Panel Session 1
-Expectations to ACN -

Shigeru Kimura
Special Adviser to the President on Energy Affairs
ASEAN Energy Outlook by ERIA

• Final Energy Consumption

TFEC of ASEAN total (BAU):
2017: 480 MTOE
2050: 1,138 MTOE

Growth rates (2017-2050):
TFEC: 3.2% PA
Coal: 3.6%
Oil: 3.6%
Gas: 3.8%
(industry and transport use)
Electricity: 3.9%
Biomass: 0.1%

BAU: Business As Usual to apply existing EEC and RE policies
APS: Alternative Policy Scenario to apply ambitious EEC and RE policies

Source: ERIA ESP WG Report 2019-20
**ASEAN Energy Outlook by ERIA**

**Power Generation (BAU)**

- **Power generation in ASEAN (BAU)**
  - 2017: 1,041 TWh
  - 2050: 3,439 TWh

- **Growth rate by each power source in 2017-2050**
  - Coal: 3.6% increase
  - Oil: -2.4% decrease
  - Gas: 4.1% increase
  - Hydro: 2.0% increase
  - Geothermal: 3.6% increase
  - Others: 8.0% increase

- **Share by each power source from 2017 to 2050 (BAU)**
  - Coal: 37% -> 36% (27% of APS)
  - Oil: 3% -> 0%
  - Gas: 40% -> 46%
  - Hydro: 18% -> 10%
  - Geothermal: 2% -> 2%
  - Others: 1% -> 5% (12% of APS)

Source: ERIA ESP WG Report 2019-20
ASEAN Energy Outlook by ERIA

• CO2 Emissions

<table>
<thead>
<tr>
<th>Year</th>
<th>BAU 2050</th>
<th>APS 2050</th>
<th>APS 2050 with CCUS</th>
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<tbody>
<tr>
<td>EEC &amp; RE</td>
<td>377</td>
<td>876</td>
<td>529</td>
</tr>
<tr>
<td>Coal</td>
<td>1,217</td>
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<tr>
<td>Oil</td>
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<td>Gas</td>
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- Application of CCUS for thermal power generation plants of APS in 2050

Source: ERIA ESP WG Report 2019-20
Vision of Asia CCUS Network

Through collaboration and cooperation on development and deployment of CCUS in the Asia region, the Network will contribute to the decarbonization of the region.

2021
- Launch of Asia CCUS Network, which is served as platform to development of CCUS
  - Capacity building, Knowledge sharing
  - Launching new projects and proceeding with existing projects
  - Building storage potential mapping
  - Developing roadmap of CCUS

2025
- Development of projects and business environment
  - Suitable matching of emission sources and storage sites
  - Creating common rules
  - Project development in combination with new technologies and needs

2030
- Decarbonizing Asia Economic Zone with a focus on CCUS
  - Expansion to the Indo-Pacific region
  - Contribution to CO2 reduction targets
  - Commercialization of CCUS project in ASEAN
  - Activation of R&D
  - Asia Hub & Cluster
Mission of Asia CCUS Network

• Promote **knowledge sharing** through holding an annual forum, conferences, workshops, and meetings
  – 2021: Launching of ACN
  – 2025: Creating common rules and financial mechanism
  – 2030: Commercialization of CCUS projects in ASEAN

• Conduct **research studies** on technical, economical, and legal standards of CCUS in the EAS region
  – 2021: Developing roadmap of CCUS and storage potential mapping
  – 2025: Suitable matching between emission sources and storage sites
  – 2030: Asia Hub & Cluster to support CCUS value chain

• Holding **capacity building trainings**
  – 2021: Basic lecture
  – 2025: Project development
  – 2030: Activation of R & D
Memberships of Asia CCUS Network

• **Members**
  – Governments in EAS region
  – Role: Laws & institutions, policies

• **Supporting members**
  – **Private and public companies in EAS region**: Implementation of CCUS
  – **Academia in EAS region**: Technical, economical and legal studies of CCUS
  – **Finance sector**: Support investment to CCUS business
  – **Regional and international organizations, forums and initiatives**: Regional and international research studies of CCUS and coordination

• The members and supporting members **share the vision** and **support the mission** of ACN
Promotion of CCUS in Asia Region

• **CCUS** is a clean energy technology to mitigate CO2 emissions from large scale industrial facilities such as thermal power plants and iron & steel factories and consists of following three treatments;
  – Capturing CO2 at emission sites
  – Transport CO2 from emission sites to storage sites
  – Utilization and Storage CO2 at storage sites

• **Asia CCUS Network**: Contribute to set up CCUS value chain through knowledge sharing, research studies and capacity building trainings by 2030
Structure of Panel Session 1

- Each panelist is asked to make brief presentation mentioning issues & challenges in your field related with CCUS and expectations to ACN
  - 7-8 minutes per each

- Question from the moderator to each panelist
  - 10 minutes

- Dialogue among the panelists
  - 10 minutes

- Response to questions from Audience
  - 5 minutes
Thank You for your Attention!!