

Summary of Discussions
Second Meeting of the GMS Subregional Energy Sector Forum (SEF-2)
Ho Chi Minh City, Viet Nam, 22 November 2008

1. **Objectives.** The SEF-2 meeting will discuss the medium term (2008-2015) road map for expanded GMS energy cooperation and will consider the proposed work plan for realizing the road map, after a careful assessment of the priority activities and timetable of the work plan. The first SEF meeting held in Bangkok in December 2004, agreed to establish the SEF to oversee the expansion of cooperation to other energy sub-sectors per the request of the GMS countries. ADB shortly approved RETA 6301: Developing the GMS Energy Sector Strategy, whose study was completed recently with findings on various feasible energy mix scenarios. This serves as the basis for the medium term road map and work plan, which would be presented for consideration in this meeting. The SEF-2 meeting will also exchange information on developments in the energy sector of GMS countries.

2. The SEF-2 meeting was held in Ho Chi Minh City, Viet Nam on 22 November 2008 and co-organized by the Electricity Regulatory Authority of Viet Nam (ERAV)-Ministry of Industry and Trade (MOIT) and the Asian Development Bank (ADB). It was attended by representatives of the six GMS member countries, as well as by representatives of ADB, Agence Francaise de Developpement (AFD), Australian Agency for International Development (AusAid), Japan International Cooperation Agency (JICA), Mekong River Commission (MRC), RTE International, Swedish International Development Cooperation Agency (Sida), and World Bank (WB). Attached is the agenda and program of the meeting (Annex 1) and the list of SEF-2 participants (Annex 2).

3. The SEF-2 meeting was co-chaired by Mr. Pham Manh Thang, Director General, ERAV-MOIT, and Mr. Yongping Zhai, Principal Energy Specialist, Infrastructure Division, Southeast Asia Department (SEID), ADB.

Opening Session

4. Mr. Anthony Jude, Officer-in-Charge of the Infrastructure Division (SEID), ADB, welcomed the participants and provided the objectives of the meeting, i.e., to discuss the proposed road map for expanded GMS cooperation in energy, a process which was started in the SEF-1 meeting in Bangkok in December 2004. He said the road map assumes importance in the light of recent huge fluctuations in world oil prices, and that recent moves in the subregion for cooperating in the gas sector require closer examination. He also noted that the climate change issue would require better adaptation and mitigation efforts by the GMS countries.

5. Mr. Yongping Zhai, Principal Energy Specialist, Infrastructure Division, Southeast Asia Department (SEID), ADB, welcomed the participants and gave the background of the SEF and the efforts of GMS countries, with ADB support, to come up with a strategy for expanded GMS cooperation in energy. He said the SEF meeting will discuss and consider the medium-term road map and work plan for cooperation in other energy forms (aside from power). The meeting will also discuss the Climate Change Implementation Plan (CCIP) of the GMS Environment Operations Center (EOC), mindful of the energy sector's role in reducing carbon emissions. There will be an examination of the potential synergies between the CCIP and the environment work under the new RETA 6440.

Study to Prepare Medium Term (2008-2015) Road Map and Work Plan for Expanded GMS Cooperation in Energy

6. Mr. Thierry Lefevre, Center for Energy Environment Resources Development (CEERD), discussed the potential benefits of energy cooperation, and provided current regional energy cooperation schemes. He explained the possible mechanisms for energy sector cooperation, which covers modes or mechanisms, and the possible areas for energy cooperation, namely, energy security, climate change, energy efficiency (EE) and conservation, clean coal technologies, new and renewable energy sources (NRE), biofuels, and nuclear energy. He gave the rationale for energy cooperation in the GMS, and reviewed the findings and recommendations of the energy strategy study completed recently. He then discussed the rationale for energy cooperation in the context of the GMS Strategic Framework, the strategic objectives of expanded GMS cooperation in energy, and what would be required to achieve such objectives. He presented the proposed road map for GMS energy cooperation and explained its contents- impact, linkages with other GMS sectors of cooperation, and the subregional cooperation measures. The latter includes: increasing access to energy, utilizing domestic resources in more systematic and sustainable manner, improving regional security, and supporting private sector participation in energy development. He enumerated the proposed projects/ activities to realize the road map, consisting of investment and technical assistance projects in conventional and renewable energy. Presentation is attached as Annex 3.

7. ADB explained that the aim is to have a concrete, practical and implementable medium-term (2008-2015) road map for expanded GMS energy cooperation. ADB presented the road map accompanied by a work plan (Annex 4) that details the specific activities and general timetable for realizing the road map's objectives. The road map and work plan was presented to the Subregional Energy Forum (SEF) for review and endorsement. ADB showed slides detailing the specific GMS cooperation projects/ activities that fall under each energy sub-sector- in power, oil/gas, energy efficiency, new and renewable energy, and regional energy planning, policy and program coordination- with projects classified by the medium-term thrust under each sub-sector.

8. **Discussions.** The GMS participants were invited to provide suggestions on the scope of the proposed projects, and the proposed timeline, taking into account whether the proposed projects are realizable in the timeframe indicated, whether there are ongoing similar activities in each GMS country, and the prospects for development partners' support for such activities. Lao PDR noted that some projects in the long list may be too large to be attainable in the medium term, and suggested restructuring the road map to make it more suitable to each country's priority needs. Thailand agreed on this point, and noted that the aim is to arrive at common areas and achievable projects for cooperation. Myanmar and Cambodia noted that some items that are being carried out under ASEAN should be coordinated with the ASEAN to reduce duplication. PRC will refer the work plan to its National Energy Bureau and will submit comments shortly. Thailand suggested excluding power sector reform and restructuring from the GMS road map as this is a national concern. The body agreed to this proposal.

9. The WB inquired whether a different group of people would be involved in the expanded energy road map, and ADB noted that the SEF would have both RPTCC and energy ministry members, but the expansion of the SEF membership would depend on the buy-in of the countries. AFD expressed appreciation for the efforts to expand energy cooperation, as the GMS had experienced tremendous growth in energy demand. However given the magnitude of the challenges, GMS energy cooperation should be further broadened to include advocacy work at a higher level and efforts to promote energy efficiency and demand side management across

sectors. ADB said that the SEF in this case may require expansion of its membership to include cross-sector representation, such as from the GMS transport and environment agencies. Sida observed that the proposed road map is quite extensive, and is keen on looking at the priorities to be submitted by the countries. JICA expressed strong interest in the carbon reduction initiatives and other cross-cutting issues, and will also look forward to learning of the countries' priorities. AusAid will look forward to the outcome of the process of consultations to firm up the road map.

10. **Agreement.** The meeting agreed to further restructure the work plan and will further review and provide comments on the items in the work plan, and provide indications of their preferred priority areas of cooperation by 28 November 2008. ADB said that the proposed road map is only a general framework and recognizes that priority activities could be firmed up and projects developed later as countries and development partners agree to implement some projects. ADB noted some possible areas that the countries could look at, such as sharing of best practices in renewable energy options for off-grid development, energy efficiency best practices for industry, gas pricing and regulatory frameworks, etc.

Climate Change Implementation Plan (CCIP) and the Linkage with Environment Work in RETA 6440 and Those of the Environment Operations Center (EOC) (Presentation Annex 5)

11. Mr. Pavit Ramachandran, Component Leader for SEA, EOC, provided a background of the work of the EOC based in Bangkok. He provided the rationale for integrating environment in GMS development plans. He discussed the sectoral and regional trends that have important implications for the energy strategy and the efforts to attain sustainable energy development. He explained the need for Strategic Environmental Assessment (SEA) in the power sector. He presented the methodological variants of SEA and explained the conduct of SEA for the hydropower sector in Viet Nam. He said that under this, five alternate scenarios were considered between 2011 and 2025 (based on projected demand within Viet Nam's PDP VI). He then gave the overall approach to assessing risks and impacts, which considers risks and impacts in the zone of influence and the wider impacts (air pollution, hydrological). He showed the cost of mitigation measures, which is small compared to expected benefits. He discussed the measures for mitigating biodiversity risks and managing water resources, and showed the possible effects of climate change on energy investments in the subregion. He summarized the lessons from the SEA experience in the GMS and stressed the imperative of looking at broader benefits and risks of energy development. He indicated the planned activities in 2009-2011 which include SEA for Viet Nam's PDPVII, carbon neutral transport corridor, renewable energy pilots (off-grid solar, biogas) and carbon financing guidelines adapted to the GMS.

12. **Discussions.** Thailand and Viet Nam inquired about the methodology for measuring air pollution and other impacts. EOC replied that costing was obtained from estimates of previous studies, adapted for the GMS, but stressed that in many cases, site specific estimates would be required. WB noted that there are technical constraints in moving toward more environmentally-friendly options. AFD expressed keen interest in the EOC presentation and noted the need to analyze the end uses of energy services, to gain a better perspective of the most suitable alternative options.

Application of the Work Done by the EOC on Strategic Environmental Impact Assessment (EIA) for RETA Training Purpose

13. Mr. Bui, (ADB), informed the body of the need to complement the work under component 2 of RETA 6440, with the CEP work of the EOC, especially for capacity building in

environmental planning and monitoring of power projects. WB asked whether the Government of Viet Nam has considered the SEA recommendations in its PDP decision making; EOC said that the SEA pilot's lessons would be considered by the energy ministry for its next PDP. Mr. Jude explained that the lessons from SEA in Viet Nam power sector could provide the template for broader guidelines on how to integrate sustainability considerations in energy planning across the various energy sub-sectors.

Updates on Developments in the Energy Sector (Country Presentations, Annex 6)

14. **Cambodia.** Mr. Victor Jona of the General Department of Energy, Ministry of Industry, Mines and Energy (MIME) gave the overview of Cambodia's power sector structure, the goals and targets for rural electrification, and the potential renewable energy sources (solar, wind, hydro, biomass, biogas, and biofuel). He discussed the national policy on rural electrification by renewable energy and detailed the implementation of specific projects in this area.

15. **Discussions.** Cambodia clarified that the WB support to rural electrification involved provision of off-grid connections to 15,000 households. Mr. Jude informed of the progress in the development of gas in Cambodia, which required streamlining of policy, pricing and regulatory framework to facilitate commercial gas production.

16. **PRC.** Mr. Zhou Anshi of the Planning Department, CSG, provided an overview of energy sector in PRC, showing the energy production mix, and consumption mix, and compared the composition of PRC's energy consumption with that of the world. He discussed PRC's energy development policy comprising efforts at optimizing the energy mix, improving energy efficiency, protecting the environment, safeguarding energy security, and developing energy in the western region. He explained the PRC's international energy cooperation efforts, and its national program to address climate change, including specific targets for carbon emission reduction.

17. **Discussions.** Sida noted that renewable energy (RE) development is to a large extent dependent on policy support, and inquired about PRC Government's incentives for RE. PRC enumerated the various incentives to enhance investment in renewable energy and energy efficiency. PRC also informed of efforts to harness clean coal technology (IGCC).

18. **Lao PDR.** Mr. Daovong Phonekeo of the Department of Electricity, Ministry of Energy and Mines, provided an overview of the energy situation in Lao PDR, highlighting hydropower as sole source of electricity, the growth of petroleum consumption and oil exploration prospects. He discussed the various promotion activities in energy efficiency (EE) and energy conservation (EC) being carried out under the ACMECS and ASEAN-Japan program. He noted the current problems and challenges for the sector, and future priorities that would cover renewable energy policy and energy efficiency and conservation programs. He informed of efforts in mini/micro hydropower, hybrid power system, photo-voltaic (PV) solar, biogas and biomass.

19. **Discussions.** In response to the WB query, Lao PDR clarified that the mini/micro hydropower projects are supported by Japan and operated by Electricite du Laos (EdL). ADB (Mr. Tian) asked about plans to expand the RE projects commercially, and Lao PDR replied that these currently use expensive technology and are therefore limited to pilot scale. Sida asked about the relative cost of the RE technology, and Lao PDR replied that the 80 kW micro hydropower project costs US\$ 3million.

20. **Myanmar.** U Htin Aung of the Energy Planning Department, Ministry of Energy, discussed the emerging challenges in the energy sector, characterized by volatile energy prices,

need for secure and sustainable supplies, and pressure to tap alternative sources. He noted the developments in the various energy sub-sectors (petroleum [oil and gas], coal, renewables and biofuels). He described the nature of cooperation with GMS countries (PRC, Viet Nam and Thailand), covering projects being undertaken by both public and private enterprises. He detailed the country's response to the climate change issue, in terms of policy and institutional framework to comply with the UN Framework Convention on Climate Change (UNFCCC) and other international conventions and agreements.

21. **Discussions.** Sida asked whether revenues from oil and gas are allocated for future energy development. Myanmar replied that energy development activities are funded from the government budget.

22. **Thailand.** Mr. Samerjai Suksumek of the Bureau of Power Policy, Energy Policy and Planning Office (EPPO) updated on the developments in Thailand's energy sector, covering the energy situation overview, developments in the institutional/ policy framework, and situation in greenhouse gas (GHG) emission. He briefed on the progress of energy programs as responses to the oil crisis and climate change issue, covering EE improvement, RE promotion, promotion of alternative transport fuels (gasohol, bio-diesel, and natural gas) and introduction of nuclear energy. He discussed Thailand's prospects for energy cooperation which could include the following areas: oil, RE, technology transfer/ training in EE, and policy networking through a regional forum.

23. **Discussion.** In response to the WB query, Thailand explained that the base tariff is 2.4 baht per kWh, over which feed-in tariff is added for encouraging RE. ADB (Mr. Tian) asked about potential conflicts between biofuels and food production; Thailand said that the biofuel program encourages use of land not suitable for food production.

24. **Viet Nam.** Mr. Nguyen Anh Tuan provided an overview of the energy sector covering the production, final consumption, demand forecast, primary energy supply capability, energy demand-supply balance. He enumerated the strategic considerations in energy planning such as diversification (energy type and investment), refinery construction, energy efficiency program, national demand-side management (DSM), exploration and production of coal and gas, RE development, import of fuel, power interconnection and trade, gas pipeline interconnection, and nuclear power.

Session VI: Closing Session

25. **Synthesis of Discussions/ Agreements.** Mr. Zhai was pleased to observe that energy cooperation among the countries are already going beyond the power sector, such as technology transfer and training in energy efficiency improvement and in renewable energy development. He requested more detailed project ideas from the representatives that could be included in the energy road map and their additional feedback on the proposed road map within two weeks.

26. **Consideration and Adoption of Proceedings.** Mr. Zhai announced the distribution of the draft summary of proceedings for review by the body. After the SEF members reviewed the draft summary of proceedings, and after incorporation of suggested changes, the body therefore approved the minutes of the SEF-2 meeting *ad referendum*.