

Summary of Discussions
1st Meeting of the Planning Working Group (PWG-1) of the
Regional Power Trade Coordination Committee (RPTCC)
Siem Reap, Cambodia, 13 June 2006

I. Background

1. The establishment of the Planning Working Group (PWG) was agreed during the 1st Meeting of the Focal Group held in Hanoi in January 2006, and is the first of the sub-groups to be created to carry out priority activities of the RPTCC. The list of PWG members was recently finalized based on nominations submitted by the GMS countries. The PWG-1 meeting was co-organized by the Ministry of Industry, Mines and Energy (MIME) of Cambodia and the Asian Development Bank (ADB). It was attended by PWG nominees of the six GMS member countries, as well as by representatives of AFD, IUCN, JBIC, SIDA, Soluziona, TEPCO, World Bank and ADB.

2. **Objectives.** The PWG-1 meeting was held to: (i) set the internal procedures including appointing the authorities, and discuss decision-making and communication channels/procedures; (ii) discuss proposed terms of reference (TORs) of specific priority tasks, namely, performance standards, operational planning, rules for cross-border electricity trade, transmission regulation and training program; and (iii) advance the progress of FG/ PWG activities assigned to country focal points, namely, the GMS Power Master Plan, power sector database and website, and best practices for power purchase agreements (PPAs). Attached is the agenda and program of the meeting (Annex 1) and the list of PWG-1 participants (Annex 2).

3. **Opening & Welcome Remarks.** H.E. Khlaut Randy, Secretary of State, MIME, Cambodia, welcomed PWG participants and thanked ADB for the meeting support and facilitation. He cited the role of regional power trade in realizing affordable and reliable energy supply to the GMS region. He called on the participants to work hard to ensure that the work plans to achieve regional power trade are effective and appropriate.

4. Mr. Anthony Jude, Principal Project Specialist, SEID, ADB explained the importance of establishing the PWG and provided the PWG meeting's objectives. He outlined the main agenda items of the meeting and stressed the need for the PWG to agree on the relative priorities to be assigned to various PWG tasks.

II. Discussion on Institutional Arrangements for the FG and Next Steps

5. The meeting agreed that CSG (PRC) would be the Chair of PWG and EGAT (Thailand) the Co-Chair for the next two years. The Chair from PRC is Mr. Yu Wenqi, Division Chief, Planning Department, CSG, while the Co-Chair from Thailand is Mr. Varavoot Siripol, Assistant Director, System Planning Division-Transmission, EGAT. The meeting also agreed that the communication procedures would be similar to that for the FG (e.g., all communications to go through the Chair). As in the FG, there would be no country base of operations for the PWG.

III. Planning Working Group Activities

6. *Priority PWG Activities and Presentation of Terms of Reference (TOR).* Soluziona presented the TORs of the five priority tasks, which generally contain the following sections for

each task: background; objectives; glossary of terms, scope/ activities; deliverables; and timeline. Presentation is attached (Annex 3).

7. *Performance Standards.* Soluziona described the PWG activities involved in developing specification of reference standards for the Regional Transmission Network (RTN) of the GMS. The main objective is to address short-term reliability problems, prior to ensuring regional quality and reliability. Country-level activities include benchmarking and power system analysis, while regional-level activities include scenario definition and power system analysis, the latter involving coordination among national Transmission System Operators (TSOs).

8. **Discussion.** Participants discussed the scope of work and expected outputs of the consultant on performance standards. Thailand noted the difficulties in defining common operating criteria among different systems. The participants agreed on the need for study on performance standards. Soluziona added that standards would have to be defined for the regional transmission system. WB suggested looking into models of guidelines for all types of standards used in other countries.

9. *Transmission Regulation.* This shall be applied to all transmission services in the GMS through the Trading Network Model (TNM), including related activities of such institutions as the Regional Transactions Coordinator (RTC), the TSO of each country, and Transmission Facilities Owner (TFO), whose facilities comprise the TNM. Activities include analysis of inter-TSO compensation mechanisms, design of common regional database and establishment of interconnection calculation procedure.

10. **Discussion.** Thailand believed that the study, dealing with stage 2 activities, would be needed but only after about 5 years, and not at this time. However, the PWG agreed to include development of transmission regulation as a priority area.

11. *Electricity Trading.* Soluziona noted that the FG, tasked to develop the detailed rules for cross-border electricity trading, should focus on types of transactions expected for stages 1 and 2 of the PTOA. Main issues to be analyzed include: structure of flexible PPAs; schedule of opportunity transactions and flexible PPAs; methodologies for calculating available transmission capacity in the RTN; methodologies for transmission capacity allocation; design and implementation of Regional Commercial Database; and trading of ancillary services in the RTN.

12. *Operational Planning.* As and when the workload and specialization required would be warranted, Soluziona proposed the establishment of the Operational PWG (OPWG), to be derived from the split of the PWG. The OPWG would deal with, among others, the establishment of clear outage planning/ procedures, assessment of main network constraints, evaluation of network losses in the RTN, establishment of demand forecast models and definition of emergency plans.

13. *Training Program.* An adequate training program would be implemented for the FG and PWG, which would consist of in-house courses and visits to international regulatory entities/ system operators. Training programs for staff categories would focus on: economics background; planning/ operation of power markets; use of mathematical models for optimizing operation/ expansion of power systems. Instruction programs were separately proposed for the FG and the PWG.

14. WB emphasized the need to have a coherent program for power trade development that takes stock of the available resources, and provides a timeline of activities that would be

undertaken. PRC said the strengthening of institutions would be more important at this point rather than meeting individuals' training needs as implied in the proposed training courses.

15. *General Comments.* PRC expressed the need to optimize allocation of resources, which would involve carefully prioritizing activities; suggested priorities include power planning, rural electrification and training. ADB clarified that the topics were only presented for the purpose of determining possible inclusion in the PWG work plan, but not necessarily to be carried out immediately. ADB noted the comments and indicated that based on these comments, the TORs would be revised within one week, and circulated to the GMS members for review and prioritization through the Chair (PRC). The PWG agreed that the priority areas are performance standards, transmission regulation, and training.

IV. Progress of Priority PWG Activities

16. *Power Master Planning: Thailand Assistance to Cambodia and Lao PDR.* EGAT discussed the elements of planning assistance to Cambodia such as load forecasting, generation system planning, transmission system planning, and on-the-job training. Similar assistance would also be provided to Lao PDR. EGAT discussed a number of issues in providing such assistance. Presentation is attached (Annex 4).

17. **Discussion.** Thailand suggested that power planning assistance to GMS countries be coordinated to avoid duplication. The WB suggested EGAT's continued involvement in providing assistance in developing Cambodia's capability for power system planning, and cited areas where EGAT's contributions would be needed. Cambodia clarified the differences in the scope of assistance on power planning provided by EGAT and WB. In a separate meeting between EGAT, MIME/ EDC and World Bank, it was agreed that the master plan activities of EGAT and the consultant appointed by Cambodia would be coordinated to produce a single, agreed master plan. It was also agreed that EGAT would play an advisory role in the entire power development planning activity that includes provision of software and training. ADB cited generation projects in its funding pipeline for Cambodia, which should be considered in the power master plan. Lao PDR suggested that the required TA from EGAT would be on transmission planning of some specific project, rather than the master plan study.

18. *Power Master Planning: PRC Assistance to Myanmar.* CSG provided a background of PRC's assistance on power system planning to Myanmar (presentation attached as Annex 5) and noted the main contents of the plan which include: general situation/ analysis; distribution/ utilization of primary energy resources; power development situation; load forecast; generation expansion planning; power grid expansion planning; and environmental protection. The primary conclusions and suggestions of the plan were presented, covering energy demand, total power installation, hydro installation, capital cost for generation expansion, export-oriented projects, transmission line length, and capital cost of transmission/ transformation projects. CSG discussed the proposed works for the next stage.

19. *Power Master Planning: PRC Assistance to Lao PDR.* CSG presented the background, progress and main contents of the master plan study for Lao PDR's power industry, and discussed the work schedule of the study. Presentation is attached as Annex 6.

20. **Discussion.** ADB inquired whether capacity building is included in the power system planning assistance to Lao PDR and Myanmar. PRC clarified that this is currently focused on actual planning rather than training. WB noted that it provided assistance on power system

planning to Lao PDR, which was completed in 2004 (by Mansuel), and suggested that the parties revisit the lessons from said study.

21. *GMS Regional Power Sector Database, Data Requirements, Updates and Website.* CSG recalled the FG mandate for PRC to develop the database, discussed the added information proposed by PRC, and provided the status of PRCs' work in filling-up the database. He presented the TOR on the establishment of the GMS Power Website, which specified the design principles, design scheme, proposed working schedule, items for pricing, and issues for coordination/ confirmation. Among the issues raised by CSG were the bidding/ payment of consulting company by ADB, purchase of software/ hardware by ADB, and location of web server (ADB HQ or GMS countries). Presentation is attached (annex 7).

22. **Discussion.** The discussions focused on the difficulties of posting the database contents in the website. Lao PDR cited the technical issues of posting large data sets on the web. Thailand raised the limitations of disclosing some sensitive power data. ADB said the current meeting should agree on the database format, including only data each country would be comfortable disclosing. The WB noted that most of the data being considered are public information but if there are concerns regarding disclosure, suggested securing the website. WB expressed concern about the frequency of updating data, and about sustaining and maintaining the database. SIDA said that the data should be made public to the extent possible in an open website; however confidential data may be placed in a secure section of the website. ADB said the issue could be in processing and making good use of the data, rather than data access.

23. ADB suggested that the PWG members agree first on the format of the database, which was proposed in the format earlier circulated by CSG. ADB added that Soluziona was engaged under the AFD-funded TA to work with the PWG on the database development, but without the agreed format, Soluziona could not commence work, especially on the software requirements. ADB clarified that the hardware would be funded out of the AFD TA. It was agreed that the PWG members would try to fill up the database format and relay their concerns on the format to CSG as soon as possible.

24. *Best Practices for Power Purchase Agreements.* Soluziona presented the scope of the "Desk Study Report" which covers: the role and main provisions of bilateral arrangements; target of best practices in PPAs; and impact of risks on energy price (presentation is attached as Annex 8). Soluziona discussed the main features of PPA in terms of pricing and price-setting mechanism recommended for GMS. He showed the types of price structure, from single to multi-term prices and recommended the two-part price structure for the GMS, citing its advantages. He discussed the optimal management of the water reservoir for hydropower plants and recommended that in the case of two-term pricing, the buyer should manage the reservoir, citing schemes applied in other countries. He gave general recommendations on the use of transmission facilities and ancillary services, especially inclusion of clauses on the use of lines (linked to PPA) for cross-border trade. He discussed the provisions for transition to competitive markets and summarized the preliminary recommendations for achieving best PPA practices.

25. **Discussion.** Lao PDR requested PWG members to submit their comments to the chair of the FG (copy to FG members) by June 25; he noted that the draft final report would be completed in two months and circulated to GMS members for further comments. The final report is due in October 2006. PWG members raised concerns related to pricing of risk, management of water reservoir by buyer, application of the two-part tariff formula to hydropower projects, pricing of ancillary services and other aspects of the presentation. Soluziona stressed the

importance of comprehensive information on water flows and other physical data, which could affect decisions by PPA parties on reservoir management and estimation of water value, among others. The WB suggested organization of the report to illustrate clearly the basis for the draft recommendations. The recommendations would be finalized only after taking into account the comments of PWG and any other additional comments received by Soluziona by June 25.

V. Closing Session

26. *Consideration and Adoption of Proceedings.* Mr. Jude announced the distribution of the draft summary of proceedings for review by the body. The PWG members reviewed the draft summary of proceedings and after incorporation of suggested changes, the body therefore approved the minutes of the PWG-1 meeting.

27. **Closing Remarks.** Mr. Jude cited the main achievements and agreements of the meeting, particularly on the institutional arrangements for the PWG. He stressed the need to prioritize the activities presented earlier, particularly on the capacity building required for power trade development. He reminded the PWG members to submit their proposed work plan within a week, to be consolidated in a matrix. He cited the presentations on power planning assistance and noted the overlaps observed and the need to address these. He reminded on the need to work on the PPA best practices study and for PWG members to submit their comments within the time frame agreed.