

GREATER MEKONG SUBREGION

2nd ENERGY TRANSITION TASK FORCE MEETING

4-5 December 2023, Siem Reap, Cambodia

SUMMARY OF PROCEEDINGS

I. Introduction

1. The 2nd Meeting of the Greater Mekong Subregion (GMS) Energy Transition Task Force (ETTF-2) was held in Siem Reap, Cambodia on 4-5 December 2023 in a hybrid format. ETTF-2 was followed by a training on regional power market for the GMS Regional Power Trade Working Group (RPTWG) on 6 December 2023.

2. ETTF-2 discussed the following: (i) progress on key workstreams under regional power trade, GMS ETTF activities with other subregional programs, and follow-up actions; (ii) ETTF workplan including scope of work, workstreams, working groups, and priorities; (iii) power sector development plans, and energy transition strategy and roadmap of GMS member states; (iv) trends and opportunities in regional power trade in other regions, e.g., ASEAN and Africa; (v) proposed technical assistance on regional power market pilot and shadow trade; (vi) concept note on regional power market and follow-up action plan for the RPTWG; (vii) capacity building and training needs of GMS member states; and (viii) development partners' regional power trade initiatives toward energy transition in the GMS. The agenda is in **Attachment 1**.

3. The Ministry of Mines and Energy, Cambodia, in cooperation with the Asian Development Bank (ADB) organized the ETTF-2. The meeting gathered about 70 participants from ETTF members, development partners, and ADB. See **Attachment 2** for the list of participants.

Day 1

II. Opening Session

4. Mr. Victor Jona, Under Secretary of State and Chairperson of the Second ETTF Committee Meeting, Ministry of Mines and Energy (MME), Kingdom of Cambodia, chaired ETTF-2. Mr. Jona emphasized the need to accelerate clean energy transition by providing a secure, reliable, and affordable energy and connecting grids beyond borders. He stressed the need to expedite multilateral trade, noting that the Laos-Thailand-Malaysia-Singapore (LTMS) Power Integration Project (PIP) has effectively demonstrated the viability of such trade in the region. To help shape strategies for the GMS, he suggested to draw lessons from the experience of Eastern African and Southern African Power Pool and learn the potential of regional power trade in various contexts. He requested participants to provide comments on the concept note on regional power market pilot and shadow trade in the GMS. Mr. Jona thanked Agence Française de Développement (AFD), Australia's Department of Foreign Affairs and Trade (DFAT), United States Agency for International Development (USAID), UNESCAP, ASEAN Secretariat, ASEAN Centre for Energy (ACE), and Heads of ASEAN Power Utilities/Authorities (HAPUA) for their participation in the meeting.

5. Mr. Keiju Mitsuhashi, Director, Pacific and Southeast Asia Region, Energy Sector Office, Sectors Group, ADB, in his opening remarks, stressed ADB's commitment to promoting regional

power trade and energy transition in the GMS. He highlighted the ETTF milestones, including the first ETTF meeting in June, energy partnership with ASEAN, and groundwork for the development of regional power market. He proposed the ETTF to revisit the vision and aspirations of GMS Leaders in 2002 in light of the signing of intergovernmental agreements on regional power trade in the GMS, unveiling of the first GMS masterplan for interconnection, setting up the Regional Power Trade Coordinating Committee (RPTCC), and signing of various MOUs to advance regional power trade. Mr. Mitsuhashi emphasized that the visions and aspirations of GMS Leaders for an integrated power market should persist with new approaches. ADB is committed to supporting the countries to realize their visions and aspirations through regional power markets and interconnection development.

III. Plenary Session

Day 1

A. Energy Transition towards ASEAN decarbonization: Actions and Progress

6. Mr. Prihastya Wiratama, Project Manager of ASEAN Power Interconnection Power, Fossil Fuel, Alternative Energy, and Storage (PFS) Department, ACE, explained the ASEAN perspective on low-carbon development and the ASEAN Plan of Action for Energy Cooperation (APAEC). He outlined the commitment of ASEAN member states in carbon neutrality and emission reduction target. Mr. Wiratama shared the findings of the updated study on renewable energy (RE) share and installed capacity to bring ASEAN on track toward the 2040 timeframe and foster greater collaboration for the establishment of the ASEAN Power Grid (APG). He also discussed the development of Carbon Capture Utilization and Storage (CCU/S) deployment framework and roadmap for ASEAN. The presentation is in **Attachment 3**.

B. Development of the ASEAN Power Grid and the ASEAN Interconnection Master Plan Study (AIMS) III

7. Mr. Iman Faskayana, Alternate Secretary-in-Charge, HAPUA, described the development of the APG, which is a key programme area under APAEC. Key strategies include expansion of regional multilateral electricity trading, strengthening of grid resilience and modernization, and promotion of clean and renewable energy integration. The way forward for the APG is to implement the findings of the AIMS Study III update, which suggests periodic alignment of AIMS with evolving national and regional power landscapes, establishment of a long-term RE target under the next APAEC, and more detailed analysis and plans for higher capacity additions for future priority interconnections, including a pilot project on multilateral power market. See the presentation in **Attachment 4**.

8. The following comments were raised.

- On the difference between optimal and high RE target, ACE clarified that under the optimal scenario, the potential RE in each country is optimized, resulting in realistic numbers on RE. Under the high RE, ACE pushes more than RE, i.e., replacing all fossil fuels to be utilized more than RE as a base load.
- Interconnection points and alignment of the two scenarios would depend on the capacity from potential RE and the readiness of each line, as in the case of Malaysia and Indonesia which will be ready in 2027.

- ACE is communicating with the GMS countries on the interconnection projects identified under the APG and AIMS III study. Singapore has opened a 4 gigawatt RE. Some ASEAN countries have new MOUs to develop lines from Cambodia to Singapore. There is also an opportunity to develop lines from Viet Nam to Singapore. These projects need to be referred to HAPUA council and working group and be considered in APG planning.
- ACE gave updates on BIMP PIP, including the connection of the West Sarawak and West Kalimantan; cooperation between PLN and SSP to conduct joint studies supported by USAID grant on the potential of using more hydropower from Kalimantan; conducted feasibility study to connect Sarawak to Sabah and Brunei. AIMS III will try to develop more details about multilateral power trade, including creation of regulatory framework and platform for data sharing. It was suggested to consider the aspiration of each country to develop potential line from Cambodia or from Viet Nam to Singapore. In the future, AIMS III will be updated to accommodate more than 18 potential lines.
- The MOU of the APG is valid until 31 December 2024. The extension will be proposed in 2025 once the draft is ready and each country agrees to the extension.

C. Promoting Regional Power Market and Interconnection Development in the GMS and other subregions in ASEAN

9. Ms. Hyunjung Lee, Senior Energy Economist, Pacific and Southeast Asia Team, Energy Sector Office, Sectors Group, ADB, talked about accelerating the multilateral power trade through regional power market and interconnection development, which will be a focus of multilateral cooperation programs in the GMS or ASEAN. With the need to update and reassess approaches to accelerate multilateral power trade, Ms. Lee explained the details of the proposed regional power market development which has been discussed extensively in 2023, including primary purpose, criteria for design, components, consultation and engagement process, and key milestones. Refer to **Attachment 5** for the presentation.

D. Country Presentations

10. GMS country representatives provided updates on the (i) country's power sector development plans (e.g., new policies, plans, tariff regulations), energy transition strategy and roadmaps; (ii) development of high-voltage cross-border power interconnections, i.e., new MOUs, agreements or projects; (iii) actual data of cross-border power trade and projections of demand and supply; (iv) existing and future planned high-voltage interconnections; (v) plans for the development of renewable energy, energy storage systems, smart grids, electric vehicles, demand response, and energy efficiency; (vi) investment requirements and financing challenges for energy transition; and (vii) specific capacity building needs for energy transition.

11. Comments are summarized below.

Thailand

- On the implementation of the Demand Response Control Center, the Electricity Generating Authority of Thailand (EGAT) cooperates with the distribution system operator where they collect the load from end users and compensate the amount of load reduction. The cost is separate from the electricity price which the government supports.

Cambodia and Viet Nam

- Both Cambodia and Viet Nam provided updates on their respective MOUs with Singapore. A study of the linkage of submarine cables between Cambodia and Singapore is ongoing. The cost estimates for subsea connector are not yet finalized for both Cambodia and Viet Nam.

E. Regional Power Trade for Sustainable Energy Transition in the GMS

12. Development partners discussed their initiatives in the GMS regional power trade interconnections that support energy transition plans. The support comes in the form of technical assistance, pilot investments, capacity building and knowledge sharing, and potential collaboration opportunities with GMS programs.

13. Dr. Mirza Huda, Lead Researcher, Climate Change in Southeast Asia Programme, ISEAS -Yusof Ishak Institute, shared virtually some lessons from the LTMS-PIP. Two success factors were identified: (i) governance mechanism that promotes country ownership and (ii) political commitment expressed multiple times at the ASEAN and country levels. Challenges met include maximum grid capacity at 300 MW limits future expansion, lack of consensus on the effectiveness of wheeling charges, climate change and human impacts on hydropower development, and the negative social and environmental impacts of hydropower dams. Dr. Huda gave some policy recommendations to address the political, technical, and institutional requirements of a regional power trade. See **Attachment 6** for the presentation.

14. Ms. Yejin Ha, Economic Affairs Officer, Energy Connectivity Section, ESCAP, participating virtually discussed the Green Power Corridors (GPC) and lessons from ESCAP's Regional Roadmap on Power System Connectivity. She highlighted the key multilateral connectivity initiatives in the Asia-Pacific region, including the GMS connectivity initiative, GPC framework including the components, case study, and various phases of implementation; and proposals to accelerate energy connectivity in the GMS and Southeast Asia. The presentation is in **Attachment 7**.

15. Mr. Grayson Heffner, Director, Utility Modernization and Power Trade, USAID Southeast Asia Smart Power Program (SPP), gave a presentation on the SPP, which is a five-year program to promote energy trade, support open and transparent energy markets, and accelerate ASEAN's transition to clean, reliable, and affordable energy. SPP aims to increase regional power trade by 5%. The SPP strategies for advancing the APG include wheeling charges, tagging delivery of RE in grids, development of RE certificates, variable RE, 3rd party funding of greenfield interconnector, capacity building workshop on subsea interconnector (Jakarta: May 2024) and coordination of power development planning. Mr. Heffner also shared the planned SPP support for the APG through 2024. Refer to **Attachment 8** for the presentation.

16. Mr. Dwight Ronan, Senior Program Manager, DFAT Bangkok office, gave an overview of the work of Australia in the Mekong region on energy and climate. Through the Partnership for Infrastructure (P41), Australia is working with ASEAN member states on transport and energy transition. Mr. Ronan also shared Australia's engagement in various GMS countries, such as (i) the Thailand-Australia Strategic Partnership; (ii) work on electric vehicles in Cambodia and the Cambodia-Australia Partnership for Resilient Economic Development; (iii) Laos-Australia Sustainable Energy Partnership; and (iv) Australia and Viet Nam signed the enhanced economic

engagement strategy with energy cooperation as one of the key pillars. The work in the PRC and Myanmar are handled by the Australian embassy in Beijing and Yangon, respectively.

17. The following points were discussed:

- USAID collaboration with GMS countries to organize workshops on hybridization strategy was sought to benefit the countries not only in advancing power infrastructure but also to facilitate inter-country electricity trade. USAID expressed interest in collaborating with ADB to hold a workshop on robust hybridization strategy. Information on how variable RE can be firmed and can be exported with similar quality as thermal power or hydropower plant to importing countries was emphasized.
- On balancing the fluctuations of RE, approaches are in place around the world where hybridization strategies have been effective. Hawaii is an example where there is about 40% penetration of variable RE in the system and the project developer is required to include hybridization strategy as part of the auction. Other examples can be included in the workshops.
- On the lessons learned and best practices from the LTMS study, the working group and task force structures can be replicated. However, there are some limitations. The current infrastructure capacity is 200 megawatts and expanding LTMS will require infrastructure upgrade. Further, LTMS is unidirectional, with electricity trade only from Laos to Singapore. For the higher level of energy integration, there is a plan to consider bidirectional grids. Opinions differ on the effectiveness of wheeling charges, and it was suggested to look at best practices of wheeling charges.

F. ETTF Operations strategy: Enhanced cooperation with ASEAN and other development programs

18. In the presentation on the GMS ETTF Operation Strategy Proposal, Ms. Hyunjung Lee, ADB, emphasized two points. First, the clear economic and decarbonization benefits of regional power trade requires a much broader dialogue beyond the GMS and stronger cooperation with ASEAN. Second, generation and transmission investment requirements are vast, even from preliminary figures, and cannot be entirely financed by state-owned enterprises (SOEs) and require private sector participation. To address these, the GMS ETTF is considering three strategic approaches: (i) strengthen partnership with ASEAN bodies (HAPUA, APGCC, AREN, ACE), subregional programs (LTMS), and other development partners; (ii) increase and engage private sector participation; and (iii) allow flexibility in ETTF meetings and events. For the first approach, ETTF is (i) implementing a shadow and pilot regional power market project jointly, (ii) organizing joint or back-to-back meetings and workshops, and (iii) expanding virtual invitations to other organizations or programs. More details are provided in **Attachment 9**.

19. The ETTF Chair informed the meeting that Cambodia will turnover chairmanship to Lao PDR. He reiterated the conduct of two ETTF meetings in a year, one in June and one in December. Considering that ASEAN Senior Officials Meeting on Energy (SOME) Plus Three meetings also take place in June, it was suggested to hold one ETTF meeting on the sidelines of SOME.

20. Countries provided the following comments.

Cambodia

- Align ETTF meetings on the Regional Energy Planning (REP) to APAEC as it plays

an important role in consolidating policy frameworks from subsector networks and presented at the SOME.

- Explore opportunity to collaborate with the PRC by actively engaging the ETTF program in the ASEAN-China Energy week as well as Asia Pacific Energy Regulatory Forum where the PRC plays an important role.
- Cambodia supports ETTF, including attracting other partners such as the private sector to learn from them on the implementation of LTMS-PIP.
- Cambodia supports virtual meetings.
- Additional reflections: Consult the ASEAN Secretariat on the possible room in the SOME Plus Three meeting and consider the proposal to cooperate with development partners given their requests to ASEAN. In principle, ASEAN welcomes all cooperation, but it needs a clear concept note and clear direction on the cooperation. ASEAN abides by the same principles: (i) ensure that the mechanisms of working together are in place, (ii) align work with APAEC, and (iii) avoid duplication with other development partners.

People's Republic of China

- The National Energy Administration (NEA) of China held the 2023 China-ASEAN Clean Energy week (CACEW) in September 2023, including (i) the 6th East Asia Summit Clean Energy Forum, (ii) the 6th ASEAN Plus Three Clean Energy Roundtable Dialogue, and (iii) China-ASEAN Clean Energy Capacity Program: 2023 Exchange Project. China Renewable Energy Engineering Institute (CREEI) provide the technical support.
- In the future, the PRC hope more stakeholders on cross-border electricity trade. CSG is mainly responsible enterprise in GMS.

Lao PDR

- Lao PDR supports organizing ETTF meetings twice a year and conducting one meeting on the sidelines of SOME in June.

Myanmar

- Myanmar agrees in principle with the approach and is committed to actively participate in the ETTF program. Many agencies and ministries are involved in the energy sector in Myanmar and it was proposed that ETTF consider those institutions.

Thailand

- Holding meetings together can give a bigger picture, while separate meetings will allow focus on GMS concerns.

Viet Nam

- Keep the same members for each meeting to ensure productive exchange and provide insights from past meetings. The work of RPTCC in the last 20 years achieved a lot of targets and outcomes. The success of every working group or task force depends on the member participants.
- Harmonize ETTF with other bodies like ASEAN. However, in Viet Nam, different bodies have different members. Thus, back-to-back meetings are a good option and in addition, Viet Nam tries to share the information with other members of other groups.

21. ADB gave the following views:

- A lot of work needs to be done to align with ASEAN activities and other forums and avoid overlaps, including on representatives, venue, format, etc. These will be considered.
- A broader network and outreach would be needed so that other activities in the region are not missed.
- Working with the private sector will be done selectively and in small scale. They can be invited as resource persons based on the recommendation and support of ASEAN member states that can provide an enabling environment for the private sector to be more active in the country and then explore later how they can increase private sector participation.
- More work needs to be done on the ETTF activities. ETTF will continue to conduct two meetings in a year and be flexible with the arrangements, including with the ASEAN SOME Plus Three, timing and membership. Luang Prabang will be considered as the next venue of the ETTF meeting.
- Cooperation with ASEAN and other fora will not undermine the uniqueness of GMS and will continue to keep the GMS ETTF identity. The purpose of discussion is to explore cooperation with other fora and explore if the organization can be streamlined, and the relationship and trust built within the GMS.

Day 2

A. Regional Power Trade Trends and Opportunities in Other Regions

22. Mr. Jonathan Hedgecock, International Regional Power Trade Expert, ADB Consultant; and Mr. Hans-Arild Bredesen, International Power Market Expert, ADB Consultant, gave a presentation on the regional power trade potential in the GMS countries following lessons learned from Eastern African and Southern African Power Pool. Key observations are as follows: (i) there is a wide range of international experience to draw upon in developing a regional market; (ii) markets grow from identifying opportunities to trade surplus energy between countries and regions arising from resource differences, load patterns and seasonality; (iii) integrating national markets into a regional market on a step-by-step basis is a key to success; (iv) liquidity in regional markets grows once participants can see the benefits of potential trades; (v) top-down organisational/regulatory requirements should be limited to key decisions needed to enable utilities to explore opportunities; and (vi) interconnection is the key facilitator for market expansion. Other details of presentation are in **Attachment 10**.

23. Key points discussed:

- Lao PDR shared concerns on the excess energy supply during rainy season and limited supply during dry season. Shadow trading could be a good way to explore various scenarios and simulations. Lao PDR has independent power producers (IPPs) and direct transmission lines exporting to neighbors. It can explore selling surplus during wet season and utilizing surplus in a more efficient way. While countries have bilateral contracts, they have the option to go to the market and trade there instead, which gives opportunities for market development.
- Who trade electricity across the grid-to-grid interconnection needs to be understood. They could be a bilateral agreement between two power utilities. Diverse players want to enter the market using grid-to-grid interconnection. Thus, the market is creating the opportunity to utilize grid-to-grid interconnection more efficiently. Unlocking that grid-to-

grid interconnection through the availability of market platforms that can optimize the use of the interconnection capacity is very valuable.

- The regional market will allow everybody to trade if there is a grid connection and agreement with the transmission system operator (TSO), market participant agreement or market participant fee. There are flexible solutions that allow for everybody that the country would allow to trade.
- Transmission pricing across the world can be looked at and conclude that there is no agreed right answer to how it is done. Different options require different ways of doing in each country. The key to shadow trading is to illustrate different ways of doing it and finding solutions for each country.
- Regional electricity markets cannot guarantee lower prices, but the result would be getting optimal use of resources and cost-effective pricing.

B. Regional Power Market Pilot and Shadow Trade Project in GMS/ASEAN: Final Concept Note Endorsement and Discussion on the TORs and Implementation Arrangement

24. Ms. Hyunjung Lee, ADB, facilitated the session that reviewed and endorsed the concept note on the regional power market pilot and shadow trade project, including the consulting services terms of reference (TORs) and implementation arrangement. Based on this discussion, ADB will process a new regional technical assistance to support establishing a regional power market within GMS/ASEAN to accelerate energy transition through bilateral and multilateral power trade. This TA is aligned with ASEAN and GMS initiatives to enhance cross-border electricity trade and facilitate the development of power interconnection projects to optimize renewable energy resources, and thereby enhancing energy security and resilience.

C. Energy Efficiency – Proposal for the Energy Efficiency Activities with the aim of Energy Efficiency Working Group Establishment in 2024

25. Ms. Architrandi Priambodo, Senior Energy Specialist, Pacific and Southeast Asia Team, Energy Sector Office, Sectors Group, ADB; and Rajeev Ralhan, Energy Efficiency and Performance Standard Specialist, ADB Consultant, led the session that discussed key areas of capacity building activities in energy efficiency and energy conservation to be implemented in 2024. The series of capacity building activities are expected to lead the GMS member countries in formulating high-level key action plans to promote financing in energy efficiency and energy conservation. The following topics were proposed to be explored for Policy Support Work and Online Trainings in 2024: (i) trainings/support energy efficiency in both supply and demand side power sector, (ii) trainings on developing ESPC Market Development, (iii) work towards supporting implementation of Energy Management Systems (EnMS), and (iv) supporting Financing for Energy Efficiency in GMS and ASEAN. See presentation in **Attachment 11**.

26. The following comments were provided:

Cambodia

- To support industrial consumers in Cambodia, the Energy Efficiency Revolving Fund for energy-efficient equipment is being developed. The objective of the fund is to identify projects that can be supported and make available, possibly cheap financing, for industries to implement low-carbon technologies. The fund aims to provide access by small- and medium-sized local enterprises that would not otherwise be able to

access local financing. Energy efficiency financing is a market that local commercial banks are not familiar with.

- Supporting the implementation of energy efficiency and attracting more financing will require cooperation with transport and industry sectors and ensure that financial resources are allocated efficiently. To address this, (i) create an enabling environment for investments on energy efficiency, such as supporting policies and regulations; (ii) create financing mechanism that can support investments on energy efficiency by the private sector and can serve as models for replication; and (iii) consider the relevance of piloting.
- Work on developing standards for transformers has not started. Once there is a buy in on the priority areas, the decision will be made to move forward.

Lao PDR

- The Electricite Du Laos (EDL) has been working on the energy efficiency approach, with both technical and non-technical standard of the energy meter to focus on reducing the losses in their power system. Lao PDR proposed to include in the training on energy efficiency both the supply and demand sides.
- Implement a top-down approach on policy and regulatory support, especially for the industry buildings and residential sectors. Implement campaigns or provide incentives to users.
- Capacity building activities can include regulatory framework.

Myanmar

- Develop training on improving efficiency of transformers/electronic motors, electrical and electronic appliances for power system.
- Include in the capacity building training the following: (i) standard for electric motor, (ii) digital tool for enhanced implementation of EMS in industry, and (iii) financing mechanism of energy efficiency in industry building and transport sector.
- Myanmar will cooperate in the sector work of energy efficiency to be carried out under the GMS ETTF. It is proposed to participate the representatives from the Ministry of Industry in the trainings and workshops on energy efficiency.
- Since the GMS member countries have high energy consumption, the utilization of renewable energy should be considered to meet the energy demand. In addition, green energy transition should be encouraged to increase energy efficiency. Therefore, it is recommended that training programs and seminars needed for capacity building with cutting-edge technologies related to green energy and renewable energy should also be provided to the member countries.
- In the GMS ETTF TORs agreed by RPTCC 29, it was mentioned that “Each GMS country will nominate four persons to be ETTF members, headed preferably by the GMS National Coordinator (NC+4). The suggested members of the Task Force are high-level officials (DG/DDG) of relevant ministries.” As we, GMS National Secretariat, recognized, the GMS Secretariat hasn’t requested the nomination for ETTF yet. We are just providing the participants list for ETTF meetings which held two times, once in June and once in December 2023. We have noted that Cambodia also discussed and proposed to hold a virtual consultation on the TOR to allow participation of other ministries including the Ministry of Finance during the 2nd ETTF Meeting. As discussed by the representative of Myanmar during the 2nd ETTF meeting, many agencies and ministries (such as Ministry of Agriculture, Livestock and Irrigation -

MOALI, Ministry of Transport and Communications - MOTC, Ministry of Natural Resources and Environmental Conservation - MONREC, Ministry of Electric Power - MOEP, Ministry of Energy, Ministry of Industry and Ministry of Science and Technology – MOST) are involved in the energy transition process in Myanmar. Therefore, it is proposed that the GMS ETTF Secretariat should consider the task force membership for the coverage of the relevant ministries and agencies when requesting the nominations for the GMS ETTF. We, National Secretariat, would also like to suggest that it would be better leading by the high-level official of the ministry concerned with the energy sector rather than the GMS NC.

Thailand

- Thailand agrees with the capacity building proposed on demand response and other strategies to reduce network losses to promote utility side initiatives.
- Include harmonization on the efficiency standard among GMS countries, using standard such as IEC for models and SEPS for NEE labelling.
- Thailand agrees with Cambodia's comment on financial model that supports small-scale enterprises.

Viet Nam

- The energy efficiency law in Viet Nam was issued more than 10 years ago. While a lot of results have been achieved, there is still much potential for improving energy efficiency in Viet Nam and other countries. Consider changing the approach to energy efficiency with industrial customers requiring commitment to clean energy usage.
- Create motivation for customers and implement behaviour change communication toward energy efficiency.
- Provide incentive mechanisms for energy efficiency.

D. Capacity Building and Training Needs of GMS Countries under ETTF

1. 2024 Capacity Building Program to Support GMS ETTF's Clean Energy Transition Efforts.

27. Mr. Joao Aleluia, Energy Specialist, Pacific and Southeast Asia Team, Energy Sector Office, Sectors Group, ADB, introduced the session and noted that capacity building and training is one of the main components of the ETTF framework, along with the promotion of regional powers trade in the GMS and enhancing energy efficiency. ADB as Secretariat of ETTF is committed to delivering the training component but would require significant resources and need to find the balance between the resources employed.

28. Mr. Taeil Kang, GMS ETTF Renewable and Energy Efficiency Specialist, ADB Consultant, discussed the 2024 Capacity Building Program to support GMS ETTF's clean energy transition efforts covering (i) regional power market development and (ii) renewable energy integration and power grid infrastructure advancement. The session provided an opportunity for GMS countries to highlight specific areas in which they will need assistance and develop a capacity building program 2024-2025 based on the partnership with other development partners and ASEAN programs. **Attachment 12** gives the details on the training program.

2. GMS Knowledge Network: Knowledge-based Policy Dialogue in the GMS

29. Mr. Antonio Ressano, Principal Regional Cooperation Specialist, Regional Cooperation and Integration Unit, SERD, ADB, briefed the participants virtually on the new initiative launched by the GMS Program in 2022--the GMS Knowledge Network (GMSKN). Mr. Ressano discussed the GMSKN objectives, outputs, and progress to date, including the preparation of a stocktaking study which will identify priority themes and sectors. Energy was identified as one of the priority areas, specifically, (i) subregional power trade, market development and integration; (ii) physical, technical, and operational cross-border interconnection; and (iii) promotion of green energy consumption through the e-vehicle, reduce greenhouse gases, and increase national renewable energy production. Refer to **Attachment 13** for the presentation.

3. Australia Study Tour Program in 2024

30. Mr. Richard Neumann, DFAT, shared the design of the ETTF study tour to Australia. Adopting the theme, "Toward 100% green energy transition: Technology, Market, and Policy," the tour is proposed to be held on 11-15 March 2024. Mr. Neumann described the detailed program and shared a glimpse of the energy transition in South Australian power system, citing it as an excellent case for the design of GMS energy transition.

31. These comments were provided.

- On the GMSKN, Myanmar suggested additional topics as part of interconnectivity, including focus on grid-to-grid interconnectivity and harmonization of grid code.
- Moreover, add energy efficiency and under it, not only electric vehicles but also, industry, private sector and other sectors such as agriculture and urban development.

E. GMS Program Updates (including the preparation for GMS Summit in 2024)

32. Ms. Pinsuda Alexander, Economist (Regional Cooperation), Regional Cooperation and Integration Unit, Southeast Asia Department, ADB, gave a virtual presentation on the GMS Program updates, including an overview of the GMS Program initiatives and plans. She discussed and requested feedback on the GMS Regional Investment Framework (RIF) 2023-2025 and 2024-2026. Ms. Alexander also discussed the work on strategic alignment with the preparation of the sector strategy framework. See **Attachment 14** for the presentation.

33. On the preparation of sector strategy, it was suggested to consider the ETTF TOR endorsed by GMS member states in June 2023. The TOR provides a good background on the dynamic situation of the energy sector in the region. In terms of strategic priorities and in line with the GMS 2030, the sector strategy can be strengthened to include crosscutting themes and consider risks and mitigation measures.

F. Green Financing Training under ETTF

34. Mr. Joao Aleluia, ADB discussed the key takeaways from the recent green financing training organized in Bangkok on 3-4 October 2023 and a brainstorming session on key strategies and actions for green financing programs under ETTF. Possible topics for future training include: (i) deep-dive on transition finance, which could cover more comprehensively all steps from project origination to implementation, (ii) legal frameworks to support issuance of

green bonds, (iii) more detailed presentation of case-studies, which could be presented by representatives of the respective entities, (iv) additional training in taxonomies, and (vi) technical assistance in projection selection and analysis. **Attachment 15** provides the details.

35. Thailand shared discussion with the Public Debt Management Office under the Ministry of Finance about the country's efforts to increase the size of sustainability bonds and drive the SOEs' capability to issue this kind of bond. In Thailand, every infrastructure investment project has a plan, and the criteria for selecting those projects are relevant to this transition bond or green bonds.

G. Key takeaways on the GMS Regional Meeting: Perspective from GMS EETF Chairperson (Cambodia)

36. Mr. Keo Vichet, Deputy Director, Department of Energy Development, General Department of Energy, Ministry of Mines and Energy, Cambodia and Ms. Architrandi Priambodo, ADB, briefed EETF on the outcome of the GMS Secretariat Consultation Meetings held in Bangkok on 17-20 October 2023 covering the following topics: (i) Enhancing Digitalization in the GMS Program, (ii) Enhancing the Role of Private Sector in the GMS Program, (iii) Development Partners in the GMS Program, and (iv) Strengthening GMS Program's Engagement with Local Governments. See **Attachment 16** for the key takeaways for each meeting including how EETF complements the GMS-2030.

H. The EETF and Planning of Future Activities and Agreed Actions from 2nd EETF meeting for implementation in 2024

37. The session discussed the EETF Work Plan and its scope of work including workstreams such as (i) regional power trade, (ii) energy efficiency, and (iii) capacity building/green financing, working groups, and other priorities. The EETF Chair and Ms. Hyunjung Lee, ADB, moderated the session.

38. Countries provided the following comments:

Cambodia

- It is important for Cambodia to join the capacity building training on green financing.
- It would be better to hold a virtual consultation on the TOR to allow participation of other ministries including the Ministry of Finance.

People's Republic of China

- The PRC wants to engage in the GMS regional cooperation.
- The country will continue to share experience and learn from regional countries.

Lao PDR

- Lao PDR emphasized the importance of regulation of the power market.
- Capacity building training on regional power trading is important and Lao PDR is interested to participate in the trainings.

Myanmar

- Myanmar requested to physically attend meetings and trainings in the future.

Thailand

- Thailand appreciates ADB's efforts to advance energy transition in the GMS countries.
- The capacity-building activities are very useful and are applied in their work.
- Thailand has taken energy transition seriously and gave update on Thailand initiatives on energy transition.
- As the PRC is the most advance in technologies, it was suggested to organize a visit to China.
- Thailand requested ADB to share knowledge on virtual power plant and load forecast for all the countries.

Viet Nam

- For the regional power market in general, Viet Nam agrees with the update, timeline, and progress. Vietnam will also provide official comments.
- To have a productive ETTF meeting, it was suggested to identify in advance the key issues and the main content of the meeting and focus on pending issues.
- Capacity building should be prioritized. In addition to the study tour in Australia, it would be useful to also get views from European countries given the complexity of operating a regional power market.

39. ADB expressed appreciation of the comments and noted that those would be considered in the design of ETTF programs and activities in the coming years.

I. Closing of the 2nd ETTF Committee Meeting

40. The Co-chair highlighted these key points: (i) the regional power market is not just for cost-cutting or cost-saving; it aims to strengthen energy security when there is a surge of potential for RE coming into the system; (ii) regional power market development is not just for economic development but for energy security which is important for each country and the utility operation; (iii) coordination and alignment with other fora is important; (iv) GMS as the core group will ensure its identity going forward; and (v) bringing in the private sector is important but will be done in a gradual manner; the public sector can enable them to work as resource person as an initial approach. On the way forward, the ADB team is ready to support consultation if necessary. As the ETTF program is full of expanding training and capacity building, provided with ideas and feed backs, ADB will prioritize and make 2024 a good learning year for ETTF.

41. The Chair reiterated the importance of energy transition, integrating renewable energy, energy efficiency and conservation, electric vehicles, and power transmission linkages. He cited the case of Singapore which requires power from Cambodia, Viet Nam, Lao PDR, and Thailand to mitigate the use of fossil fuel. In closing, the Chair extended heartfelt appreciation to all participants for their active engagement, insightful contribution, and unwavering commitment to advancing regional power, trade, and energy efficiency in the GMS. The Chair also expressed appreciation to ADB and the development partners for their continued support and collaboration.

Day 3

42. Mr. Hans-Arild Bredesen, International Power Market Expert (ADB Consultant) led the training on shadow market trading using a real trading platform. Participants provided the following feedback.

Cambodia

- Is shadow power market possible? It requires lots of time to learn the basics. How can countries benefit from it? Please share the algorithms to allow the countries to 'play' in the market.
- A lot of questions remain, and Cambodia/the GMS countries may take time to adopt the new approach.
- It would be good for GMS to start adopting the approach in the very near future.

People's Republic of China

- Suggestions: more exchanges on the technical aspects, a joint study on regional power market in which the PRC can share their experience.

Lao PDR

- The training is very useful for GMS countries.
- It was good to learn shadow power trading ahead of actual regional power market.
- Suggestions: GMS countries need to apply the approach; a study tour in a power market like GMS.

Myanmar

- The country has no experience in power market yet but hopes to participate in the next trainings.

Thailand

- Thailand and GMS countries can benefit a lot from the development of regional power market.
- Suggestions: next training can go deeper on how to develop shadow power trade and how the mechanism works, create imaginary power market for GMS, share South Korea's experience in power market transformation.

Vietnam

- The training is complicated.
- Suggestions: organize country training in the local language, more exciting exercises to learn more about the Africa power pool, GMS countries can go to Vietnam to learn about its national electricity market.

HAPUA

- They will support the project on the shadow power market.

43. Ms. Hyunjung Lee, ADB, requested the participants to review the concept note again and provide comments until mid-January. The project will be funded by ADB and led by ASEAN/GMS. The suggested country-level training can be organized if there is a shadow trading platform in the GMS, which the project will support. The next meeting will be in the PRC. ADB will discuss with the Chair (Cambodia) the event preparation.