

10th APEC-Tsukuba International Conference:
Innovation of Mathematics Education through Lesson Study Challenges to Energy Efficiency
on STEM and Cross-Border Education

Toward Enhancing Energy Efficiency in the APEC Region

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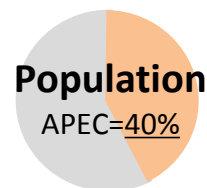
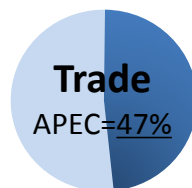
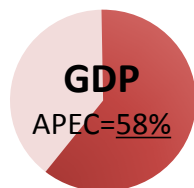
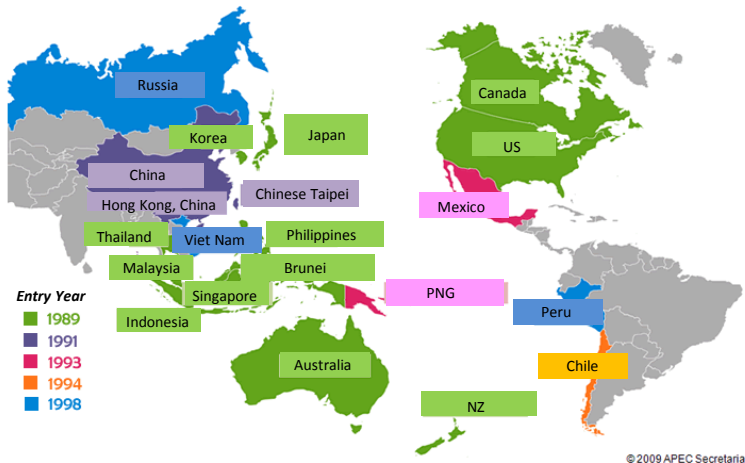
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1. Overview of APEC (1)

- Established in **1989** to support **sustainable economic growth and prosperity** in the Asia-Pacific region
- Three pillars: **(1) trade and investment liberalization; (2) business facilitation; (3) economic and technological cooperation**

APEC's 21 Economies



(Source: IMF (2012))

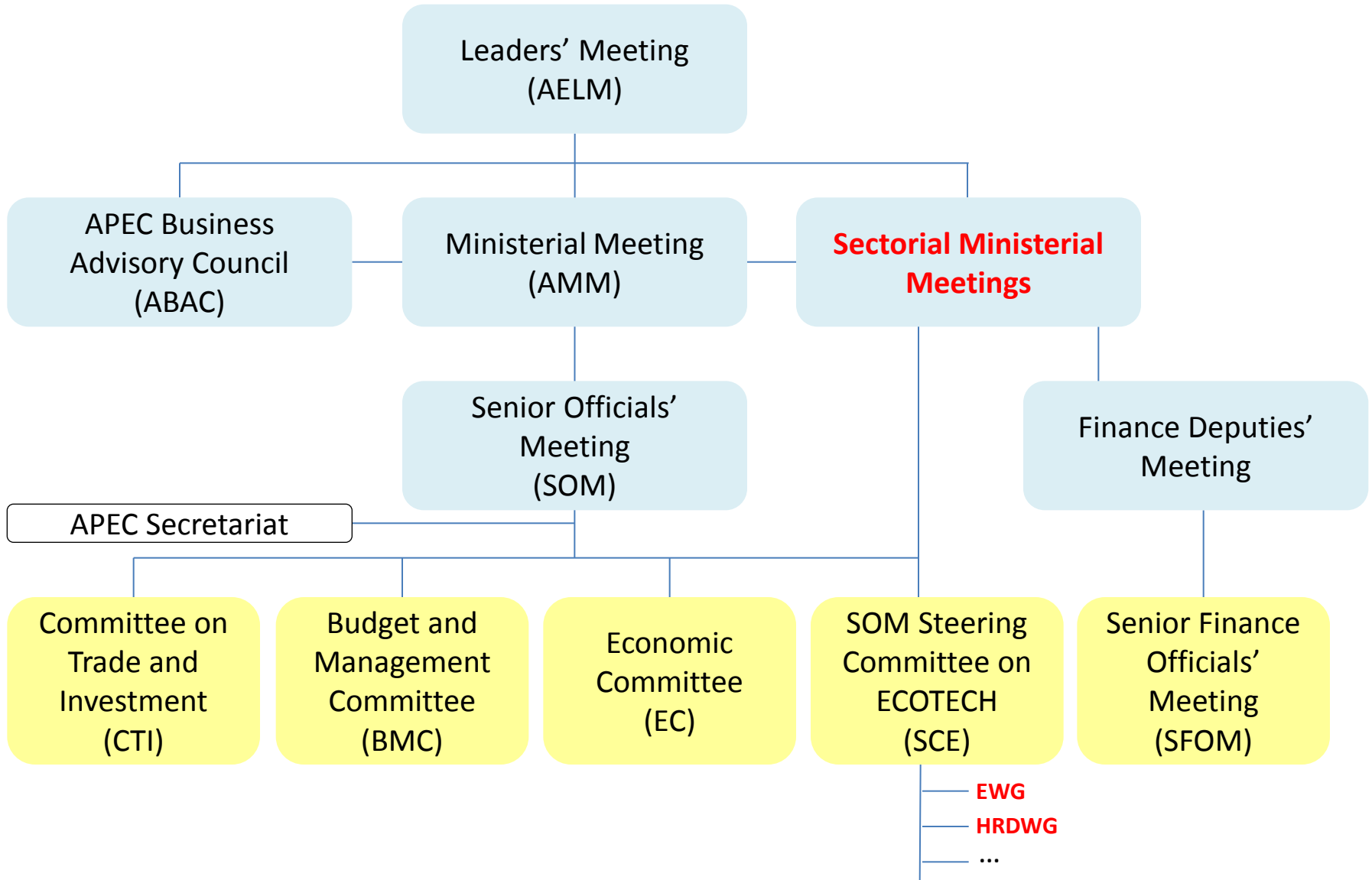
APEC Chairs

(2010	Japan)
2016	Peru
2017	Viet Nam
2018	PNG
2019	Chile
2020	Malaysia

2016 APEC Priorities

1. Advancing **Regional Economic Integration** and **Quality Growth**
2. Enhancing the **Regional Food Market**
3. Towards the Modernization of **MSMEs** in the Asia - Pacific
4. Developing **Human Capital**

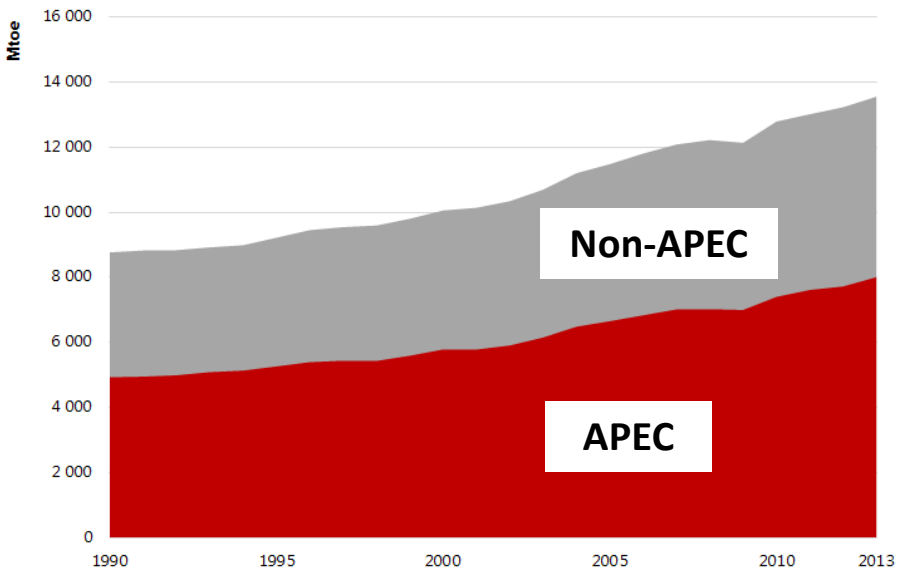
1. Overview of APEC (2)



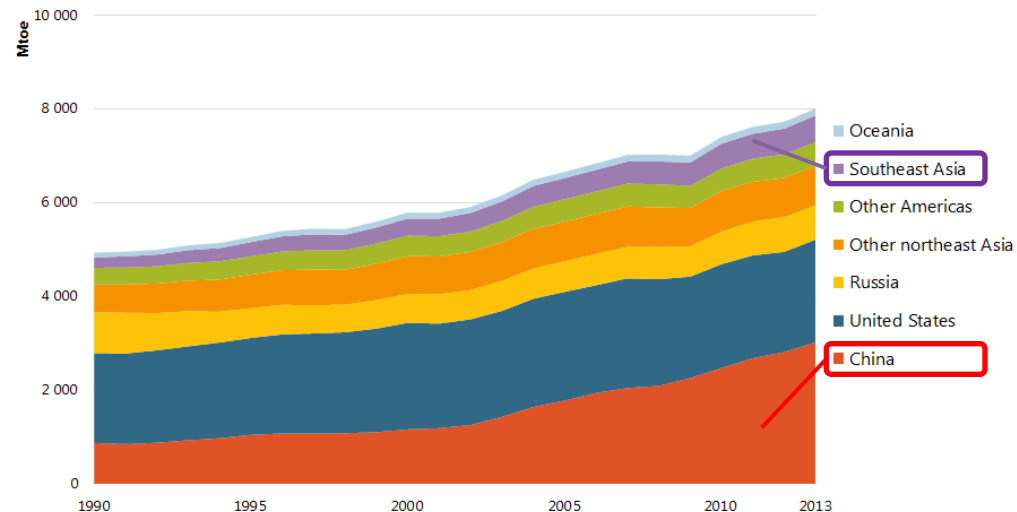
2. Global Energy Trend

- APEC represents around **60% of the world's primary energy demand**
- In **developing economies** such as China and Southeast Asia, energy demand has more than **doubled since 1990**

Global Energy Demand



Energy Demand by APEC Economies



(Source: IEA Energy Balance (2015))

3. APEC Energy Ministerial Meeting (EMM)

- The 1st APEC Energy Ministerial Meeting (EMM) was held in **Sydney** in **1996** to discuss how **energy security, economic growth and environment conservation should be achieved simultaneously**
- The EMM is held **every couple of years**

12th EMM

- **Cebu, the Philippines**
- **October 13, 2015**

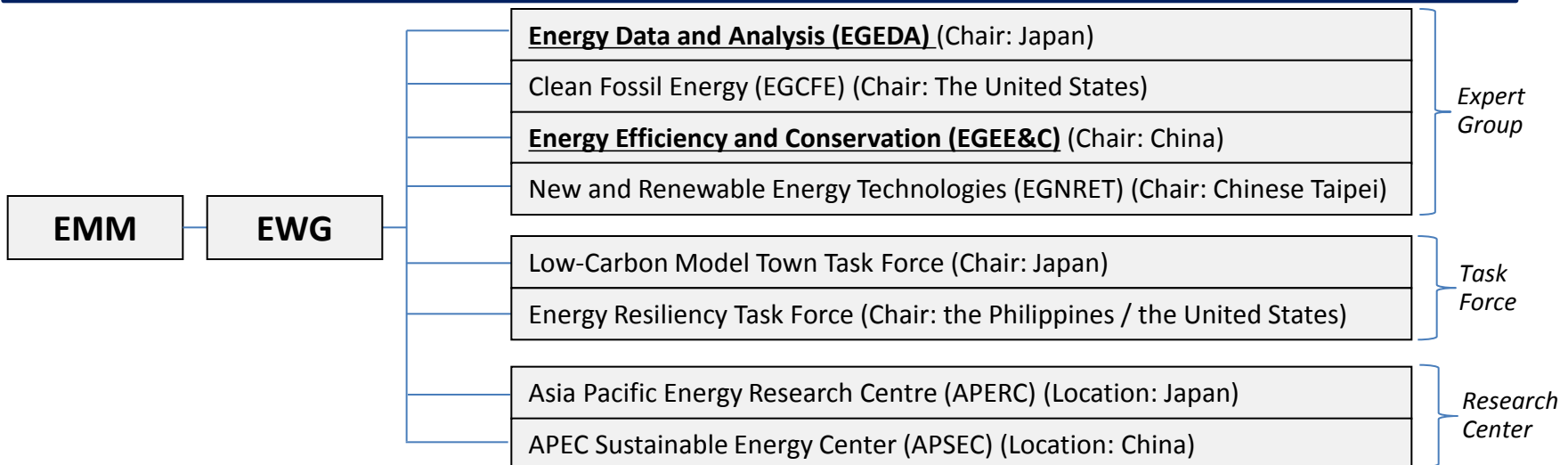


- **Key message about energy efficiency**
 - ✓ The future economic growth of the APEC region will be supported by an appropriate mix of energy resources and power generation technologies that includes both conventional and renewable energy with increasing priority for clean energy sources and enhanced energy efficiency
 - ✓ Ministers encouraged Members to promote energy supply diversity and energy efficiency

4. APEC Energy Working Group (EWG)

- **Energy Working Group (EWG)** was launched in **1990**
- Chaired by Dr. Phyllis Yoshida, the United States
- EWG's mission under Strategic Plan for 2014-2018
 - ① Strengthening regional and domestic energy security and resilience across the region
 - ② **Lowering the carbon intensity of energy supply and use**
 - ③ Promoting the diversification of fuels and sources
 - ④ Training a gender-inclusive energy workforce

EWG Structure



5. Promote Energy Efficiency

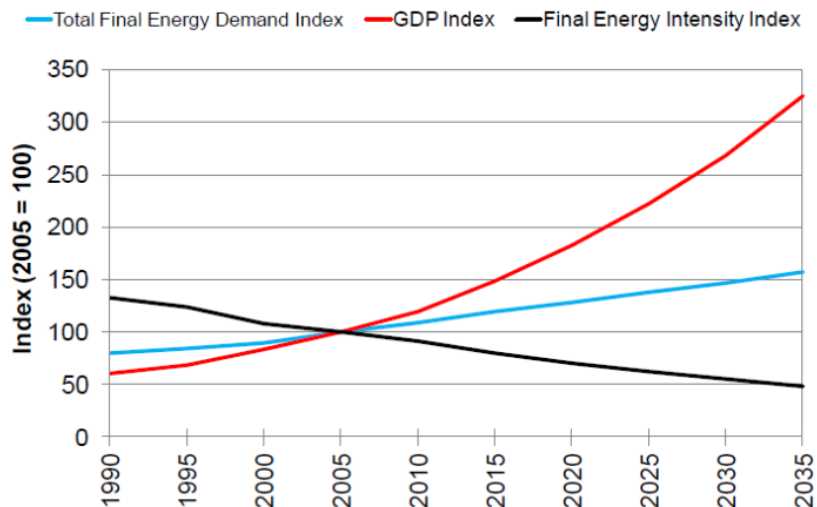
➤ APEC's energy efficiency goal:

Reduce APEC's aggregate **energy intensity by 45% from 2005 levels by 2035**, as set out in the 2011 APEC Economic Leaders' Declaration

➤ Japan launched **APEC Peer Review on Energy Efficiency (PREE)**:

Voluntary peer review mechanism, to **assist APEC economies in developing or implementing policies on energy efficiency**

Change in APEC's Energy Intensity



(Source: APEC Energy Demand and Supply Outlook 5th Edition (2013))

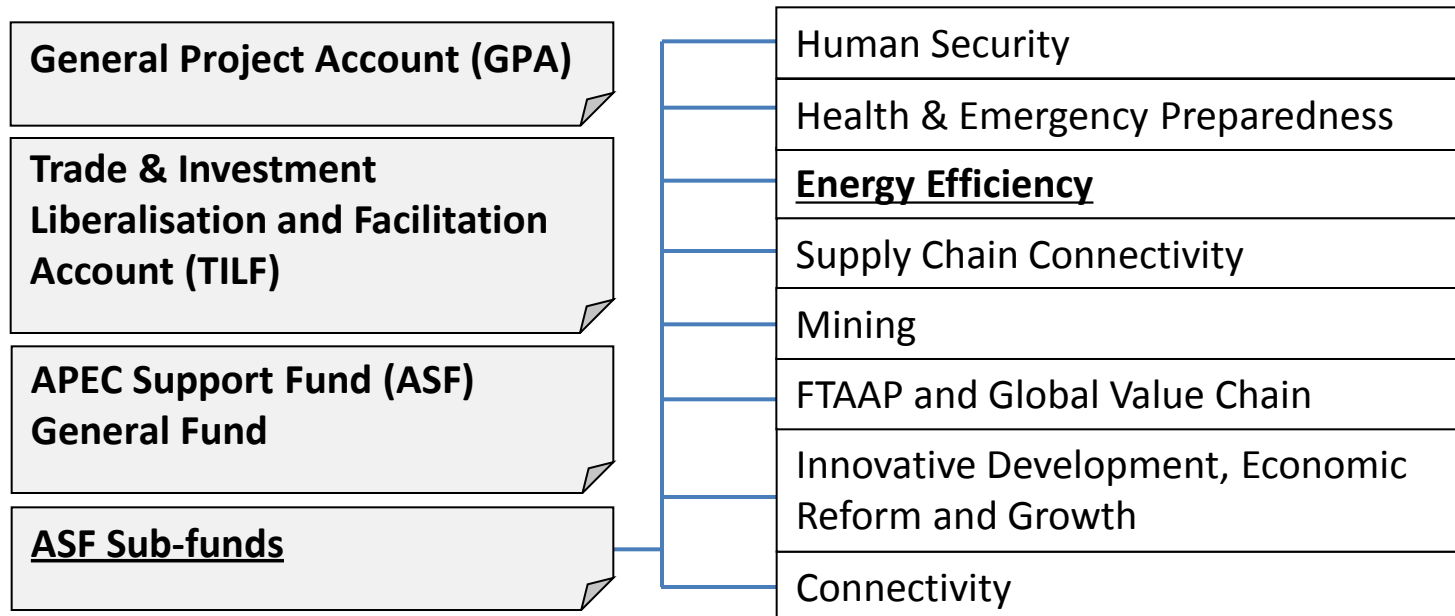
PREE's Key Objectives

- **Share information** on energy efficiency performances and policies
- Provide **opportunities for learning** from other APEC member economies' experiences
- Explore how **energy efficiency goals could be effectively formulated**
- Provide **recommendations**

6. APEC Energy Efficiency Sub-Fund

- **APEC Support Fund (Sub-Fund for Energy Efficiency and Low-Carbon Measure)** to contribute to the promotion of energy efficiency activities and low-carbon measures
- Japan has provided cumulative contribution of **USD 16.7 million** to the fund since 2009

APEC Project Funding Sources



7. Conclusions

- APEC region is at the center of global energy demand
- Through the EMM and the EWG, APEC economies have discussed energy security issues including energy efficiency since 1996
- It is vital to enlighten the younger generation about the importance of energy through elementary and secondary education
- Japan will keep contributions of energy efficiency activities in the APEC region

Thank you for your attention!