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REG: Greater Mekong Subregion (GMS)

Summary of Proceedings: 15th Meeting of the GMS Regional Power Trade Coordination Committee (RPTCC-15)

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Asian Development Bank

Greater Mekong Subregion Economic Cooperation Program
15th Meeting of the GMS Regional Power Trade Coordination Committee (RPTCC-15)
Da Nang, Viet Nam
16 – 17 December 2013

Summary of Discussions

A. Objectives

1. The RPTCC-15 Meeting was held to: (i) give updates on the Greater Mekong Subregion (GMS) countries' latest power development plans; (ii) discuss the establishment of the Regional Power Coordination Center (RPCC) headquarters and refine its articles of association; (iii) review the Minister-endorsed Regional Investment Framework (RIF) energy sector pipeline and prepare for its implementation; (iii) review the final report of the strategic environmental assessment (SEA) for GMS regional power development; and, (iv) discuss continuing assistance from development partners to promote GMS power trade. RPTCC-15 also featured a site visit to the Song Bung 4 Hydropower Project.

2. The RPTCC-15 Meeting was held in Da Nang, Viet Nam from 16 - 17 December 2013, organized by the Electricity Regulatory Authority of Vietnam (ERAV) in cooperation with the Asian Development Bank (ADB). It was attended by all members of the RPTCC, as well as by representatives of ADB and the World Bank.

3. The RPTCC-15 Meeting was chaired by His Excellency Tun Lean, Undersecretary of State, Ministry of Industry, Mines and Energy (MIME), Cambodia. Mr. Zhao Yinong, Director, National Energy Administration, PRC acted as vice chair. (See **Annex 1** for the detailed agenda and **Annex 2** for the complete list of participants for RPTCC-15.)

B. Opening Session

4. His Excellency Tun Lean, Chair, RPTCC-15, welcomed all delegates and partners whose presence clearly shows regional cooperation and solidarity. Chair summed up the sector developments toward increased GMS power trade as well as energy access and stability from over 20 years of GMS energy cooperation. He then anticipated the future challenges of GMS in infrastructure and regulations that may be met by a range of initiatives, including Public Private Partnerships (PPPs). After providing an overview of the RPTCC-15 agenda, Chair then reported the approval of the GMS RIF pipeline at the 19th Ministerial Conference (MC-19) in Vientiane, Lao People's Democratic Republic (Lao PDR) on 10-11 December 2013 – an important milestone and catalyst for the subregion. Finally, Chair thanked Viet Nam and ADB for the excellent organization, and wished everyone a productive meeting.

5. Mr. Dinh The Phuc, Deputy Director General of ERAV, Ministry of Industry and Trade, Viet Nam, and host of RPTCC-15, welcomed all participants to Da Nang and thanked ADB for assisting in organizing the meeting. Mr. Phuc recounted the main benefits of power trading expected from energy cooperation since it was established in 1990s as: (i) optimized power system planning and operation, reducing reserved margins for individual systems; (ii) improved power system reliability; and, (iii) use of low-cost electricity sources, reducing power generation costs overall. Toward this end, Mr. Phuc recounted the key achievements for GMS, including several key agreements and Memorandums of Understanding (MOUs) spanning 2002 to 2008,

accompanied by technical assistance (TA) projects identifying, and facilitating solutions to, barriers to cross-border interconnections. Most recently, the MOU for the RPCC has been signed, a process that began in RPTCC-9 (Shenzen, People's Republic of China [PRC]; October 2010), and the GMS RIF pipeline, including the energy sector pipeline, has been approved at the MC-19. Mr. Phuc concluded that the agenda in the next 2 days will bring the GMS even closer to its goal of power trading across the subregion.

6. Mr. Chong Chi Nai, Director, Southeast Asian Energy Division, ADB, welcomed all the participants to RPTCC-15, and thanked the host for all the arrangements, including the field trip to the Song Bung 4 Hydropower site. He underscored the importance of the RPTCC-15 as a witness to: (i) the establishment of the GMS RPCC; (ii) the approval of the GMS RIF energy sector pipeline; and (iii) the conclusion of the first GMS-wide strategic and environmental assessment (SEA). Mr. Chong likewise highlighted the immediate next steps facing the RPTCC, including (i) selection of RPCC's headquarters and the finalization of the Articles of Association for consideration of the RPCC board in their first meeting; (ii) preparation of a realistic and practical implementation plan and country-led, sector-specific, robust monitoring and evaluation mechanism for the RIF; and (iii) consideration of SEA in GMS member's power development plans (PDPs). Finally, Mr. Chong thanked the GMS development partners, Agence Française de Développement (AFD), Australian Government Department of Foreign Affairs and Trade (DFAT, absorbed Australian Aid), Swedish International Development and Cooperation Agency (Sida), and the World Bank, for their continued commitment to GMS energy cooperation and power trade.

C. Country Updates of Power Development Programs: Focus on Cross-Border Projects (Annex 3)

7. **Cambodia.** Electricite du Cambodge (EDC) gave an overview of Cambodia's electric supply industry, including applicable voltage levels. In 2013, an additional 865.10 megawatts (MW) entered the grid from various sources, including hydropower from Viet Nam (290 MW) and Thailand (430.10 MW), biomass (40 MW), and coal-fired power (100 MW). In the next 5 years, about 1,819 MW will be added to the national grid system. Presently, medium voltage connection points cross the border to Thailand (8 points of 22 kilovolts [kV]; and 115 kV in 2007), to Viet Nam (18 points of 22 kV and 35 kV; and 230 kV in 2009), and to Lao PDR (2 points at 22 kV). In the future, new connection points are anticipated to the same countries (i.e., 7 points of 22 kV and 35 kV to Thailand, 7 points of 22 kV and 35 kV to Viet Nam, and 240 kV to Lao PDR some time in 2017-2018).

8. EDC then highlighted progress made on 7 of its major projects, namely: Kamchay Hydro Electric Power Plant (193.2 MW); Kirirom III Hydro Electric Power Plant (18MW); Stung Attay Hydro Electric Power Plant (120 MW); Stung Tatay Hydro Electric Power Plant (246 MW); Lower Stung Reussy Chrum Hydro Electric Power Plant (338 MW); Coal Fired Power Plant 1, Sihanouk Province (100 MW); and, Coal Fired Power Plant 1, Sihanouk Province (405 MW). Finally, EDC introduced its power development program, including Cambodia's power supply and demand outlook and future power generation sources. Cambodia aims to generate adequate supply to the national grid by 2015, with its reserve margin at 25% by 2018. By 2020, all cities and provinces should be connected to the grid through high-voltage systems, with a 50% nationwide electrification rate.

9. During discussions, Cambodia expressed interest in pursuing mutual power exchanges with Thailand and Viet Nam. (See replies in succeeding paragraphs on Thailand and Viet Nam

updates.) Cambodia also raised again the issue on transmission synchronization within the GMS, requesting ADB for technical assistance in this regard, including the definition of a common transmission line for the subregion, to guide GMS members' infrastructure development accordingly. ADB fed back that the Association of Southeast Asian Nations (ASEAN) power grid is considering 500 kV (for both AC and DC) as the main interconnection standard, pending further discussions. Meanwhile, GMS' Working Group on Performance Standards and Grid Code (WGPG) is considering 230 kV above as the potential regional standard.

10. **PRC.** China Southern Power Grid Co., Ltd. (CSG) gave an overview of its operations in 2013, including an overview on installed capacities for hydropower, nuclear, wind, solar photovoltaic, and biomass. For CSG's Revised 12th 5-Year Planning, peak load is expected to increase by 10.1% from 2010 (118 gigawatts [GW]) to 2015 (191 GW), while consumption will increase by 10.5% (710 terawatt-hours [TWh] in 2010 to 1,170 TWh in 2015). CSG then introduced its Green Grid target for power grid development, featuring (i) 3C (computer, communication, control) technologies; (ii) efficient power transmission; (iii) an energy saving dispatching and emission reduction program; and (iv) renewable energy integration. PRC then described cross-border power trade with its neighbors, including existing trade between CSG with Viet Nam (1.1 GW, 24.9 TWh), Lao PDR (24.4 MW, 0.27 TWh), and Myanmar (483.9 MW, 7.65 TWh). Activities facilitating future power trade include 2.8 GW of capacity from 3 projects in Cambodia, and a MOU on Power Purchase Program from China to Thailand signed on 6 June 2013, accelerating progress on the \pm 600KV Transmission Project. Presently, PRC and Thailand agree to a technical scheme and are negotiating the commercial mode of the project.

11. **Lao PDR.** Electricite du Laos (EdL) described the current energy and power situation in Lao PDR, including the development of the country's energy supply industry. Installed capacity as of 2012 is at 3,203 MW. Consumption grew continuously at a 14% average, while peak load increased continuously at a 13% average, with total peak load forecasted to continuously increase from 714.9 MW in 2012 to 4,801.4 MW in 2025. As of 2013, a total of 27 cross-border interconnections exist, comprising sixteen 22/35 kV lines, three 230 kV lines and two 500 kV lines just exporting, as well as six 115 kV lines engaged in bilateral power exchange. EdL then presented its transmission line development plan, and five planned cross-border connections up to 2015, comprising three 230 kV lines (two to Viet Nam and one to China), and one 115 kV and 500 kV line each, both to Thailand. In the future, Lao PDR will primarily use 230 kV and 500 kV lines for transmission; the 22 kV and 115 kV lines will be used mainly for distributing power to domestic customers.

12. **Myanmar.** Ministry of Electric Power (MOEP) gave an overview of its operations, including its history, organizational structure, existing national grid system, and existing power plant locations. MOEP reported actual power demand at 1,850 MW and total generation at 1,688 MW. In 2013, the maximum power shortage was at 228 MW (lower than in 2012); and by the summer of 2014, MOEP is expected to have solved this problem. MOEP then proceeded with a comprehensive presentation of its demand forecasting and development plan. A 15% average increase in demand is expected between 2013 and 2016. Over the same period, installed capacity should increase by 602 MW of hydropower, 50 MW of solar power, 300 MW of coal-fired thermal power, and 2,878.15 MW of gas turbine combined cycle power. Moreover, thirty-five transmission line and substation projects should be implemented, representing 2,387.31 miles and 3,130 megavolt-amperes (MVA) in total. Finally, by 2016, thirty-four percent of households should be electrified.

13. In response to question from Lao PDR, Myanmar stated that they have no objections to sending power to Lao PDR in the future. Projects with Lao PDR are still in the initial stages and were excluded from the presentation at this time, unlike projects with PRC and Thailand which were presented as already under construction. Presently, given Myanmar's power demand, the country's policy is to retain 50% of generated power within Myanmar, and allow 50% to be exported to other countries. Lao PDR, in turn, suggested that many utilities and economic zones offer possibilities for future cross-border connections between the two countries.

14. **Thailand.** EGAT described its total contracted capacity of 33,591 MW by plant type and by producer, as well as its total energy generation (estimated at 146,834 GWh) by fuel type, as of 31 October 2013. EGAT summed up its power purchases from neighboring GMS countries based on capacities stated in MOUs, including 3,000 MW from China and 7,000 MW from Lao PDR. (There is also a MOU with Cambodia with an unspecified capacity, and an expired MOU with Myanmar, previously reported at 1,500 MW.) Thailand is projecting 5,427 MW in power interconnection purchases in 2013-2019 specifically from Lao PDR, comprising 2,111 MW from completed projects, as well as, 3,316 MW from signed power purchase agreements (PPA) and projects under construction.

15. In response to questions, Thailand made several separate clarifications. First, the last slide on the presentation shows 115 kV (not 500 kV) connection points between Thailand and Lao PDR. Second, the specific connection year for a future project depends on each project developer, as well as on the interaction between Thailand's demand and supply. Thailand will update its PDP in the near future with more recent demand and load forecasts, and any timeframe that might be available. Third, Thailand stated that it is possible to consider mutual power exchanges between Cambodia and Thailand in future PDPs (similar to the current model between Lao PDR and Thailand). In connection, Thailand offered to initiate a working group to further investigate the proposal, suggesting potential lead discussants and scopes of responsibilities. Finally, responding to PRC, Thailand agreed that the MOU between Thailand and PRC may be reviewed and discussed, if necessary.

16. **Viet Nam.** ERAV gave an overview of its current power system, including its transmission network and the institutional structure under the Ministry of Industry and Trade (MOIT). ERAV reported electricity consumption at 105.39 billion kWh in 2012 (posting a 12.2% average growth rate between 2006 and 2012). Simultaneously, generation and imports total 120 billion kWh in 2012. (Installed capacity as of November 2013 is at 28,172 MW.) Per the country's Power Development Plan 2011-2020 (Master Plan VII), approved by the Prime Minister in 2011, Viet Nam's installed capacity will be at 75,000 MW by 2020 and 146,800 MW by 2030, decreasing hydropower's share to 26% then 16%, and gas turbine's share to 16% then 12%, while increasing coal fired thermal to 48% then 52%. ERAV concluded with an update of its interconnection projects, featuring current and future interconnections with Cambodia, Lao PDR and PRC, including a super high voltage connection between Northern Viet Nam and Yunnan.

17. In response to Cambodia's question, Viet Nam confirmed that the transmission line Stung Treng to Tay Ninh is still in the country's Master Plan VII. Once the plan is revised, information reported to the next RPTCC meeting will likewise be updated. Cambodia in turn confirmed that maintaining the project in Viet Nam's master plan would be beneficial to Cambodia, suggesting that power from Cambodia might also help supply Ho Chi Minh City.

D. Bids for Venue of the RPCC Headquarters

18. Thailand reported that, on 29 November 2013, the country's Ministry of Energy was authorized and empowered by the Deputy Prime Minister and Ministry of Foreign Affairs of the Kingdom of Thailand to sign the "Intergovernmental MOU for the Establishment of the RPCC in the GMS" (or the IGM). Thailand's Minister of Energy, Mr. Pongsak Ruktapongpisal, signed the IGM on 9 December 2013, in Bangkok, Thailand.

19. **Issue for Consideration.** Since all 6 GMS countries now signed the IGM, in line with consensus among members in RPTCC-13 meeting, the bids for the RPCC headquarters can be opened. However, RPTCC must first decide whether to consider the late bid of Lao PDR submitted in May 2013, after the deadline for bid submissions set for 30 September 2012.

20. **Brief Background.** At RPTCC-12 (Vientiane, Lao PDR; May 2012), GMS countries agreed the selection criteria and evaluation committee of bids and that proposals would be submitted within three months. Subsequently, an invitation will be sent to all members in this regard on 12 June 2012. Only Thailand and PRC submitted their bid by 30 September 2013. At RPTCC-13 (Yangon, Myanmar; November 2012), GMS countries agreed that proposals will be opened only after all countries signed the IGM. On 12 December 2012, four members, namely Cambodia, PRC, Lao PDR and Viet Nam signed the IGM in the 18th GMS Ministerial Conference. While waiting other two members' signing the IGM, Lao PDR submitted their proposal in May 2013. At RPTCC-14 (Kunming, PRC; June 2013), Cambodia, Thailand and Viet Nam remained open to consider Lao PDR's bid. PRC's delegation informed that they had to get endorsement of higher authority for consideration before providing an official position (Myanmar was absent from the meeting). Myanmar signed IGM in June 2013 and Thailand signed it in Dec 2013.

21. **Discussion on Bids to Host the RPCC Headquarters.** While Cambodia, Thailand and Viet Nam, now joined by Myanmar, maintained no objection for considering Lao PDR's bid, PRC maintained that all GMS countries previously discussed and agreed to the rules on the bidding process which, thus, should be observed and enforced.

- a. **Lao PDR's position.** Lao PDR apologized for the late bid that has led to these necessary discussions. While Lao PDR's bid was submitted after the deadline, it was submitted before any bids could be opened and considered. Given that RPCC is a cooperation initiative aimed at promoting GMS power coordination and power trade cooperation, and given that Lao PDR has been continuously proactive in these cooperation activities, the Ministry of Energy and Mines considered a bid submission appropriate for Lao PDR. Although Lao PDR submitted late, it did not benefit from the time, information, and/or prior knowledge of the other proposals. Lao PDR agreed that the letter sent by ADB which states the deadline is legitimate. But, strict to the legal is not the best way to cooperation; rather, in cooperation problems can be re-discussed and re-solved. Therefore, GMS should not look at the words alone but at the entire institution and the spirit behind submitting a proposal – to further the cooperation between countries. Ultimately, any winning bid is good for the evaluator, and more proposals equal more competition, which is good for the RPCC and GMS overall. Moreover, rules can be compromised in the spirit of GMS cooperation. Upholding strict rules may compromise future diplomacy. Lao PDR was open to rebidding by all parties.

- b. **PRC's position.** PRC emphasized the seriousness of rules and guidelines. GMS needs rules to guide GMS countries toward the right direction, commonly agreed through a consensus. Changing the rules midstream will set a precedent for similar issues in the future. For instance, if the rules can be re-discussed after it is approved, then a new round of bids would be equally open to another round of discussions. If GMS countries can reach a consensus and break it afterward, then parties may never arrive at a consensus and move forward. If one rule can be undone, then all rules can be undone. PRC used the metaphor of university applications and entrance exams, where very talented people cannot be accepted into the university if they submit their applications late. PRC agreed with the suggestion of Thailand that the issue on complying strictly with the regulations or not should be resolved bilaterally between PRC and Lao PDR. Otherwise, if late bids or rebidding is considered, the criteria should be changed.
- c. **Consensus-building.** GMS countries agreed to arrive at a consensus to ensure that the RPCC established is legitimate, competitive, open and transparent. Ultimately, Thailand noted, that every member must be able to accept in consensus the majority view, and accept the results of the bids. In this regard, Thailand suggested that, since Cambodia, Myanmar, Thailand, and Viet Nam, have no objection to either considering Lao PDR's proposal or proceeding without it, perhaps Lao PDR and PRC can simply resolve the matter bilaterally. The four other countries will follow the agreement between PRC and Lao PDR in this regard. Otherwise, a conclusion may remain elusive, if the 4 other members continue to discourse on whether the guidelines governing the proposal should be followed strictly, in which case Lao PDR will be disqualified. Thailand and Viet Nam agreed with Lao PDR that more proposals add to the options of good locations for the RPCC headquarters, and are better for the RPCC and GMS overall. In the course of discussions, Cambodia vacillated between positions, and suggested that since PRC complied with all the agreements and participated in the timely signing of the IGM, PRC maintains the prerogative to accept or reject any proposed process. Also, since the deadline and consequences on the invitation for proposals from ADB is clear, GMS countries should proceed only with the proposals received before the deadline. ADB clarified that the invitation itself is a consensus, and asked whether the GMS countries are inclined to change the consensus now, at RPTCC-15. ADB proposed that the task the GMS countries are faced with is to arrive at a consensus on whether it will uphold the deadline strictly. ADB asked countries to arrive at a consensus on this issue, suggesting that agreeing on another set of rules is also a rule (i.e., not only set rules are rules). A consensus can also be arrived at if Lao PDR withdraws its proposal. World Bank suggested that a third option is to arrive at a consensus to rebid.
- d. **ADB's role.** PRC suggested that, as a third party, ADB can oversee the process, ensuring it is neutral, transparent and efficient. Thus, PRC asked ADB to follow the rules and efficiently proceed with the establishment of the RPCC. ADB's position is that any bid submitted after the deadline is disqualified per the agreed rules. However, ADB informed that GMS is a consensus-based institution, comprising 6 members who are the decision makers. If GMS members reached a consensus, ADB has to follow new consensus. ADB has no decision-making authority, and can only function as an honest broker.
- e. **Reconsideration of evaluation criteria.** PRC suggested that, if the deadline can be reconsidered, then the evaluation criteria can likewise be reconsidered, to ensure

that they are fair, open and transparent. Deadline cannot be isolated from the rest of the bidding procedures like the evaluation criteria. Lao PDR was open to reconsidering the criteria, noting that the delay was caused by signing issues, not criteria discussions. Since many things may have changed in the past year, criteria can be revised to better benefit the RPCC. Thailand preferred to focus on the issue of considering Lao PDR's bid, rather than revisiting the criteria again, given the significant time and effort invested by the GMS countries to develop and agree on the criteria in the first place. Reconsidering the criteria will bring GMS countries too near the beginning when they are already at the end. Moreover, Thailand would have to resubmit and defend the criteria to the Parliament of Thailand for approval again (as it did with the IGM), and the Minister of Energy would have to re-sign the IGM. This option is nearly impossible for Thailand to consider. ADB reminded that the evaluation criterion, established in 2011, is nearly 2 years old. ADB further cautioned that revising the evaluation criteria is inappropriate at this time, as it will be difficult to reach a consensus with existing bids having informed each country of their own strengths and weaknesses. In conclusion, PRC agreed to the difficulties of changing the evaluation criteria.

- f. **Bidding timetable.** In response to a World Bank query, ADB clarified that, unlike the commercial bid, there was no validity period for the bids, mainly because the IGM was expected to have been signed in or near December 2012 by all GMS countries. The protracted period was unexpected, and the consensus of all countries amidst the delay was to open the bids only after all 6 countries had signed, which happened only on 9 December 2013. Meanwhile, Lao PDR's bid was not returned to them because there was no consensus during RPTCC-14 in June 2013, when Lao PDR's bid was presented, and 3 countries agreed to consider it, while 1 country was absent and another needed more in-country consultations. Viet Nam reminded the delegations that it was one of the 4 countries who raised interest in bidding for the RPCC headquarters, but as raised during RPTCC-14, Viet Nam shared the difficulties of Lao PDR in submitting a bid before the deadline, experiencing difficulty in vetting the proposal and securing approval from in-country authorities. (Thus, Viet Nam has no objections to consider Lao PDR's bid.)
- g. **Rebidding.** The World Bank raised the option to rebid after an extended period. Cambodia objected to the rebidding because it will significantly delay the process. Both Lao PDR and Thailand were open to rebidding without revising the evaluation criteria. Moreover, Lao PDR was amenable to opening the rebidding to all member countries to make the process more open and increase healthy competition for RPCC. Furthermore, Lao PDR was open to not resubmitting a bid, and simply maintaining its original bid for consideration.
- h. **GMS energy cooperation.** The spirit of long-term cooperation between and among GMS countries was iterated throughout the discussion. GMS countries insist on arriving at an amicable solution for the sake of long-term cooperation in the power sector of the subregion.

22. **Closed-Door Session.** After extended discussions without arriving at a consensus, Chair proposed to end the session in favor of a later meeting between the heads-of-delegation (HODs). ADB concurred and added that it should be a closed-door meeting for the HODs to candidly discuss how to proceed with. When the sessions resumed, ADB reported the results of that meeting, summed in the next paragraph.

23. A member from each delegation held substantial discussions on the best way to open the bid. Since the GMS Economic Cooperation Program started, the institution has not been legally binding, and has upheld the principle of consensus, with flexibility towards nurturing a long-term relationship and cooperation. Confidential voting was also discussed. But, it was declined in line with guidelines of RPTCC. The following three options were discussed, but, members could not reach a consensus.

- i. Consideration of Lao PDR's bid will be referred to GMS coordinators' meeting.
- ii. Conduct rebidding, but only PRC and Thailand can rebid (with no change in selection criteria and bidding process).
- iii. Conduct rebidding open to all members (with no change in selection criteria and bidding process).

24. **Final discussions.** In further discussion, PRC clarified it did not want to reject any bids, rather it wanted member countries to abide strictly by the original consensus, which would be good for GMS overall. Otherwise, future consensus will not be meaningful. PRC asked that ADB should make the final decision instead of the 6 GMS countries. (Simultaneously, PRC maintained that the issue concerns all 6 countries, not just PRC and Lao PDR.) Ultimately, whoever makes the final decision must abide by the previous consensus and use it as the basis for any decision. PRC was willing to elevate the issue to higher authorities, if found necessary. Thailand maintained that the issue is best resolved bilaterally between PRC and Lao PDR, noting that if PRC wants to abide by the original consensus then Lao PDR must withdraw. Moreover, if ADB makes the final decision, all GMS members must accept the decision completely. Viet Nam declared that it fully understood Lao PDR's situation, thus, as with other countries, it wanted to accommodate Lao PDR, and also asked ADB to find an amicable resolution. Even for the terms of reference for the evaluation committee, the committee can only make an evaluation, while it is the RPTCC who makes a decision on the TOR. ADB has no authority to make decisions for the RPTCC. Consensus can be made only by GMS members.

25. **Elevation to Higher Authorities.** Chair made an example of the ASEAN, sharing that when a meeting concludes with still unresolved matters between parties, the involved countries are asked to report to higher authorities for them to decide at their level. Thus, Chair asked PRC and Lao PDR to do the same and ask higher authorities on guidance regarding other flexible ways forward. (Chair noted that only PRC and Lao PDR have to compromise their opinions to resolve the matter). There was some deliberation on whether the issue could be elevated to the SOM, to be resolved by the GMS country coordinators, if it cannot be decided at the RPTCC. ADB noted that decisions within the RPTCC and recommendations shall be made by consensus and seek a guidance to GMS Ministerial Conference. Anticipating that positions will not change for the duration of RPTCC-15, the discussions were concluded in favor of pursuing other options that may emerge from further in-country consultations with higher authorities. ADB conveyed a sense of urgency noting that it will be difficult to find legitimate excuses to further prolong RPCC establishment, while Chair highlighted the need to maintain good relations among members into the long-term future. In his closing remarks to the RPTCC-15, Chair asked ADB to report the discussions to each GMS member coordinator, to take up the matter during the next GMS SOM. Following the SOM's decision, ADB will help organize a special RPTCC meeting to open the bids and avoid further delay, if needed

E. Final report of the SEA for GMS regional power development (Annex 4, Annex 5)

26. International Centre for Environmental Management (ICEM), the consultant for ADB presented an overview of the final report of the SEA for GMS regional power development (Annex 4). A summary of the report was distributed to all GMS delegations (Annex 5). ICEM reported the following main conclusion and recommendations (more details can be found in Annexes 4 and 5):

27. Conclusions

- a. Power sector planning does not take account of wider environmental and social impacts.
- b. Full costs and benefits of alternative plans are not captured in analysis.
- c. Power sector planning is undertaken on a national, not a regional basis. Consequently, inconsistencies emerge and cross-border impacts are not fully considered.
- d. The effectiveness of public consultation on power development plans is mixed, and generally appears to ignore wider environmental and social concerns.
- e. The rate of development of the power sector is expected to be very rapid and to outstrip the capacity of agencies tasked with environmental regulation, monitoring and enforcement, with the result that pressure from environmental and social impacts may be expected to increase.

28. Recommendations

- a. Integrate environmental and social concerns into the national power planning processes.
- b. Ensure that national and regional power sector planning considers environmental and social costs.
- c. Develop a common approach to power sector planning across GMS members.
- d. Encourage cooperation and coordination in planning.
- e. Put in place minimum protocols for public consultation on regional power development plans.
- f. Make more effective use of existing consultative processes.
- g. Strengthen the capacity of agencies responsible for regulation and enforcement of environmental and social impact management measures to keep pace with power sector development.
- h. Strengthen the technical knowledge base for environmental and social impacts management in the power sector.

29. **Discussions.** Following are highlights from the discussion following ICEM's presentation.

- a. **General comments on SEA and PDP planning.** The scenarios in the ICEM study compare existing country plans with something that will be different. They are not actual plans, but rather compare each scenario's requirements to aid GMS countries in decision-making should one of the scenarios be adopted for implementation. Adopting one of these scenarios still requires a GMS country to prepare an actual plan around the selection. Overall, ICEM emphasized greater regional cooperation when applying the SEA, looking beyond individual country impacts. The ICEM study reveals inconsistencies in national plans when elevated to a regional level. But some implementation activities can be done only at the national level (e.g., power plant

development, greater balance between renewable energy [RE] and energy efficiency [EE]). The ICEM study demonstrates how the tool can be used at a national level to examine different ways of PDP preparation, requiring a package of capacities, including that of practitioners to apply SEA, and that of decision-makers to understand SEA

- b. **On internalizing costs in the RE scenario.** In response to Lao PDR on the low quality and reliability of RE power, ICEM clarified that the extra capacity needed to guarantee power supply when adopting renewable energy sources, has been built into the model. While capital costs are more expensive for the RE scenario because of the need to build more plants, the overall costs appear similar to the current PDP scenario. Likewise, ICEM included land intake calculations in the model. It found that solar and wind farms tend to be located in lands less valuable for agriculture.
- c. **On SEA technical transfer and future applications.** Viet Nam asked how the SEA TA project might be concretely turned over to GMS countries – including descriptions of the method, tools used, knowledge generated, and experience gained – so that GMS members might benefit not just from the results of the TA but also capably introduce SEA into their future PDP development work. ICEM responded that there are various ways to apply these methods in each GMS country. Countries can use SEA in PDP preparation while referring to the methods and results in the ICEM study, with support and training available through ADB. The database generated by the study will be turned over to ADB and be accessible to all member states. Although limited, the OptGen software used in the analysis is improving and has proved useful.
- d. **On demand responses.** PRC suggested that smart grids can change garbage power (i.e., from intermittent energy sources such as solar and wind) into good power. In connection, PRC proposed to account for both the supply side and demand response in a comprehensive master plan to help realize regional power development, stating that it will take more than technology to increase the use of RE sources. ICEM agreed, clarifying they used the demand benchmark stated in the PDPs as inputs to their model, adding that the demand predictions in some of the countries appeared greater than realistic. Thus, the model should be reviewed in this regard. Demand can be reduced in various ways including through EE activities and through the use of smart grids to better incorporate garbage power.
- e. **On hydropower and resettlement.** Lao PDR raised concerns that hydropower is classified separately from RE against widely accepted practice, as in ASEAN, International Energy Agency (IEA), and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). In connection, Lao PDR asked to help reconcile some reported figures: (i) On resettlement due to hydropower (Annex 5, slide 42), no large and medium scale hydropower projects were displaced in the global scenarios, meanwhile, they were reduced in the two regional scenarios. Then, (ii) on resettlement due to land take by thermal and nuclear plants (Annex 5, slide 41), it seems that no land was taken by new projects. Moreover, in the RE-global scenario, the number of thermal plants is reduced, especially in Viet Nam where coal displacement is occurring. But in the EE-global scenario, even more coal is being displaced in Viet Nam, and some in Thailand. These figures, and their seeming accuracy, need to be better understood.

ICEM clarified that large hydropower may be classified as RE, but it exhibited sustainability issues key in the study. Thus, ICEM considered the current PDP as reflecting more conventional power development, and the other 4 scenarios are the

different options, with more or less large hydropower (over 30 MW) to show the difference in sustainability, not necessarily “RE-ability”. (Thermal and nuclear plants tend to be in more populous areas than hydropower; thus displacing more people.) In the RE scenario, where the number of hydropower plants are strengthened, the standard plant size of 10 MW was used as input on resettlement and area due to project impact. ICEM assessed individual projects, and made assumptions on some projects with information gaps, using available standard methods. To compare scenarios, ICEM used a standard profile per MW. ICEM’s database accounted for run-of-river and storage dams, and considered storage volumes and reservoirs in the assessment. ICEM offered to talk more about the details, but assured GMS countries that the impact will not change very much even when tinkering the details. While more sensitivity analyses can be conducted as a refinement to the study, overall, ICEM is pleased with the outcomes of the methods used in the study.

- f. **Qualifier for “affected”.** In response to a query from Lao PDR, ICEM agreed to add the phrase “positively/negatively” affected in the conclusion on social security (Chapter 10), to reflect that both positive and negative factors were considered. For instance, hydropower might affect fisheries negatively, but may affect drinking water supply positively through company interventions.

30. At the end of the session, ADB reported the next steps for the AFD-financed TA. In the finalization workshop in June 2013, it was discussed that Cambodia and Thailand would be potential countries where SEA approach will be adopted in preparing the national PDP (but Thailand informed their PDP will not be reviewed in 2014). ADB informed that Viet Nam has already used SEA method in the preparation of its PDP-VII.

F. GMS RIF – Final Energy Portfolio (Annex 6, Annex 7)

31. Mr. Duy Thanh Bui, Senior Energy Economist, ADB presented the GMS RIF approved by the GMS Ministers during the MC-19 (Vientiane, Lao PDR; 10-11 December 2013). ADB described the GMS RIF as the collective aspirations of countries that will continue to be a living, evolving framework to be implemented and regularly updated for better implementation. The GMS RIF energy sector pipeline comprises 13 investment projects valued at \$3.2 billion, and 8 TA projects valued at \$11.5 million. Investments are dominated by transmission and distribution (T&D) projects (92%), followed by energy access projects (5%) and RE projects (3%). Over half of TA projects are on energy sector development (56%), followed by RE (26%), then EE and T&D (9% each). The GMS RIF considers that, while infrastructure development is important, energy connectivity needs more software development, such as the synchronization of technical standards. Likewise, the GMS RIF considers climate change as a working assumption. (The presentation on the GMS RIF is appended in Annex 6. The GMS RIF energy sector pipeline extracted from the complete compilation of the 10 GMS sectors was distributed at RPTCC-15, and is appended as Annex 7).

32. **Discussions.** The World Bank asked whether GMS countries discussed the measurable outcomes for 2022, and could conclude that the situation would be worse without realizing the GMS RIF investments. ADB replied that the development of the GMS RIF energy pipeline was guided by the GMS expanded energy road map discussed in the GMS Subregional Energy Forum. The road map has a results monitoring framework with indicators presented in a 4-level hierarchy (i.e., activity, output, outcome and impact). However, since it is an energy road map, it is broader than a road map for electricity cooperation.

33. **Next steps.** Per the results from the MC-19 as reported by ADB, RPTCC must consider how the RIF can be effectively executed by the (i) formulation of a realistic and achievable implementation plan; (ii) mobilization of public and private financing; and, (iii) improved coordination and results-based monitoring and reporting.

G. Discussion on Proposed RPCC Articles of Association (Annex 8)

34. Mr. Jong Inn Kim, Lead Energy Specialist, ADB reported that no members provided their official comments upon ADB's request on the proposed Articles of Association of RPCC which is to be approved during the first RPCC board meeting. Thus, GMS countries discussed additional comments to the articles in this session. Agreements for implementation follow below:

- a. On page 2, Preamble and on Page 3, Article 2, Para.1, delete ""Trade" in "Regional Power Trade Coordination Centre (RPCC)".
- b. On page 3, Article 1, Para. 7, replace "GMS States" with "GMS Countries".
- c. On page 6, Article 9, Para. 7.g, replace "RPCC objectives" with "RPCC's objectives" (as used in Para. 7).
- d. On page 11, Article 14, Para. 2 on "Accounting Year" and "calendar year", Para. 5 on "fiscal year", and Para. 7 on "Financial Year", pending consultations with lawyers, Para. 2 will define the terms accounting year, fiscal year and financial year to mean calendar year (i.e., 1 Jan to 31 Dec), reconciling terminology, and recognizing that each GMS country has different fiscal years.
- e. On page 7, Article 10, Para. 2 on the nomination of the Executive Director, no minimum guidelines will be prescribed and the paragraph will be maintained as written. This will give the RPCC board flexibility in deciding the matter and selecting someone skillful and professional who can manage the RPCC in the long-term. This discussion was initiated by Viet Nam's suggestion that the criteria and procedure for nomination should be clearly defined. Later, Viet Nam agreed with other delegations to defer the matter completely to the RPCC board. Cambodia suggested to add that candidate evaluation be conducted by an inter-member country task force (like the ASEAN Center for Energy). ADB suggested that country rotation for the position may not be a good principle to include as a guide for the RPCC board. Chair shared that, per ASEAN's experience, rotation is not efficient. GMS countries considered all suggestions and agreed to retain the board's full powers on the matter, and maintain the paragraph as written.
- f. On page 11, Article 12, Para 6 on "code of conduct" and Article 21 on "internal regulations", GMS countries were clarified that these are purely RPCC (not RPTCC) items, to be specified and approved by the RPCC board.
- g. On page 11, Article 14, Para. 1 on "capital contributions", Para. 6 on "contributions" and Para. 7 on "fees", these terms will be defined and differentiated. ADB noted that one issue that emerged on contributions previously is whether or not GMS countries should give equal contributions. This may be influenced by whether or not some costs will already be shouldered by the winning proposal to host the RPCC (still to be

determined). The question then might be whether or not the balance will be equally covered by all 6 or just the remaining 5 members. Lao PDR recounted that it was previously agreed that other countries will contribute to the balance but not equally. Regarding Para. 7, ADB clarified that this is a statement implying equal membership rights among all members. For instance, voting power is not determined by the amount of contributions; all members have one vote regardless of contribution.

- h. On page 12, Article 15, Para. 2, on arbitration, given that conflict will be submitted to the RPTCC for arbitration, detailing the arbitration process is unnecessary in the articles. ADB recounted that the details were in the articles originally, but that GMS countries previously agreed to apply a more oriental and less Western philosophy, by lessening detail and simplifying the articles overall.

H. Update on Expected Assistance for Continuing GMS Power Trade Activities (Annex 9)

35. **World Bank TA.** Mr. Dejan Ostojic, Lead Energy Specialist, World Bank presented WB's proposed TA for Regional Power Market Development in the GMS, aiming to: (i) develop open access to power transmission grids, including common rules for nondiscriminatory treatment of cross-border transactions; and, (ii) develop a regulatory framework conducive for public and private investments in the regional power market, including transmission interconnections. The TA will focus on cross-border trading issues, regulatory and commercial barriers to the development of a regional power market, and voluntary guidelines for national regulators. World Bank noted that while the past has focused on project-driven development, and the present on project-to-project development, the future will be on system-to-system development. In this regard, GMS members must conduct intensive dialogue and discussion to iron out important questions and agreements, and collaborate to harmonize policies and develop the system together. (World Bank's presentation is appended as **Annex 9**.)

36. In the course of discussions, World Bank clarified that the proposal will initially span one year of operations. Subject to the first year's progress and effectiveness, expectations and future support will be adjusted according to the ownership and demand shown for this type of technical intervention.

37. In connection, World Bank agreed to pay equal attention to technical and economic issues, recognizing that one could not be separated from the other. World Bank expounded that every technical solution has costs to be resolved. Otherwise, overpricing can occur and technical issues may not be implemented. Lao PDR suggested that while the most important activity for the country is identifying the pricing method for the cross-border transmission lines, tackling the issues on synchronizing frequency and voltage controls is equally important. Agreeing with Lao PDR, Thailand added that the World Bank should investigate stability limits and how the constraints might be released from the system. (Based on Thailand's experience with Nam Theun 2, the conductor size of the transmission line was limited by transient stability considerations in sending power from Lao PDR to Thailand.) To maximize the World Bank TA, Thailand suggested it should investigate the technical constraints first, and help identify which interconnection is the best between GMS countries, at the lowest cost, to release the constraints; then investigate the pricing mechanism.

38. **AFD TA.** Mr. Jong-In Kim, Lead Energy Specialist, ADB re-presented AFD's proposal on behalf of AFD (**Annex 10**).

39. **Next steps.** WGPG and WGRI Chairs will send their program of activities to the World Bank through ADB, to help World Bank in prioritizing activities and interventions. ADB, AFD and GMS countries to continue coordination on the AFD-financed Phase II TA.

I. Closing Session

40. **Next Meeting and Venue.** GMS countries agreed that Cambodia would host next RPTCC meeting. The specific venue and meeting dates will be announced in the near future. A special meeting for the opening of the RPCC bids may be called in the first quarter of 2014, pending feedback from GMS SOM meeting. For reference, the first GMS SOM is tentatively scheduled on 10 February 2014, back-to-back with the first task force meeting for the 5th GMS Summit (tentatively scheduled in December 2014).

41. **Summary and Closing.** Vice Chair, RPTCC-15, acknowledged the meeting as being very productive, thanking Viet Nam, ADB and the other development partners for all the support. Vice-Chair summarized the meeting proceedings as follows:

- i. GMS countries updated their power development plans, showing each country as already having mature power trade connections with multiple countries. GMS countries share the challenge of soaring power demand which will be met by better generating capacity, with more attention paid to renewable power development.
- ii. GMS countries realized that power sector planning must be undertaken on a regional basis using a common approach, and account for wider environment and social impacts, requiring protocols for public consultation and increased institutional capacity for regulatory and enforcement agencies.
- iii. GMS countries were appraised on the complete GMS RIF, requiring both public and private resource mobilization, improved coordination, as well as results based monitoring and reporting, for effective implementation.
- iv. GMS countries updated the RPCC Articles of Association in the right direction.
- v. GMS countries were updated on assistance from AFD (on Phase II of SEA activities) and World Bank (on power market regulation and the grid code), for continued GMS power trade activities.
- vi. GMS countries underwent difficult discussions on the bidding over hosting the RPCC headquarters, recognizing the need to balance consensus and cooperation. Given that communications proved to be the most reliable method for arriving at a resolution, in-advance communications on such matters should be taken in the future.

42. Chair, RPTCC-15 thanked all participants in turn beginning with the GMS delegation who prepared for and delivered comprehensive updates to their PDPs, the development partners who continue to assist GMS power trade activities, and the host ERAV for their excellent arrangements and warm hospitality. Chair asked ADB to report the discussions to each GMS member coordinator, to take up the matter during the next GMS SOM. Following the SOM's decision, the bids can be opened either in the SOM meeting or a special RPTCC meeting to avoid further delay. Chair concluded by inviting everyone to enjoy the field visit to the Song Bung 4 Hydropower Project, before taking a safe journey home.