

July 2015

REG: Greater Mekong Subregion

Summary of Proceedings: 18th Meeting of the GMS Regional Power Trade Coordination Committee (RPTCC-18)

The views expressed in this report are the views of the author(s) and do not necessarily reflect the views or policies of the Asian Development Bank (ADB), or its Board of Directors or the governments they represent. ADB does not guarantee the source, originality, accuracy, completeness or reliability of any statement, information, data, finding, interpretation, advice, opinion, or view presented, nor does it make any representation concerning the same.

Eighteenth Meeting of the Regional Power Trade Coordination Committee (RPTCC-18)
Bagan, Republic of the Union of Myanmar, 9-10 June 2015

SUMMARY OF DISCUSSIONS

Introduction

1. The 18th Meeting of the Regional Power Trade Coordination Committee (RPTCC-18) was held to (i) provide updates on the status of the Regional Power Coordination Center (RPCC) headquarters hosting issue; (ii) provide updates on the Greater Mekong Subregion (GMS) countries' power development plans focusing on cross-border projects in line with updated and recent developments in the power sector from each GMS country; (iii) provide briefing on the Regional Investment Framework (RIF) Implementation Plan; and (iv) provide updates on the regional technical assistance (TA) on Strengthening Sustainability of Power Sector Development in the GMS (SEA Phase II). See **Annex 1** for the detailed agenda.

2. The RPTCC-18 Meeting was held in the ancient city of Bagan, Myanmar on 9–10 June 2015 and organized by Myanmar's Ministry of Electric Power (MOEP) in cooperation with the Asian Development Bank (ADB). It was attended by all members of the RPTCC and representatives of ADB, Agence Française de Développement (AFD), and the World Bank. **Annex 2** provides the complete list of participants.

3. Mr. Khamso Kouphokham, Deputy Director General, Department of Energy Policy and Planning, Ministry of Energy and Mines, Lao PDR chaired the RPTCC-18. Mr. Khin Maung Win (Director General, Department of Electric Power, Ministry of Electric Power, Myanmar) and Mr. Chong Chi Nai (Director, Energy Division, Southeast Asia Department, ADB) both acted as Vice Chair of the Meeting.

A. Opening Session

4. Mr. Khamso Kouphokham, Chair, RPTCC-18, expressed warm welcome to all participants to RPTCC-18. He thanked ADB for the preparations and the Republic of the Union of Myanmar for hosting the Meeting. He emphasized that the GMS is a special region thanks to its very rich culture and natural resources and experiencing the fast growth of socio-economic development under its close ties and cooperation. He highlighted that the access to modern energy especially to electricity is highly important for poverty eradication and therefore, the GMS regional power trade promotion will contribute to solving power shortfall in some countries. In this context, the Chair looked forward to reaching an agreement on the RPCC hosting issue. The Chair also envisaged that RPTCC members will learn from one another about power sector development in GMS. For example, Lao PDR was able to achieve a substantial progress in power sector since the last meeting in November 2014. The Chair pointed out that the member countries can use updated information as a basis to develop concrete projects in the near future.

5. His Excellency U Aung Than Oo, Deputy Minister, MOEP, Republic of the Union of Myanmar welcomed all participants. The Deputy Minister was pleased to note that the Greater Mekong Subregion is a natural economic area bound together by the Mekong River, covering 2.6 million square kilometers and a combined population of around 326 million. He urged that despite the GMS cooperation program has made a good progress, the GMS member countries

should not be satisfied about current achievements and should further strive for an integrated, harmonious and prosperous subregion.

6. The Deputy Minister pointed out that the Meeting today comes at a very crucial stage of the establishment of RPCC and urged all to reach a fruitful resolution for the outstanding bid evaluation issues to host the RPCC Headquarters. He also welcomed the member countries' presentations on their updated power development plans. He highlighted that each development partner has ongoing and proposed assistance to RPTCC activities. Referring to cross-border transmission interconnections, the Deputy Minister emphasized the importance of adopting a suitable technical standards and the pricing mechanism; how to tackle the issues on synchronizing frequency, voltage control, and transient stability for each and the whole interconnected power grid. He also mentioned about the importance of reviewing the past activities and laying down plans for future cooperation through monitoring of the project pipeline under Regional Investment Framework (RIF).

7. Mr. Chong Chi Nai, Vice Chair, RPTCC-18 expressed appreciation to the Ministry of Electric Power, Republic of the Union of Myanmar for the excellent arrangements of the meeting and the participants' support to RPTCC and commitment to advancing the energy cooperation agenda in the GMS. Mr. Chong cited that RPTCC-18 Meeting will provide updates on the status of RPCC Headquarters hosting issue. He recalled the opening of bids for hosting RPCC Headquarters took place at the RPTCC-16 Meeting held on 25-26 June 2014 in Siem Reap, Cambodia. Mr. Chong noted however, due to unresolved evaluation issues, the process of selection of RPCC host country has yet to be concluded. The establishment of RPCC is supposed to be one of the deliverables at the 5th GMS Summit in December 2014 in Thailand. He added that to be able to move forward in achieving the important milestone of RPCC establishment, it is crucial for this meeting to discuss the outstanding evaluation issues, and hopefully, reach a consensus to resolve these evaluation issues.

B. Bids for Regional Power Coordination Center Headquarters

8. The Chair invited the People's Republic of China (PRC) and Thailand to update the RPTCC on their bilateral talks held between the two countries.

9. **Update from PRC.** For the bilateral talk with Thailand, both sides held friendly and frank talk on this issue in last February. Unfortunately, no bilateral understanding has been reached. PRC reaffirmed its commitment to host the RPCC Headquarters in Kunming, PRC. PRC emphasized the full support from the government of PRC in providing all services and assistances in operating RPCC as a neutral regional multilateral organization based on the principle of "independence, fairness and transparency" to fully execute its role on power planning coordination, setting of technical standards as well as information exchange and sharing. This then will contribute to promoting enhanced power interconnection and trade cooperation within the GMS countries. PRC also shared with the RPTCC a short video clip on how PRC is ready to establish the RPCC Headquarters in Kunming.

10. **Update from Thailand.** Thailand confirmed that a bilateral meeting was held in February 2015. Thailand also emphasized that it is ready to host the RPCC Headquarters in Bangkok considering its advantage as a regional hub. In the light of not reaching a consensus, Thailand also sought the evaluation committee's decision. Thailand further strengthened its position on why the RPCC Headquarters should be established in Thailand. Thailand cited the power system security aspect, gateway to ASEAN region in developing power grid to GMS, convenient location and logistics.

11. **Discussion.** The Chair requested other RPTCC members on their opinions on how to resolve the headquarters' issues. Cambodia had no comments. Lao PDR indicated that this matter is very difficult to resolve and raised three possible options: (i) bid evaluation committee to decide/resolve the issue, (ii) provision of more time for bilateral meetings between Thailand and PRC; and (iii) rebidding. Lao PDR added that for rebidding, ADB should provide more clear and detailed criteria. Myanmar appreciated PRC's presentation the video clip of Kunming and also supported rebidding. Myanmar also emphasized that the rebidding process should be detailed and clear. Viet Nam noted that the video clip is for information only; the bid evaluation should be based on the agreed criteria. Viet Nam agreed with Lao PDR and Myanmar for rebidding.

12. The Chair summarized that 3 countries' proposal is for rebidding while Cambodia has no objection. He further requested PRC and Thailand to provide their opinions whether they agree to the rebidding proposal. PRC disagreed with the rebidding proposal. Thailand expressed the view on the proposed solution saying that the current evaluation criteria is unclear and can be hardly used to mark the points for the two remaining proposals between PRC and Thailand. Therefore, there should be alternative solutions to resolve this evaluation issue. Thailand also saw the rebidding process as a possible alternative option and is willing to support this option when there is a consensus agreement among all member countries. Furthermore, Thailand also emphasized that when the rebidding is finally agreed the criteria for rebidding should be developed in details and clear, and all members will have to agree on the detailed criteria before the rebidding. The Chair further requested PRC to reconsider its position as the other 5 GMS countries have concurred for the rebidding. PRC however, retained its initial position and requested ADB's view on the issue.

13. Mr. Chong explained the role of ADB as the RPTCC secretariat and therefore reiterated the need to reach a consensus within GMS countries themselves. He then invited Mr. Olivier Grandvoinet, AFD representative and a Bid Evaluation Committee member for comments. Mr. Grandvoinet shared the difficulties encountered in evaluating the bids of PRC and Thailand and reiterated that the Bid Evaluation Committee is not the decision-maker. He urged the GMS countries to provide guidance to the Bid Evaluation Committee.

14. Mr. Chong next requested World Bank's views on the issue. World Bank expressed concerns on the negative impacts of the non-resolution of the issue at this meeting. World Bank opined that rebidding is reasonable option. World Bank indicated that this issue should be resolved soon given that it has been pending since the 16th RPTCC Meeting about a year ago.

15. PRC reiterated its position that PRC cannot accept the rebidding proposal. PRC further requested that GMS countries to send letters to ADB stating in writing their stand or opinion on the rebidding option. PRC meanwhile will consult with related ministries on better ways to resolve the issue. The Chair however clarified if there is a need for GMS members to write to ADB given that the RTPCC-18 delegations were given authority to state their opinion at this meeting on behalf of their countries. Mr. Chong, on the other hand, mentioned that as RPTCC secretariat, ADB has no problem with PRC's request, once ADB receives the letters from members countries, ADB will circulate to all countries for transparency. The Chair requested GMS members for their opinions on the written request. Mr. Chong indicated that GMS countries will be given one week to send their letters which will be shared with other GMS countries for transparency.

16. Lao PDR asked clarification on what will happen after countries send the letters to ADB. Viet Nam pointed out that the GMS delegations to the RPTCC meetings are given authority to deliberate on the RPTCC issues and indicated that there is no need to send letters to ADB. The minutes of the RPTCC-18 Meeting will suffice to reflect that five GMS countries accepted to the rebidding. The Chair encouraged PRC to reconsider its position as with rebidding, and with clear criteria, and if PRC would emerge as the winner during rebidding, the other GMS countries would all be contented.

17. **Next steps.** Mr. Chong closed the session summarizing that five GMS countries agreed to the rebidding while PRC disagreed, which will be reflected in the RPTCC-18 Meeting minutes and the finalized minutes will be uploaded onto the GMS RPTCC website.

C. Country Updates on Power Development Plans: Focus on Cross-Border Projects

18. **Cambodia.** The Ministry of Mines and Energy (MME), Cambodia presented an update on Cambodia's power sector development plan. The presentation highlighted Cambodia's energy generation, which includes available generation capacity in 2014 and type of fuel. MME also shared its peak power demand. MME briefly described power trade with neighboring countries, particularly ongoing requests for new connection points with Thailand, Viet Nam and Lao PDR. Cambodia summarized its updates by providing an outlook of supply and peak demand from 2014 to 2020.

19. **People's Republic of China.** The China Southern Power Grid Company (CSG) presented (i) What China's power industry covered by CSG operations; (ii) future power plan which include power transmission from west to east with HVDC transmission technology; and (iii) cooperation projects in the GMS. CSG also shared their vision (i) to support "One Belt and One Road" initiative - interconnection with mutual benefits and reciprocity; (ii) to build the GMS regional power cooperation with a win-win vision; and (iii) to optimize the energy resource distribution, increase the energy efficiency, ensure a friendly environmental power development by coordinating the power planning and time sequence of HPP development.

20. **Lao PDR.** EdL's presentation provided updates on (i) status of the country's power industry in 2014, including generation capacity, energy consumption by sector, peak demand (which has continued to increase with an average of 11% from 2011 to 2014) and distribution loss; (ii) the Power Development Plan,¹ 2012-2022, including the demand forecast (e.g., in 2015 it was calculated to reach 1,555MW); (iii) existing and planned cross-border interconnection plans with Cambodia, PRC, Lao PDR, Thailand, and Viet Nam; and (iv) updated GMS data.

21. **Myanmar.** MOEP discussed (i) its existing facilities and activities of Myanmar in the power sector; (ii) new electricity laws, rules and regulations; (iii) its master plan for national electrification; and (iv) challenges faced by MOEP. MOEP presented Myanmar's existing power generation, transmission and distribution as well as demand forecasts. MOEP indicated that the maximum power demand in Myanmar will vary from the minimum at around 9,100MW to the maximum at 14,542MW by 2030, forecasted based on macro analysis. MOEP emphasized the potential in hydro as a cost-effective power source. MOEP mentioned that Myanmar's main objective, under the National Electrification Planning, is to achieve the universal access to electricity in Myanmar by 2030. MOEP also shared its plan for interconnections with neighboring countries and to fulfill its goal to provide electricity to all. Challenges remain in the

¹ EdL indicated 20 projects in the plan, 19 of which are hydropower plant projects and 1 project is a thermal power plant project.

implementation of the master plans and also attract international investors and developers. To date only 35% of Myanmar's household is electrified.

22. **Thailand.** The Electricity Generating Authority of Thailand (EGAT) presentation focused on the (i) current status and characteristic, and power planning of Thailand's power system and grid. EGAT shared updates on the power sector including contracted capacity by plant type and producer (total contract capacity is 34,668 MW and peak demand is 27, 198 MW as of 7 May 2015); energy generation (177,292 GWh) and power purchases from neighboring countries from 2013-2019. As indicated in EGAT's previous RPTCC presentations, from 2020-2030 the maximum of power import from neighboring countries should not exceed 15% of Thailand's generating capacity. EGAT also reported on the cross-border projects and power interconnection points between Thailand and Lao PDR.

23. **Viet Nam.** Electricity Regulatory Authority of Viet Nam (ERAV) provided updates on Viet Nam's interconnections which included the status of Viet Nam's power system covering load, generation mix, and transmission network. ERAV mentioned that the total installed capacity is 35,450MW with an average energy growth rate of almost 12% from 2005-2014.

24. **Discussion.** Lao PDR raised a query to Myanmar on its power export to Thailand particularly on coal-fired power plant. Mr. Khin Maung Win, Vice Chair, RPTCC-18 cited that Myanmar received the proposal to construct a coal-fired power plant and assessment is ongoing. CSG posed a query to Myanmar on interconnections with other countries. He added that due to different voltages in other countries, the country is still not connected. Myanmar also sought advice on how to address synchronization with other GMS countries. Mr. Chong shared that in Japan, there are actually two different system frequencies, namely, 50 Hz and 60 Hz. To interconnect them, HVDC is used.

25. The GMS country PowerPoint presentations are in **Annex 3**.

D. Update on World Bank and AFD Support to RPTCC Activities

26. **World Bank.** Mr. Dejan Ostojic discussed its technical assistance to support the Scaling Up Electricity Trade in the GMS power market. He stressed its support to the GMS countries to:

- i. Develop power transmission grids, and establish common rules, including grid codes, to facilitate open access and cross-border electricity trade and investments;
- ii. Establish a regulatory framework conducive to public and private investments in the regional power market, including transmission interconnections; and
- iii. Mobilize long-term financing support for priority investments in regional power grid

27. He further posted the following questions for discussion in RPTCC-18 Meeting:

- i. Are the countries ready for deeper collaboration and eventual synchronization of their power grids?
- ii. What the governments should do as a matter of priority to accelerate the regional (cross-border) investments and power trade?
- iii. How much interest the private sector has in transmission investments or is this a public sector obligation?

- iv. What type of support the WBG should provide to help accelerate the regional power market development?

See World Bank presentation in **Annex 4**.

E. GMS Regional Investment Framework (RIF) for Energy Project Implementation Monitoring

28. Mr. Duy-Thanh Bui of ADB discussed the GMS RIF for Energy – Project Implementation Monitoring. Mr. Bui described the background of RIF, and the monitoring system designed to monitor the progress of the RIF implementation. At the 5th GMS Summit held in Bangkok, Thailand in December 2014, the Implementation Plan of the RIF was approved by the GMS leaders. For RIF-Energy, 4 investment projects and 4 technical assistance (TA) projects were of high priority and included in the implementation plan. Mr. Bui further discussed with GMS delegates the implementation monitoring of the 4 investment priority projects and 4 TA priority projects in details.

29. Regarding the implementation of the TA 8830-REG Harmonizing the GMS Power System to Facilitate Regional Power Trade, Mr. Bui briefed the meeting that two Terms of References (TORs) were prepared and circulated a couple of months ago for comments by GMS countries. He explained that after all countries agree on the TORs, ADB will engage consultants (as envisaged in the RETA) to assist the two Working Groups in making progress in their respective focuses. Mr. Bui requested the RPTCC members for their comments on the two TORs. As review of the TOR is still ongoing in each GMS country, Mr. Bui indicated submission of comments on the TOR to ADB **by 29 June 2015**. To perform the duty as Chairperson of WGRI, PRC presented a brief study and procedures framework on working groups, including the background, tasks, precedent work activities and the outlook of policy and regulation making in promoting GMS power system harmonization and trade, its tasks and possible coordination with the RIF. PRC will further promote tasks of WGRI together with all GMS members.

30. **Priority Investment Projects.** Mr. Bui requested RPTCC members to provide updates on the following projects: (i) Nabong 500kV Substation and Transmission Facility, (ii) Lao PDR-VIE Transmission Interconnection (Hatxan-Pleiku), (iii) PRC-Lao PDR-Thailand 600 HVDC Interconnection, and (iv) Reinvestigation of Thai-Lao PDR-VIE Interconnection. Projects (iii) and (iv) are deferred due to lower demand for power as Thailand envisages less import in future. Nabong and Hatxan-Pleiku projects are ongoing and both design and cost estimates are being finalized. Mr. Bui's presentation is in **Annex 5**. PRC provided an indicative study on working groups, its tasks and possible coordination with the RIF.

F. Strategic Environment Assessment (SEA) (Phase II) - Strengthening Sustainability of Power Sector Development in the GMS

31. Ms. Hyunjung Lee of ADB provided a brief introduction on (i) the regional TA (RETA) of SEA Phase I and Phase II which is cofinanced by AFD and (ii) a training program on ASEAN connectivity envisaged to be held around December 2015. Ms. Lee mentioned that RETA 7679 (Phase 1) study showed that current power development plans (PDPs) in the GMS present high environmental and social pressures as GMS economic growth has been stronger and demand for electricity is growing even faster. She added that there are significant potentials in the renewable energy (RE) and energy efficiency (EE) in the GMS. In this context she mentioned RETA 7679 study examined alternative PDP scenarios incorporating RE and EE potentials, which would result in achieving a greater sustainability. Ms. Lee also shared the recent

knowledge products published under Phase I. GMS countries were given 1 set each during the RPTCC-18 Meeting and request for additional copies should be coursed through ADB Manila for separate transmittal.

32. For the Phase II, with the request of Viet Nam, Ms. Lee suggested the following three component activities (i) developing integrated SEA approach considering potential benefits and impacts of RE and EE as well as cross-border interconnections in Viet Nam, (ii) enhancing country capacity building in strengthening the sustainability of power sector development for all GMS countries, and (iii) developing knowledge products on selected topics and themes based on GMS countries' needs and priorities. She also presented the TORs of consultants and a processing schedule for proposed RETA. In addition, she introduced the ASEAN connectivity training program to be organized in Seoul, Korea in early December 2015 and March 2016 focusing on regional power market development and cross border interconnection based on international and regional experiences for ministries, regulators and utilities of ASEAN countries including RPTCC members.

33. The GMS countries supported the scope and TORs of the phase II activities. PRC shared its experiences in grid developing and specific grid code to reduce potential risks of instability during system operating, especially for impeding the disruption caused by volatile and intermittent power recourses in the process of RE integration and suggested such experiences to be considered under the Phase II. In addition, PRC mentioned the importance of strengthening the existing power system in the GMS countries to increase the share of RE given the volatile and intermittent nature of RE. Thailand suggested examining the impact of integration of a higher share of renewable energy in transmission system development and operation. Lao PDR suggested using a clearer definition of renewable energy to avoid confusion with large hydro which has been recognized as stable clean energy by indicating solar and wind as variable RE. Ms. Lee's presentation is in **Annex 6**.

G. Other Matters

34. **Disclosure of RPTCC materials.** Following a request last month from an NGO to obtain copy of the annexes of recent RPTCC summary of discussions, Mr. Chong, Vice Chair, requested RPTCC members to provide their views on disclosure of RPTCC materials. All GMS countries agree to disclose RPTCC-related meeting materials.

H. Closing Session

35. **RPCC Headquarters.** It was agreed that PRC will ask for internal approval whether to send its letter to ADB within 2 weeks indicating its position that they do not accept the rebidding proposal for the hosting of RPCC Headquarters. PRC also indicated that they will endeavor to seek the better way and provide another option to resolve the RPCC issue.

36. **Date and Venue of Next Meeting.** Thailand proposed that the next meeting will be either in November or December 2015 and venue will be confirmed with ADB later. Mr. Chong suggested to the Chair that the two working groups (grid codes and regulatory issues) participate and make presentations at the next RPTCC-19 meeting.

37. **Synthesis of Discussions and Agreements by RPTCC.** Vice Chair, Mr. Chong Chi Nai expressed gratitude to the RPTCC members for frank and open discussions particularly on the issue of RPCC headquarters. He summarized that five GMS countries accepted the rebidding proposal. He appreciated RPTCC members' country updates and emphasized the

need to tackle forthcoming challenges by enhancing power sector cooperation such as the synchronization of power systems among the GMS countries.

38. Closing Remarks by RPTCC Vice Chair Khin Maung Win, Director General, MOEP, Myanmar. Mr. Khin Maung Win expressed gratitude to ADB for giving opportunity to Myanmar to host the RPTCC-18 Meeting.

39. Closing Remarks by RPTCC Chair Khamso Kouphokham, Deputy Director General, Ministry of Energy and Mines, Lao PDR. Mr. Kouphokham expressed gratitude to the RPTCC-18 members for participating in this two-day event and contributing to the success of the Meeting.