

ASEAN Energy Outlook and Opportunities for Enhancing Cooperation with APEC

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ASEAN Overview

Energy Mix Situation

ASEAN Energy Outlook

ACE / APEC Cooperation

ASEAN: A Community of Opportunities

**Total
Trade
USD 2.6
trillion**

population: 625 million
area: 4,480,106 km²

8.5 % of world's population

56% living in rural areas

GDP growth 2003-2013:
5.1 %

Remarkable sustained growth rate

GDP per capita 3,831.8 US\$

High disparity within the region

electricity consumption: 1,178 kwh/cap
Electrification : 78.7%

About half of world's average

energy intensity:
0.435 koe / \$05p

About half of world's average

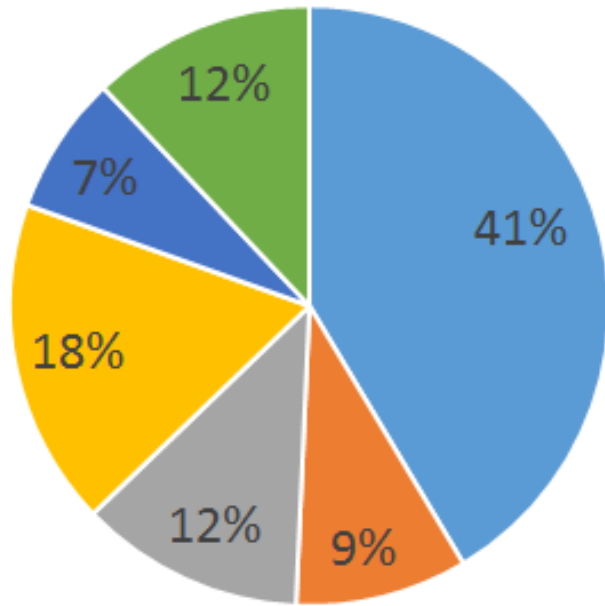
The ASEAN Economic Community:

- *Effectively implemented on 31 December 2015,*
- *Calls for a well-connected ASEAN to drive an integrated, competitive and resilient region.*

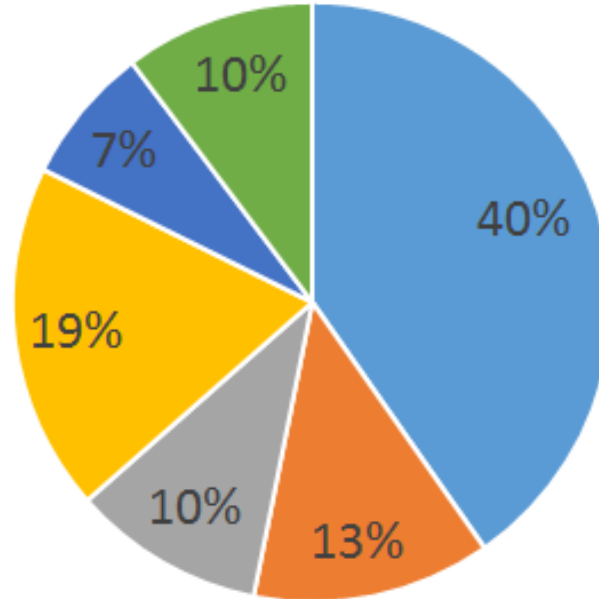
... to establish ASEAN as a single market and production base with the goal of making ASEAN more dynamic and competitive."

HISTORICAL COMPARISON - Total Primary Energy Supply,

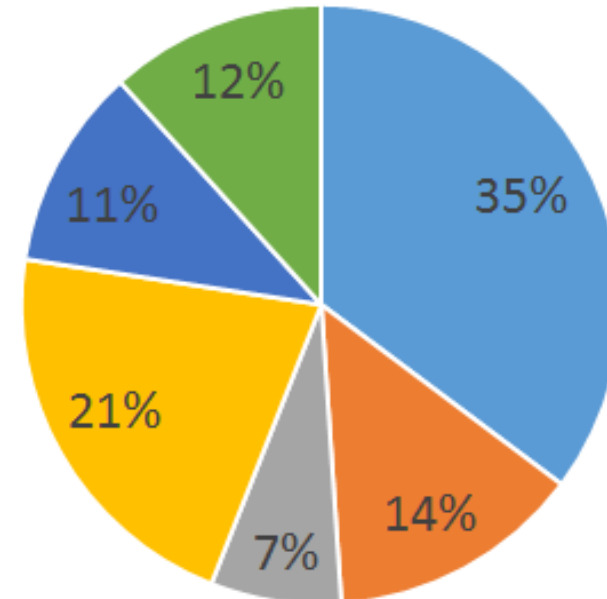
1990 = 238 Mtoe



2000 = 386 Mtoe



2013 = 618 Mtoe



■ Indonesia

■ Malaysia

■ Philippines

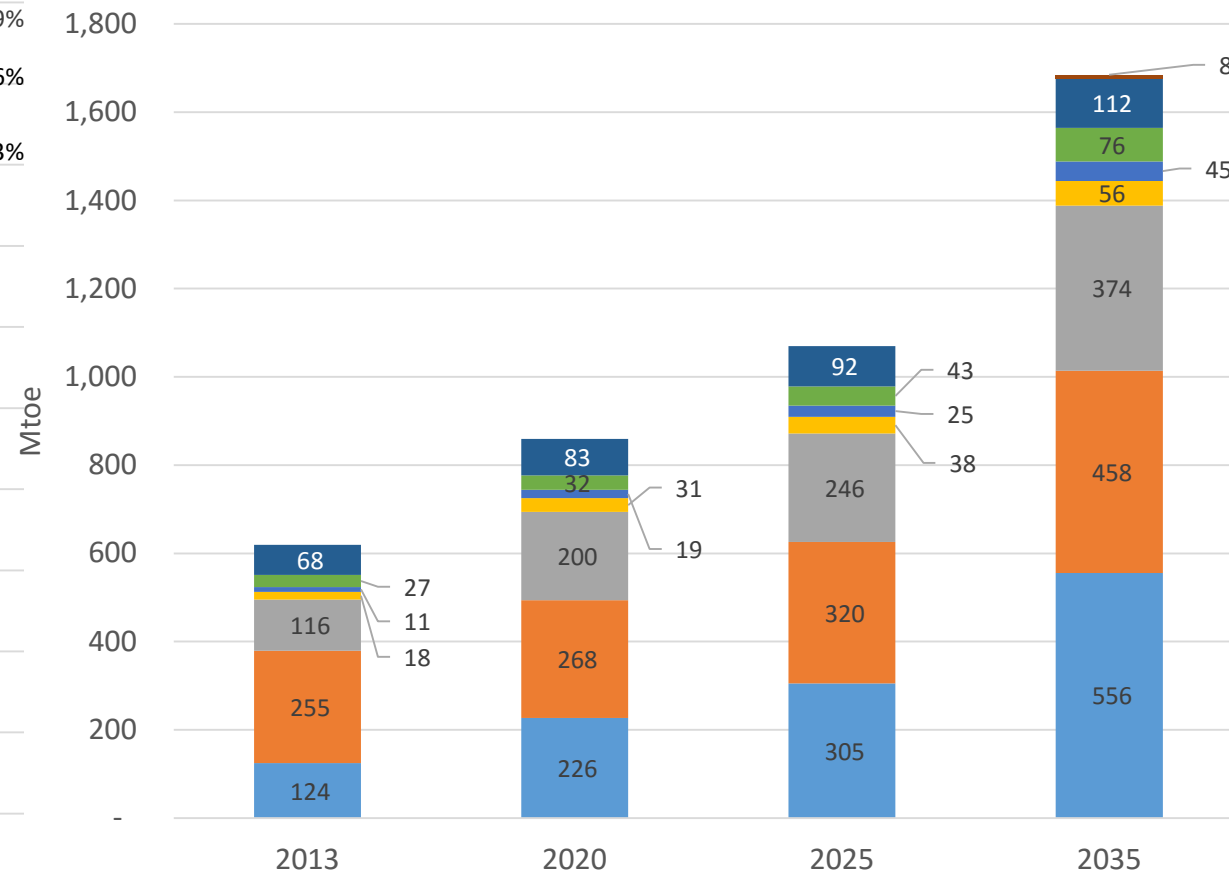
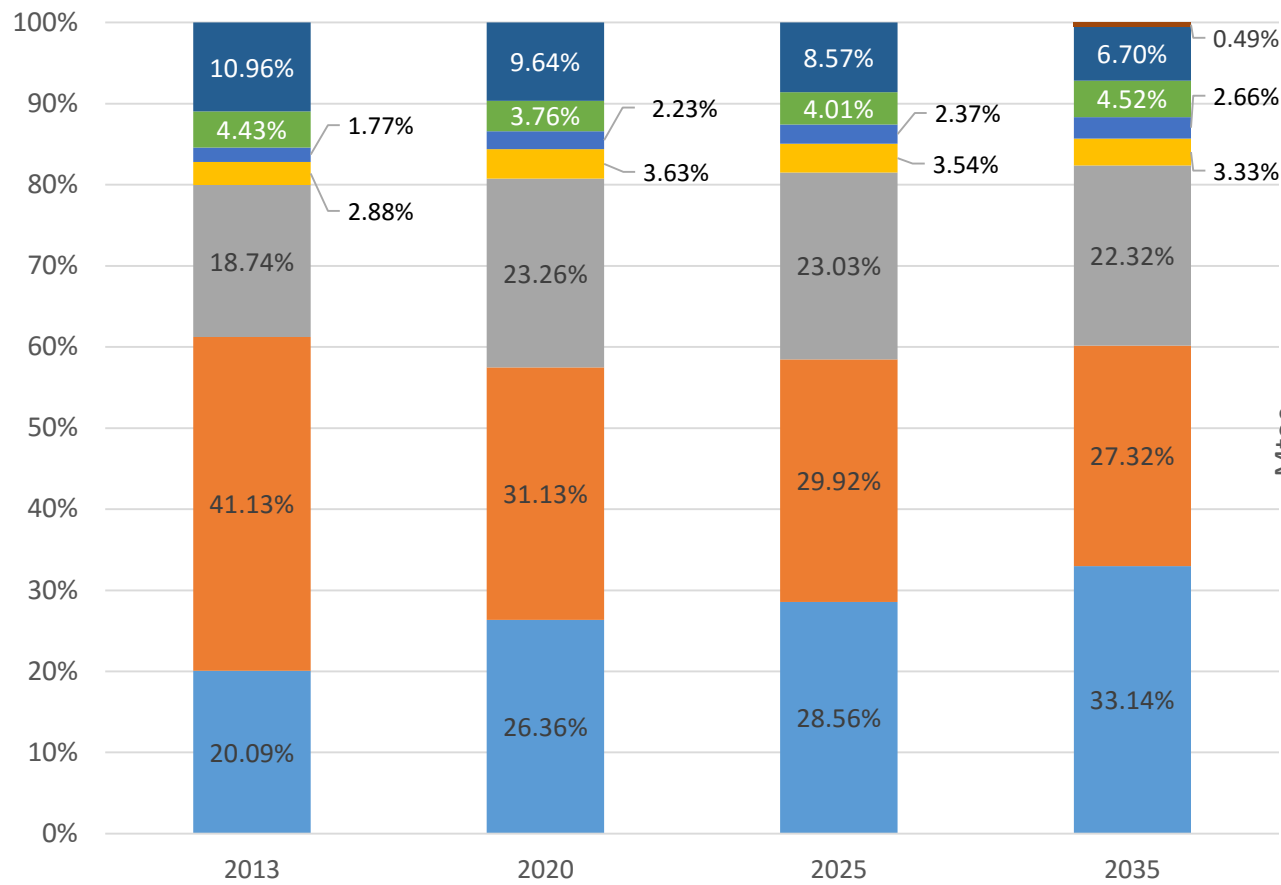
■ Thailand

■ Viet Nam

■ Rest of ASEAN



ASEAN ENERGY OUTLOOK PROJECTED TPES 2013 - 2035



- Coal
- Oil
- Natural gas
- Hydro
- Geothermal
- Others Renewables
- Traditional Biomass
- Nuclear

Sources : ACE Database, as of 2013.

ASEAN ENERGY BLUEPRINT

➤ The ASEAN Plan of Action for Energy Cooperation (APAEC)

“Enhancing Energy Connectivity and Market Integration in ASEAN to Achieve Energy Security, Accessibility, Affordability and Sustainability for All”

➤ Phase I – 2016-2020 – endorse by the ASEAN Ministers of Energy

➤ 7 Areas of Focus

✓ *ASEAN Power Grid*

✓ *Trans ASEAN Gas Pipeline*

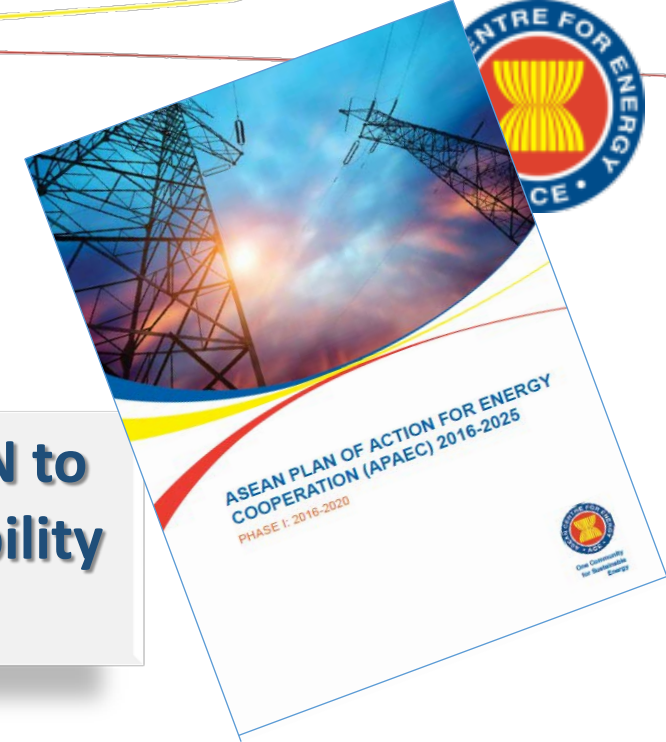
✓ *Coal & Clean Coal Technology*

✓ *Energy Efficiency & Conservation*

✓ *Renewable Energy*

✓ *Civilian Nuclear Energy*

✓ *Regional Energy Policy and Planning*



APAEC 2016 -2025 Targets

Increase % RE

Renewable Energy:

Aspirational target to increase the component of renewable energy to 23% by 2025 in ASEAN Total Primary Energy Supply.

Energy Efficiency & Conservation:

To reduce energy intensity by 20% in 2020 based on 2005 level.

Reduce EI %

Coal

Increasing at **CAGR of 7%**

Increase **CCT** technology

Increase CCT

ACE Cooperation

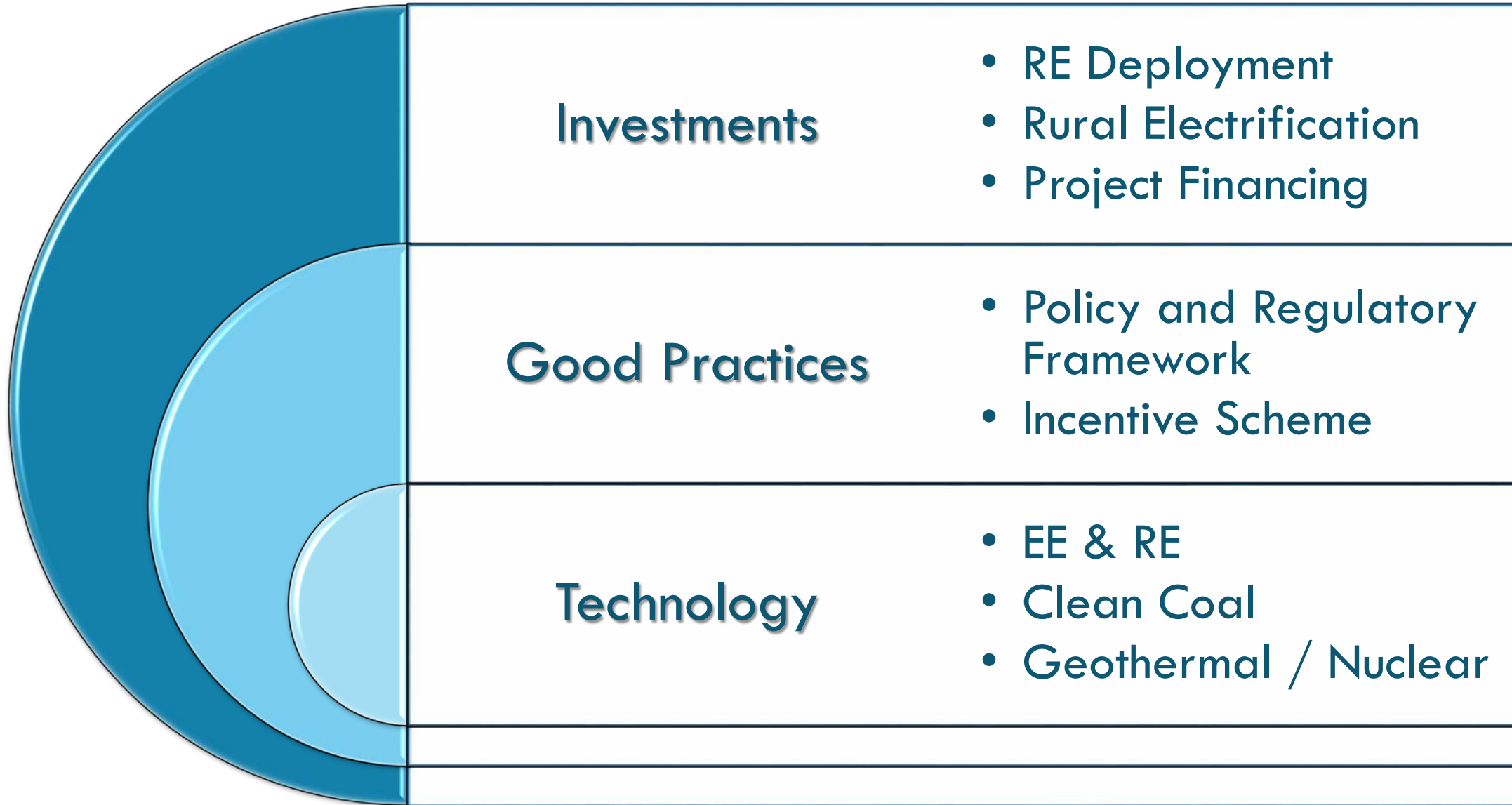
Through ASEAN Center for Energy (ACE), cooperation and collaboration in energy sector are done by

- conducting capacity building,
- technical and good practices exchange and
- policy research and analytics

Some of Ongoing Programmes:

1. ASEAN+3 Mitigation Cooperation Programme (China, Korea and Japan)
2. ASEAN-Japan Energy Efficiency Partnership (ECCJ)
3. ASEAN - Renewable Energy Support Program (GIZ)
4. ASEAN-Canada Nuclear and Radiological Program (DAFT)

APEC Cooperation





Thank you