RE*

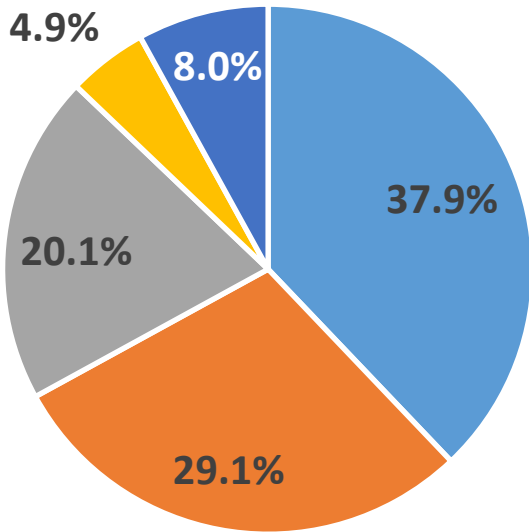


* Including electricity from NRE

Share of NRE in APEC (2014)

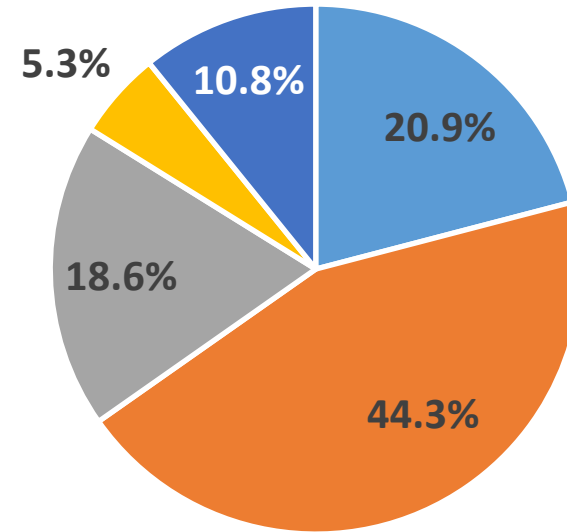
TPES

■ Coal ■ Oil ■ Gas ■ Nuclear ■ NRE



TFEC

■ Coal ■ Oil ■ Gas ■ Heat ■ RE*



* Including electricity from NRE

Revisions to APEC Annual Questionnaires

Objectives: to improve data reporting accuracy and to collect more detailed information on new and renewable energy products

General revisions: member economies can report on the original units used in the respective economies such as barrels, litres, m³, BTU, joules. However, conversion factors such as net calorific values should also be reported.

Oil and Oil products: improved reporting of petroleum products produced from sources other than oil refineries

Coal and coal products: member economies can report on the original units used in their respective economies

Natural gas: reporting data in both physical and energy units

Electricity and heat: better disaggregation of production from main activity producers and autoproducers

New and renewable energy: increased the number of products based on IRENA's data collection template

Improvements to Data (1)

Brunei Darussalam

part of the data in domestic aviation was allocated to international aviation bunkers

1990-2009 fuel oil data reported in consumption was moved to export of fuel oil

LPG reported as indigenous production was transferred as output (by-product) of Gas Liquefaction

Refinery gas reported as consumption was moved to own-use of the oil refinery

Improvements to Data (2)

China

Revised 2000-2013; data from 1990-1999 will also be revised by ESTO depending on available data that could be obtained from China

No estimation on non-commercial biomass for residential use

Improvements to Data (3)

Indonesia (still to be revised)

Final energy consumption of coal, petroleum products and electricity from 1999 to 2013 are not disaggregated to the 13 industrial sub-sectors. From 1980 to 1998 there are at most 5 out of 13 sub-sectors with FEC data

Consumption of petroleum products of the transport sector was not disaggregated into domestic aviation, road, water, rail and other transport until 2004.

No data on international aviation bunkers

For domestic aviation, there are no data in 2012 and 2014 on jet kerosene, but there are small amounts of aviation gasoline

Other sector consumption of petroleum products and electricity are also not disaggregated into residential, commercial, agriculture, etc.

FEC of natural gas is disaggregated from 2005 to 2013 but there is less disaggregation before 2005.

Need to obtain information on consumption of biomass from 1980 to 2003

Improvements to Data (4)

Malaysia

Data was revised using the energy balances from 1978 to 2012 provided by Malaysia

APERC is awaiting on the result of the survey that Malaysia is conducting with the possibility to obtain non-commercial biomass data

Improvements to Data (5)

The Philippines

data from 1990 were revised; HECS 2011 result was incorporated

Thailand

Data has just been revised and awaiting confirmation/approval from Thailand

Singapore

APERC was advised to use IEA data as Singapore agrees to EIA's estimates

Viet Nam

Work in progress, needs to gather data from Viet Nam

Why Revise?

Consistency

- Conversion Factor
- Estimation
- Proper allocation of energies

Align with changes made by economies

- economies updated data using new information, e.g. surveys

Usefulness of data

- APEC Overview
- APEC Demand and Supply Outlook



Way Forward

Review of current data

- consistency of historical data (continuity)
- completeness
- error on data entry

Revision of data

- Work with member economies

Estimation of data (for economy with incomplete data)

- Consult and gather data from concerned economies, e.g. Indonesia and Viet Nam

Uploading of estimated data

- upon approval from concerned member economy

APERC will continue to hold training courses on energy statistics

APERC will encourage non-OECD member economies of APEC to collect end-use energy consumption data

APERC will continue to revise data collection formats to address energy data needs of EWG



Thank you for your kind attention

<http://aperc.ieej.or.jp/>