GREATER MEKONG SUBREGION
29th MEETING OF THE REGIONAL POWER TRADE COORDINATION COMMITTEE (RPTCC-29)
5-6 July 2022, Siem Reap, Cambodia

SUMMARY OF PROCEEDINGS

I. Introduction

1. The Greater Mekong Subregion (GMS) countries convened the 29th (the final) Meeting of the GMS Regional Power Trade Coordination Committee (RPTCC-29) in a hybrid format (with in-person in Siem Reap, Cambodia and via web-based conferencing) on 5-6 July 2022. RPTCC-29 was a landmark meeting signaling the evolution of RPTCC into the GMS Energy Transition Taskforce (ETTF).

2. The meeting discussed (i) country updates on the latest power sector development situation, status of cross border power trade, and renewable energy deployment; (ii) RPTCC's achievements in harmonizing GMS power systems to facilitate regional power trade; (iii) key energy transition topics such as: role of carbon finance, energy efficiency, energy storage, Korea's experience on renewable energy and demand management, ADB's energy transition mechanism, Cambodia's solar park project and the rapid expansion of renewables in Viet Nam; (iv) development partners' support for energy transition in the GMS, (v) updates on the new Regional Investment Framework (RIF) 2025, Results Framework and Development Partner engagement; and (vi) the scope of the expanded ETTF and related ADB support. **Attachment 1** contains the detailed agenda for the 2 days**.**

3. The meeting was hosted by Cambodia and led by Dr. Choun Sambathratanak, Director, Ministry of Mines and Energy. The meeting was co-chaired by Dr. Chansaveng Boungnong, Director General, Department of Energy Policy and Planning, Ministry of Energy and Mines, Lao PDR and Mr. Toru Kubo, Director, Energy Division, Southeast Asia Department, ADB. Over 80 participants joined the meeting with around 30 attending in person. Cambodia, Lao PDR, Thailand, and USAID attended in person and participants from Myanmar, PRC, Viet Nam, and other development partners (AFD, GIZ, AUS DFAT) joined virtually through Zoom. **Attachment 2** provides the list of participants.

II. Opening Session

4. The Chair, Dr. Chansaveng Boungnong from Lao PDR warmly welcomed all participants. He emphasized the important role of RPTCC on regional power trade matters in the GMS as well as facilitating exchange of information despite the difficulties due to the COVID-19 pandemic. He expressed his appreciation to all participants on their continued contribution to pursue cooperation in the energy sector. Further, he highlighted the ongoing energy transition era that will be marked by the shift from fossil fuels to clean energy sources, and stressed that promoting regional power trade, expanding low carbon fuels usage, and deploying renewable energy are all important steps in achieving the energy transition. Lao PDR's speech can be found in **Attachment 3**.

5. Mr. Toru Kubo, Director, Energy Division, Southeast Asia Department, ADB co-chaired the meeting. In his opening remarks, he congratulated policy makers, regulators, key market players, and stakeholders for their critical support during the pandemic that enabled everyone to stay connected, keep economies running, and supported the continued operation of essential health and social services, including the cold chain storage chains required for vaccination. He

noted the significant progress accomplished by RPTCC on regulatory and technical harmonization among the GMS power systems over the past decade. He thanked participants for approving the terms of reference of the ETTF which also received strong support from the GMS Senior Officials Meeting held in June 2022. Mr. Toru provided further context for the energy transition and ETTF, discussing the challenges and opportunities. Finally, he emphasized the key enabling role of governments in the energy transition under five pillars referred to as the "5 Ps": (i) sound long-term plans, (ii) enabling policies, (iii) supporting key stone projects, (iv) strong partnerships, and (v) people who can drive the change and mobilize others. ADB Director's speech is in **Attachment 4.**

III. Plenary Session

Day 1

A. Country Presentations

6. GMS countries provided updates on: (i) their country's power sector development (e.g., new policies, plans, tariff regulations); (ii) development status of cross-border power interconnections, i.e., new agreements and new projects; (iii) data on quantum of cross border power trade, future projections of demand and supply post-Covid; and (iv) ongoing efforts to scale up renewables, energy efficiency and energy storage in their countries. Country updates showed that GMS bilateral power trade continues to expand with a notable increase in the role of the private sector, such as the 29 hydropower plants in Lao PDR which arecurrently being developed by private investors for export to Viet Nam. The transmission line connecting southern Lao PDR to northern Cambodia is also being constructed by private investors. Country updates demonstrated a recent boom in renewable energy capacity in many GMS countries, especially Cambodia and Viet Nam. The details of the country presentations are in Attachments **5.1 to 5.6.**

7. Key points during the discussion are summarized below:

Cambodia

- Cambodia's solar rooftop policy report is still being finalized but will include a quota for injection into the grid. Once the policy is adopted, the share from a solar rooftop and solar farms should comply with the plan and enterprises should get prior agreement of the Ministry on the generation capacity that can be installed.
- On the rationale for development of Battery Energy Storage System (BESS), Cambodia pointed out that BESS will serve as a back-up to encourage the integration of renewable energy in the system with higher penetration, especially for solar and wind. However, due to the price of the battery storage, only a small investment in battery storage is being considered at this time.
- Owing to the increase in coal prices, Cambodia has been backing down its coal plants, and is seeking to expand its use of hydro and solar, and the latter has reached an installed capacity of about 370 MW.
- Compared to solar, there is limited wind potential, and so it is not a powerful resource for Cambodia.

People's Republic of China (PRC)

- Energy storage was identified as a very important pre-requisite for large-scale renewable energy utilization. For the next five years beginning 2022, five gigawatts of pump storage will be built by China Southern Grid (CSG). Another 20 gigawatts of

various types of storage will be added to the system, including flywheel storage, compressed air storage, and battery energy storage as the most dominant technologies.

- To promote renewable energy in PRC, the government has been providing incentives such as subsidies for the feed-in tariff (FIT), although these subsidies were phased out last year. Energy transition however remains a national goal given the national net zero emissions goal. Currently, solar PV and offshore wind are assigned a benchmark tariff, which is equivalent to the coal fire power plants without subsidy.
  China also has regional carbon market and allowance trading in place. h CSG started a trial last year on green power trade which is yet to be official launched at full-scale.

Lao People's Democratic Republic (LAO PDR)

- Lao is currently managing energy supply fluctuation and working towards achieving national power security. Power generation mixed for domestic use from hydro accounts for 75%, coal based at 14%, and renewable energy at 11%. During wet season, surplus power is exported to neighboring countries eand imported during the shortage caused by dry season which is set at 5%. To manage supply, the government is now implementing solar renewable energy and promoting power generation for export and exploring further opportunities for power exchange among neighboring countries. The Government considers the promotion and development of renewable energy as a key priority to stabilize the country's power supply.
- The Ministry of Energy and Mines and Electricite Du Laos (EDL) is currently in discussions with Nam Theun 2 hydro power company to accommodate the investment and the study for the wheeling charge, based on energy generation of each Independent Power Producer (IPP). The wheeling charge of the common facility, including of substation and transmission is a financial model except for the big cost of the power transformer for the step-up transformer.
- On the security for domestic reserve, Lao has surplus during rainy season but needs to secure domestic reserve during the dry season. So there is a need to find a way to develop renewable energy and promote energy efficiency. On the demand side management, there is a target to reduce power consumption by 1% during the year but this has remained a challenge.
- On the Lao PDR-Thailand-Malaysia-Singapore Power Integration Project (LTMS-PIP) , Lao discussed the arrangement with Singapore, particularly in dealing with transmitting energy to Singapore. Singapore advised Lao to deal with the local importer with import licenses and noted some challenges given the unfamiliarity on importation. Lao further described the PPA and indicated that LTMS is not a single PPA, and countries must sign an agreement individually with countries, for example, Singapore-EGAT and Singapore-Malaysia, for the wheeling charge comprising three agreements.

Thailand

- The FIT has already been approved by the National Energy Policy Council (NEPC), but it is focused on renewables only for wind, solar, and battery. Thailand shared that the FIT price for the renewables will be announced soon, but because of the community power plant that was completed by Ministry of Energy earlier this year, there are still some issues in terms of promoting the community power plants.
- In terms of third-party access, Thailand is now in the process of preparing a policy to liberalize the electricity market as a whole and to be able to have renewable energy

market to support as well. With over a hundred companies, Thailand is considering a new platform for the market.

Viet Nam

- Viet Nam continues to invest, build, and operate new transmission facilities to operate the country's grid. During grid congestion, control systems are applied to manage the power flow on the grid and avoid overload to system stable.
- On renewable forecasting, a new department hasbeen established. In addition, Viet Nam purchases renewables data from independent international provider and collects data from power plants to prepare their own forecast. To improve the accuracy of this forecast, the responsibility is now given to the owner of the power plant.
- On transitional wind project that missed the deadline, the Minister of Industry and Trade (MOIT) sent a request to a utility to propose a new FIT price, but it is still in process. MOIT is discussing with other departments on structure to be used for the tariff option for the new wind project and consider the mechanism for the transmission project.

B. Role of Carbon and Climate Finance in Energy Transition

8. Mr. Karthik Iyer, Climate Bonds Initiative (CBI), introduced climate bond capacity building program focusing on financing the energy transition in the GMS. The presentation comprised (i) an overview of the sustainable finance market with global bond market currently stands at around USD130 trillion; (ii) a background of energy sector globally and the need for accelerated energy transition in Southeast Asia, (iii) various transition concept and sectors that will be impacted including transport, (iv) climate bonds work in transition, (v) emerging transition definitions and pathways globally, (vi) CBI training program agenda and timeline, and (vii) available CBI resources. CBI's presentation is in **Attachment 6**.

9. ADB requested participants to reflect on their understanding on the role of carbon finance in energy transition to ensure the relevance of the training program and provide feedback considering the different energy transition workstreams under the ETTF targeting different objectives as well as the needs of the countries. Further, ADB noted that the energy transition impact goes beyond the energy ministries and utilities, with implications to other sectors such as transport, public works, planning, and finance. ADB stressed the importance of collaboration with ministries of finance as they often take the lead in raising green financing and climate financing.

10. CBI echoed the training program approach to be conducted in a phased manner, providing overview to explain the basics, conducted into multiple modules with case studies and bring in external speakers through online and in-person sessions over the next one year. CBI also noted the available knowledge within GMS. Countries like Vietnam have issued green municipal bonds, which is, among the first in this region as well as China, being a leader in many of the green finance green bond markets to date.

C. Renewable Energy and Demand Management, Korean Experience

11. Mr. Taeil Kang, CEO and Chief Consultant, One Energy Island Co., Ltd, shared South Korea's Experience with Green Energy Transition, including energy environment of South Korea. Mr. Kang discussed (i) renewable energy development at scale, (ii) South Korea's energy efficiency policy and demand response program, and (iii) smart grid infrastructure to support renewable energy expansion. He also presented the details of the proposed training program,

including the proposed dates, modality and topics which align with the proposed ETTF workstreams. Presentation is in **Attachment 7**.

12. Following the presentation, ADB provided the context of Korea's experiences, noting the parallels with the efforts in GMS countries, such as initial demand response, pilots, BESS, micro grids, and combining wind with storage, which GMS countries can learn from. Further, ADB requested countries to review the proposed training program and consult stakeholders from other ministries to help develop a program that will be useful and relevant.

13. Other points discussed are as follows:

- There are critical issues on energy transition in South Korea, including provision of reliable energy to the industrial sectors. South Korea's competitive cost of production has contributed to sustaining its competitiveness in the global market. South Korea is able to utilize renewable energy to meet the demand of the industries but will require knowledge and technology to build the smart infrastructure to accommodate enough renewable energy.
- The demand response program mainly responds to peak time energy demand. An expert from energy aggregators responsible for demand response program will discuss this in the proposed training program. In 2021, South Korea launched a pilot BESS project to test the technical and economic feasibility of recycling BESS. More details on how the program works will be discussed in the training program.
- The national utility is responsible for managing of the mini grid in the remote areas.

D. Building a case for Energy Efficiency in GMS Energy Transition

14. Mr. Rajeev Ralhan, Executive Director, PwC India, emphasized the important role of energy efficiency (EE), being the first fuel to energy transition, highlighting the role of EE in emission reduction and as the first fuel of the sustainable global energy system. Mr. Ralhan discussed possible strategies for energy transition using EE such as (i) road to resource efficient buildings (building sector), (ii) approaches industrial energy efficiency (industrial sector), and (iii) road to transport sector decarbonization (transport sector), and a possible road map for the broader energy transition in GMS countries. Lastly, the training objectives and workstream were presented. Presentation is in **Attachment 8**.

15. Lao Chair shared the national energy efficiency and conservation policy in Lao PDR, which was established to achieve the reduction of demand by 10% by 2030 focusing on four areas, such as industry, residential, building office and transportation.

E. Role of Energy Storage in Renewables in Energy Transition

16. Mr. Robert de Groot, Integrated Energy Systems Practice Lead, APAC Mott MacDonald Singapore, discussed the role of energy storage in renewables in energy transition. Renewables are generally an intermittent source of energy but deploying energy storage is one way to deal with intermittency. Mr. de Groot presented on: (i) the global energy storge trends, (ii) BESS applications in the utility grid, (iii) regional examples, and (iv) scope and overview of the training program on BESS. The presentation is in **Attachment 9.**

17. ADB suggested to include in the training discussions of the following: (i) the assessment of the cost and benefits of the application of the BESS, (ii) application in the power grid with the

higher renewable energy penetration, and (iii) cost and benefit analysis, which w translating the cost of electricity with and without BESS.

18. Further, discussions on the BESS were carried out with comments from various countries as noted below:

- On energy storage system efficiency, it is seen that energy after charging and subsequently discharging is between 85 to 90%, depending on the exact chemistry and setup; and charging speed but loses about 10 to 15% if charging is faster.
- Only limited raw materials are recovered from a decommissioned energy storage system. While there are advances in recycling batteries, it is relatively expensive and challenging from financial perspective.
- Regulations are not yet geared towards allowing energy storage to play a significant role in the power system countries with well-developed markets for providing ancillary services. Although regulations may be slow to be developed, they need to be studied and tested.
- A battery system can run for 15 years for one cycle a day for 15 years straight and degradation is around the 25 to 30% mark. While there is progress on the cycle life of a battery cell, this has tapered off with incremental improvement.

Day 2

A. Marking the RPTCC's achievements in the harmonizing GMS power systems to facilitate regional power trade – closing of the TA8830-REG

19. Mr. Bui Duy-Thanh, Principal Energy Economist, ADB took stock of the implementation of RPTCC activities since 2018, including planned outcome, outputs and activities. He highlighted the main achievements of the RPTCC and the working groups. He also pointed out the targeted outputs that have not been achieved, and suggested future directions. Mr. Bui highlighted (i) WGRI accomplishments on regulatory review, transmission charges, balancing mechanism for short-term trading among others; (ii) WGPG accomplishments on performance standards, transmission regulations, standard regional metering arrangements, regional grid code and regional master plan. The uncompleted activities are (i) establishment of the Regional Power Coordination Center (RPCC), (ii) application of the developed assessment and methodology in a pilot case, and (iii) gap assessment and adoption of the regional grid code. Finally, Mr. Bui informed the approval of a new TA: Accelerating the Clean Energy Transition in Southeast Asia and the transition of the RPTCC into Energy Transition Task Force (ETTF). **Attachment 10** provides the presentation.

20. Mr. Pradeep Tharakan, Unit Head, Sovereign Energy Operations, GMS, ADB, recommended the GMS countries to discuss specific areas that can be tackled such as the grid code gap assessment as few countries have been unable to complete the process, (such as Cambodia), and offered to provide ADB support to technical inputs on the grid code, compare to the regional grid code, and perform gap assessment. Lao PDR gave an update on the grid code modification and adoption to their system and the successfully signed the grid-to-grid cooperation manual between EGAT and EDL.

B. Leveraging ADB's Climate Finance Resources to Support the Energy Transition in the GMS

21. Mr. Tharakan, ADB emphasized that decarbonizing the energy pathway is a necessity for GMS energy transition and calls for starting with the power sector which should drive decarbonization of other sectors with the view of achieving net-zero emission by mid-century. Energy transition for GMS is aligned with ADB's climate finance goal of $100 billion for Energy Transition Pathway of DMCs. ADB approaches to climate finance mobilization include (i) deploying concessional funds, (ii) maximizing market mechanism, and (iii) catalyzing private capital and facilities for private sector. The themes and activities identified under ETTF and GMS related training plan timeline over next year were also presented. The details of the presentation are in **Attachment 11**.

22. The discussion then focused on the global developments and the ongoing energy crisis which affects the accomplishments of energy transition goals and on the volatility of energy commodity fluctuation. This highlighted the importance of partnerships, communication and information sharing across the GMS countries and emphasized the opportunity for planning with a mix that is resilient to external shocks.

C. Development Partner Forum on Supporting Energy Transition in the GMS

23. Mr. Tharakan, ADB moderated the discussion with key development partners, focusing on support to GMS countries with their respective energy transition plans in terms of technical assistance, pilot investments, capacity building, and knowledge sharing. United States Agency for International Development (USAID), Australian Department of Foreign Affairs and Trade (DFAT), and Agence Française de Développement (AFD) made interventions.

24. Mr. Michael Boyd, Senior Energy Technical Advisor, USAID presented USAID's Smart Power Program (SPP) in Southeast Asia (SE). SPP framework aims to advance economic growth and development in SE through ensuring secure and market-driven energy sectors through (i) utility modernization and power trading, (ii) increased deployment of advanced energy systems, and (iii) clean and sustainable energy. Potential collaboration with GMS ETTF could include: (i) resiliency-strengthening assessments and technical assistance for GMS utilities, (ii) ASEAN Interconnection Master plan Study III phase 2 activities, (iii) support to regional and subregional harmonization of energy efficiency policies and programs, (iv) coordination with Japan US Mekong Power Partnership Action Plan implementation, and (v) mobilizing private sector participation in infrastructure development and financing. See **Attachment 12.**

25. Mr. John Dore, Lead Water Specialist, Australia's DFAT provided an intervention, highlighting DFAT Australia's commitment to a more ambitious 2030 target to reduce emissions to 43% below 2005 levels putting Australia on track to achieve net zero emissions by 2050 and by 2030, more than 82% of the electricity will be renewable energy. In the GMS region, Australia's DFAT emphasized the need to move faster to upgrade the countries' own transmission network and shared that an integrated system plan prepared by the Australian energy market operator is in place to do that. DFAT Australia will continue to develop and expand bilateral and regional climate and energy partnerships with GMS countries. Going forward, Australia is interested in seeing how they can contribute to the GMS energy transition task force as a compliment to other bilateral and ASEAN energy partnerships.

26. Mr. Arnaud Dubrac, Energy Task Team Leader, AFD shared its on-going work with some within the GMS, including co-financing TA 9003 on energy efficiency. AFD is supporting energy transition partnerships and noted the strong coordination with development partners, GMS governments and institutions to avoid duplicating some activities.

27. The following points were discussed:

- On the energy efficiency pillar, USAID further explained that it will take the same regional partnership approach being done across all the pillars, including supporting the ASEAN sub-sector network on energy efficiency and the ASEAN center for energy to push forward the plan of action, the ASEAN plan of action in the energy efficiency area. This includes activities such as pushing forward on (i) regional mandatory energy performance standards on key appliances (ii) the development of energy services companies to mobilize more private investment in energy efficiency for all consuming sectors. USAID will also work utilities, to identify opportunities for a demand side management and demand response.

- USAID shared on the availability of resources on renewable energy, including resiliency with higher penetration variable, an importance of forecasting. USAID looks forward to working with Thailand and other GMS countries.
- USAID hopes to work on developing a better flow of information, sharing of knowledge and experience obtained to make it easier at a regional level and for the energy transition to be accomplished.
- On the procurement process, USAID shared that the center for competitive procurement will serve as clearing house of information and expertise for countries and private and public sector entities to tap into.

D. Updates in the GMS Program

28. Mr. Asadullah Khan Sumbal, Principal Regional Cooperation Specialist, ADB led the presentation providing an overview of various GMS initiatives that are being undertaken in response to the GMS Leaders' mandate in the GMS Economic Cooperation Program Strategic Framework 2030 (GMS 2030), namely (i) developing a new GMS Regional Investment Framework (RIF) 2023-2025 (led by Pinsuda Alexander, Economist (Regional Cooperation), ADB), (ii) exploring new approaches for deepening engagement of development partners in GMS and (iii) development of the results framework for GMS 2030 asdiscussed by Pradeep, Srivastav, ADB Consultant. First, RIF 2025 will involve the preparation of new pipeline of projects to support the strategic and operational priorities of GMS 2030. Second, a study on deepening development partner engagement was initiated and consultations are currently underway. Third, a results framework of the GMS 2030 is being developed to enhance monitoring and evaluation. Refer to **Attachment 13.**

29. Highlights of the discussion on RIF 2025 are as follows:

- Upon endorsement in 2022, this will kick off the pipeline of projects for funding between 2023 to 2025;
- In terms of timeline and process, following endorsement of the countries until 4th August 2022, project proposals will be prepared using the existing project template, go through validation and prioritization exercise first at working group level and then at the national level;
- The new RIF 2025 will only look at mobilizing financing, given the difficulty in both project monitoring and mobilizing financing; project progress monitoring will be a separate report;
- Projects under the old RIF like power interconnection projects that have not yet commenced but are still priority under ETTF can be re-proposed and added to the

new RIF 2025; both TA and investment projects can be included in the new RIF as potential projects for other development partners to take up; and

- RIF 2025 is a priority project list and not a fund. However, given the project list, ADB and other DPs can consider an include in the funding pipeline.

30. Key development partners in the room also noted on their ongoing engagements in the GMS region during this discussion. USAID currently has bilateral missions in Viet Nam, Cambodia, and in Lao PDR and embassies in other GMs countries. USAID suggested that there was no recommendation at the moment for the sectors or any changes to suggest but encouraged ADB to continue to engage with DPs directly and further noted that the current process is working well. AFD noted some difficulties in financing, example technical assistance in Vietnam for some administrative and institutional reasons and if the process can be smooth, it will be helpful for all the technical assistance to support energy transition in the case of Vietnam. AFD further shared that it is in the process of identifying projects for co-financing.

E. Presentation on TA 9003-REG – GMS Energy Efficiency and Opportunities

31. Ms. Hyunjung Lee, Senior Energy Economist, ADB updated the participants on energy efficiency (EE) opportunities and business models in the GMS as a first fuel for energy security and climate mitigation. The presentation highlighted (i) the potential financing and business models in the GMS, (ii) Vietnam's Energy Efficiency Program, and (iii) Thailand's PEA digital energy service study. The presentation proposed policy recommendations, including long-term solutions to unlock financing for energy efficiency through policy, public procurement, and private participation; short term solution, establishing "Super ESCO" to implement energy efficiency projects in the public sector; and discussed global examples/case studies. See **Attachment 14** for the presentation.

32. Comparing delivering energy efficiency, PEA in Thailand provide energy efficiency with escrow services to the government facility which is very promising. In Viet Nam, EVN is working on ESCO projects on a pilot basis but is unable to scale up as ESCO business. Thus, it is recommended to set up the subsidy companies as ESCO as this is more suitable to their legal and regulatory framework. Currently, EVN mandate does not include mandate for energy efficiency, so further policy interventions are also required.

33. On innovations in the energy efficiency field, the ESCO model is viewed as a good start from the country instead of waiting for many years to see private innovative solutions. In the long run, there is a need to improve the enabling environment and get more private ESCOS into the market and to provide the innovative services which is the goal of energy efficiency development.

F. Overview of ongoing Feasibility Studies on Indonesia, Philippines, and Vietnam Energy Transition Mechanism

34. Mr. David Elzinga, Senior Energy Specialist (Climate Change), ADB presented the Energy Transmission Mechanism (ETM) Program for Southeast Asia. The presentation noted the accelerated retirement of coal-fired electricity as a key solution to the overall effort to decarbonize and buildup of clean energy especially in Southeast Asia. ADB launched the Energy Transmission Mechanism (ETM) Partnership at COP26, Glasgow in November 2021. The on-going feasibility study will help launch an ETM pilot, which will support energy transition across Asia focusing initially on three countries in Southeast Asia: Indonesia, Philippines, and Viet Nam. The ETM program will (i) accelerate the retirement of coal-fired plants using public

and private refinancing, and (ii) scale up investments in clean energy and storage. ETM transaction models will use various financial incentives to accelerate retirement/repurposing the coal-fired plants and are under development. An indicative timeline to operationalize ETM was also presented. See **Attachment 15** for the presentation.

G. Private Sector Case Studies: Cambodia Solar Park Project

35. Mr. Ferran Vila Planas, Public-Private Partnership Specialist, ADB shared the details of the project. ADB has been working with Electricite Du Cambodge (EDC), to develop National Solar Park Project to procure up to 100 MW of solar PV power generation from the private sector through competitive tendering. The Project demonstrated the ability of large-scale solar to improve the electricity supply and stability of the national grid, substitute power imports, reduce reliance on fossil-fuel and complement hydropower generation**.** The project comprised two phases and the solar park was structured with a clear demarcation between public and private sector investment components. Presentation is in **Attachment 16.**

36. Highlights of discussion are as follows:

- The duration of the PPA is 20 years from commissioning date.
- ADB acted as an advisor that does not place any restriction in terms of who finances the project. ADB's private sector, operations department is one of the lenders financing phase one. Other lenders include Norwegian development bank, JICA and a French bank in Cambodia.
- There are no payment guarantees as private companies were relying exclusively on EDCs credit warnings.
- Prequalification requirements were not linked to the nationality of the builder but were linked mostly to their experience and to their financial capacity.
- ADB further shared that the experience of Cambodia is widely relevant for countries in the region. For instance, Thai government, including EGAT, Ministry of Energy started thinking about offshore wind and developing the first offshore wind project.
- Lao shared its interest in considering solar projects and to learn lessons from Cambodia's experience, particularly on the smaller size of solar station, in the range of 3 to 5 MW. In this regard, ADB shared that there are possible lessons from India's experience as well, noting that the size of the project matters that drives economies of scale and availability of land provisioning.
- It was also noted that the prices decrease and lower capacity in phase 2 compared to phase 1 of the Cambodia Solar Project. Prices were also higher in 2021 compared to 2019 since a portion of financing in phase 1 came from concessional financing facility which was not the case in phase 2. Capacity is lower in phase 2 mainly due to logistical constraints for bidders due to the pandemic.
- With regards to the bidding process, EDC is combining competitive bidding with bilateral negotiations; benchmark price may not be followed strictly but can serve as a benchmark that can be used to negotiate with the companies where bilateral deals are signed.

H. Summary of Discussions of Day 2 and Agree on Actions for GMS ETTF

37. The session commenced with each of the GMS countries providing their feedback on the discussions during the two-day meeting. Countries acknowledged the substantial information on the different areas that will support energy transition in the GMS.

38. Mr. Tharakan restated to the meeting the terms of reference for the newly launched GMS Energy Transition Task Force (ETTF), established with an expanded mandate to accelerate the clean energy transition in the region. ETTF will pursue activities across four workstreams: (i) sustaining GMS cooperation on regional power trade; (ii) technology capacity building programs on renewable energy, energy storage in improving grid stability; leveraging electric vehicles; (iii) accelerating energy efficiency programs to promote more competitive industries through energy cost savings; and (iv) training on green financing and green bonds to support GMS countries in raising finance for their transition to cleaner energy. The detailed activities for each workstream, coordination mechanism, and training plan schedule were also presented. The meeting discussed and adopted the workplan for GMS energy transition in 2022-2023, with concrete activities on the four workstreams. Refer to **Attachment 17** for the presentation.

IV. Closing Session

39. Mr. Toru Kobu, ADB, Co-Chair expressed appreciation to Dr. Chansaveng Boungnong for chairing the very productive RPTCC-29 meeting and to Dr. Choun Sambathratanak for hosting the meeting. He also mentioned that helooks forward to continuing the discussion of the ETTF agenda going forward. He acknowledged ADB team for efficiently organizing the meeting and recognized the substantial contribution of Mr. Duy-Thanh Bui to accomplishing RPTCC's mandate.

40. Dr. Chansaveng Boungnong, Lao PDR, Chair closed the meeting and thanked the GMS countries, training consultants, development partners, and all participants for their contributions to a productive meeting and ADB for organizing the meeting and supporting the activities of ETTF.

41. Mr. Pradeep Tharakan requested the participants to take the output of the meeting to action and update the work, support power development, power trade, and interconnection in the region, by furthering discussions on the recommendations in renewable energy technologies, energy efficiency, green finance, and role of energy storage in energy transition.