



Opportunities for the EU and Japanese to support climate and energy agenda in ASEAN

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EIAS Briefing Seminar “Toward a Low Carbon Future in ASEAN: EU-Japan cooperation”, Brussels, 14 December, 2016

Challenges

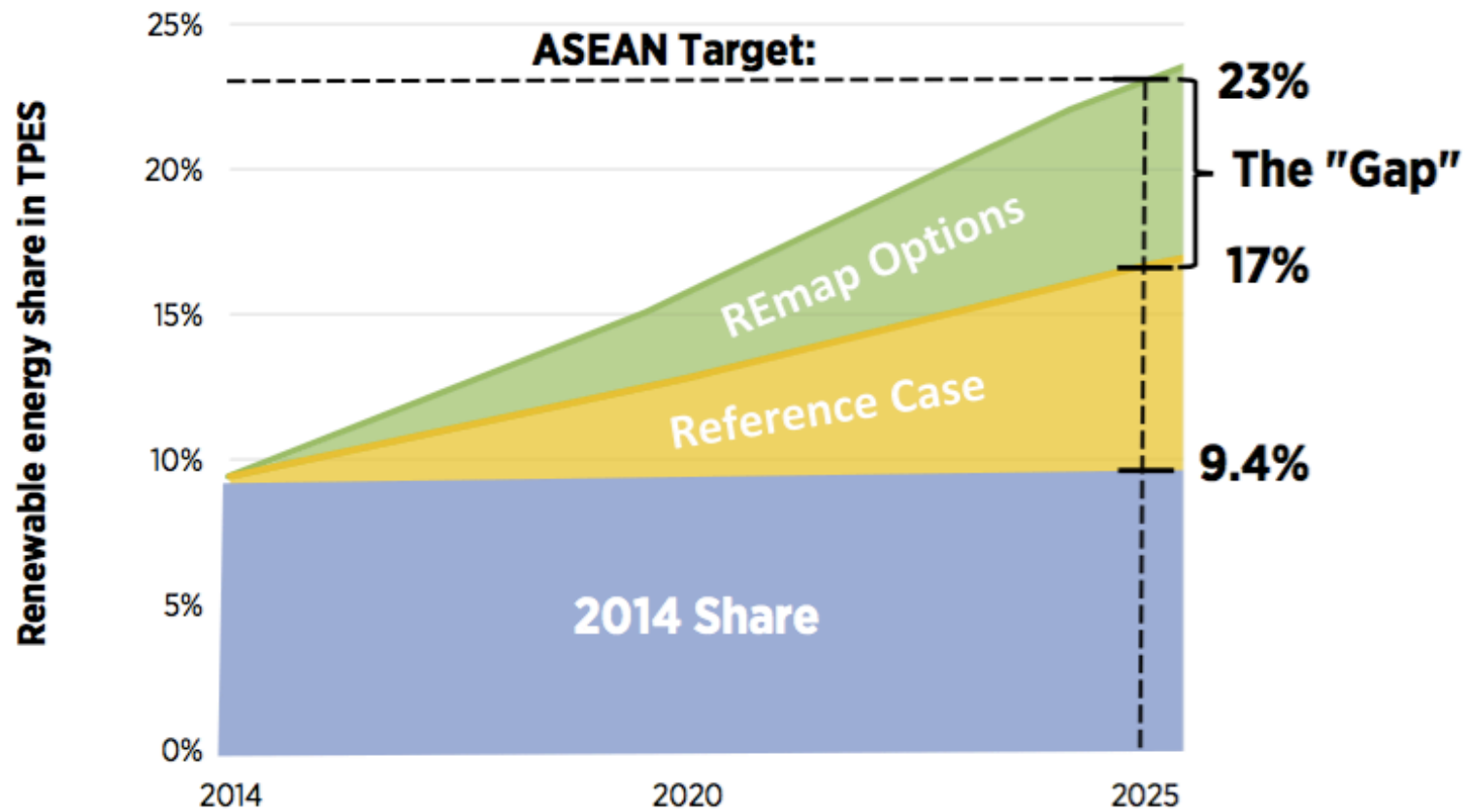
- Population growth: 615M (2014) → 715M (2025)
- GDP growth: +5% per year
- Energy demand: +4% per year until 2025, i.e. +50% over 2014 levels

Cf. share of global energy consumed in ASEAN: 5.7% → 7.5% (2025)

- Electricity demand: double 2014-2025
- Fuel demand in industry and transport: also increase
- Most demand to be met by: fossil fuels (oil, natural gas, coal); hydropower; geothermal; bioenergy for heating and cooking

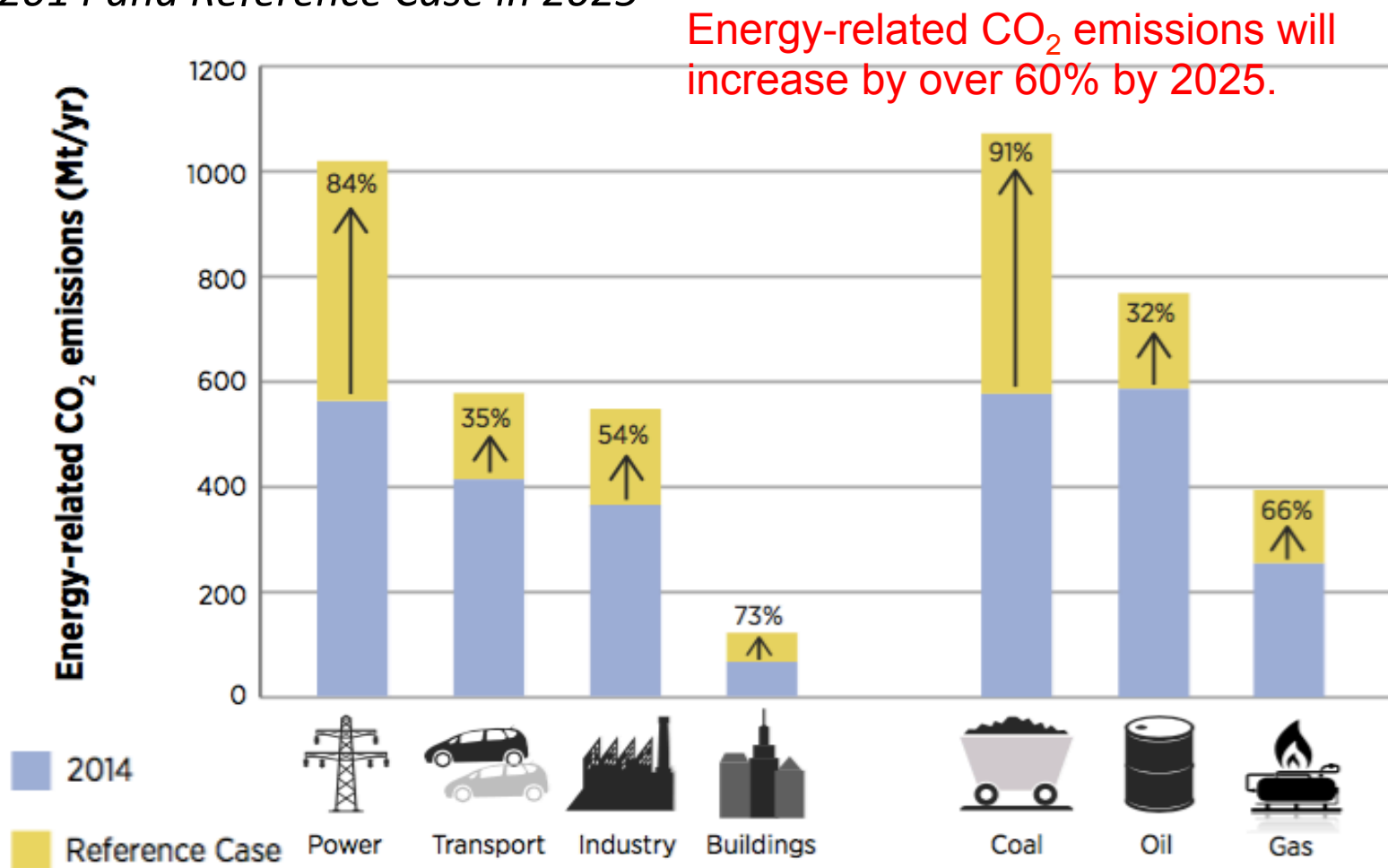
Source: IRENA and ACE (2016); OECD/IEA (2014))

Figure ES1: Renewable energy share in the ASEAN region in total primary energy supply to 2025



The renewable energy share will need to increase two-and-a-half fold by 2025 with a six percentage-point gap between the Reference Case and 23% target

Figure ES2: energy-related CO₂ emissions (lower figure) in the ASEAN region, 2014 and Reference Case in 2025



To meet the RE target

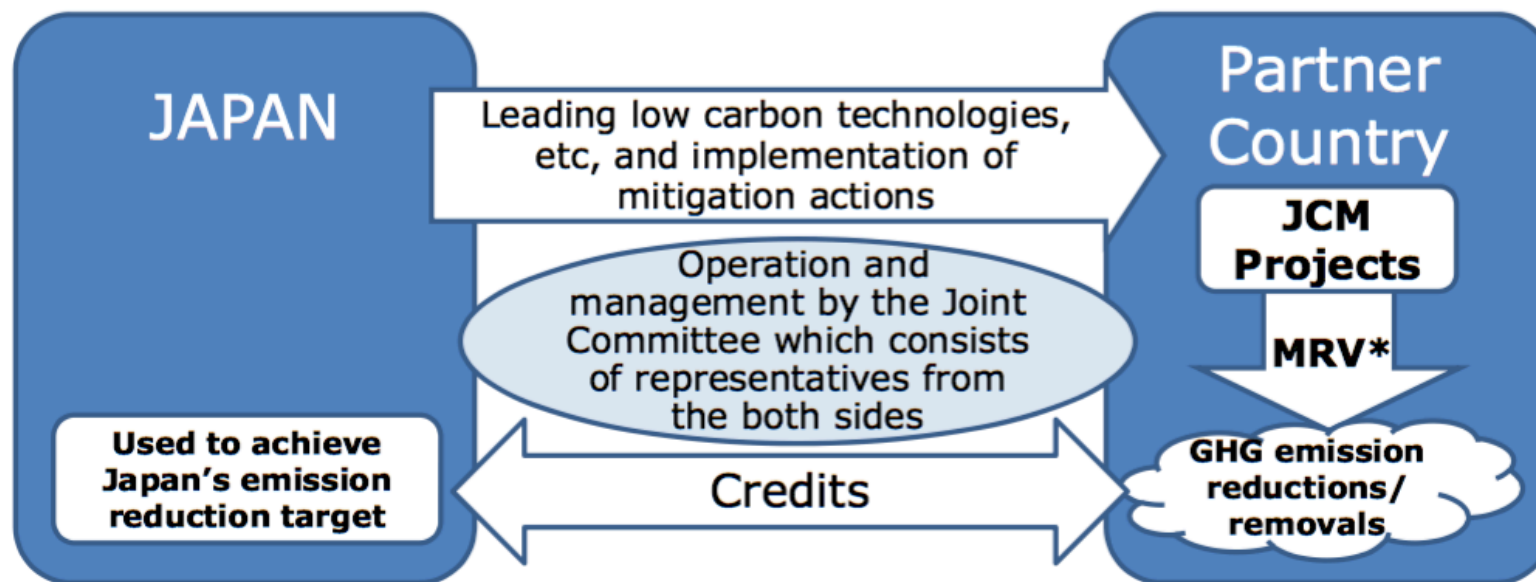
- ASEAN will need to invest **USD 27 billion annually**, a total of **USD 290 billion by 2025**, in renewable energy capacity
 - Reference case
 - New investment
 - Divestments from fossil fuels

Source: IRENA and ACE (2016)

- By 2025 across ASEAN renewable electricity will be competitive: supply at or below the cost of generation from non RE sources

JAPAN: Joint Crediting Mechanism (JCM)

- Facilitating **diffusion of leading low carbon technologies**, products, systems, services, and infrastructure as well as implementation of **mitigation actions**, and contributing to **sustainable development** of developing countries.





JAPAN: JCM

- Japan has held consultations for the JCM with developing countries since 2011 and has established the JCM with Mongolia, Bangladesh, Ethiopia, Kenya, Maldives, **Viet Nam, Lao PDR, Indonesia**, Costa Rica, Palau, **Cambodia**, Mexico, Saudi Arabia, Chile, **Myanmar and Thailand**. And **the Philippines** with intent to establish the JCM.
- Approved methodology, e.g. Anaerobic digestion of organic waste for **biogas utilization** within wholesale markets (VN)
- Feasibility studies, e.g. a **biomass power generation** project by rice hull and grain waste for RE field (Indonesia); refining waste water and residue into **bio gas** and supplying for vehicles for RE field (Thailand), city-to-city collaboration

EU Development Cooperation

- More than €170M for 2014-2020
- One of the three focal sectors:

Climate change, environment and disaster management
(€60 million/37.5 %) incl. environmentally **sustainable, low carbon and climate resilient cities**

- Projects, e.g.
 - SWITCH-Asia II (2014-20), a programme to promote sustainable consumption & production;
 - Technical assistance facility for connectivity and (sustainable) urban development in ASEAN;



References

Ministry of Environment, Japan (2016). Recent Development of the Joint Crediting Mechanism, August.

RENA & ACE (2016). *Renewable Energy Outlook for ASEAN: a REmap Analysis*. International Renewable Energy Agency (IRENA), Abu Dhabi and ASEAN Centre for Energy (ACE), Jakarta.