

---

---

**PROMOTION OF RENEWABLE ENERGY, ENERGY EFFICIENCY  
AND GREENHOUSE GAS ABATEMENT  
(PREGA)**

**Project Initiation Workshop Report**

---

---

**I. INAUGURAL SESSION**

1. The Initiation Workshop of the PREGA Project was held on April 18 - 20, 2001 at the ADB Headquarters, Manila Philippines. Eighty (80) participants, representing 10 developing member countries, bilateral agencies, international organizations/other institutions, and ALGAS national/international experts, and ADB staff attended the workshop. The participating countries were Bangladesh, Cambodia, People's Republic of China, Indonesia, India, Mongolia, Nepal, Philippines, Samoa and Viet Nam.
  2. Mr. Rolf Zelius, Chief, ADB Environment and Social Development formally opened the workshop by welcoming the participants and guests, and thanking them for their participation. He presented the climate change and sustainable energy projects previously undertaken by the ADB. He cited the Asia Least-cost Greenhouse Gas Abatement (ALGAS) project and its significant contribution to capacity building in the participating countries, and other technical assistance projects implemented by ADB following the agreement on the Kyoto Protocol. He further stated that the results of the previous projects would be used as inputs for the PREGA project. Mr. Zelius mentioned the funding sources of the PREGA project and its goals, objectives and how they will be carried forward.
  3. Mr. Paul A.G. Hassing, representative from The Netherlands, affirmed that his government is very keen to support the PREGA project. He mentioned that The Netherlands has previously been involved in similar projects, and he believes that the PREGA project is important because it addresses energy efficiency and sustainable development needs of the participating countries. The Royal Government of the Netherlands is supporting ADB projects because of the latter's commitment to poverty reduction and excellent project implementation. It expects the participants to learn from the ADB, on how to best implement the program in their respective countries.
  4. Mr. Julian Payne, Director of ADB, represented the Government of Canada in the workshop. In his speech, he said that Canada is participating in the PREGA project because of a common thrust, which is towards sustainable development. He declared that his Government would assist in the ADB implementation of the PREGA project and policy, particularly on the capacity building aspect.
  5. The Danish Ambassador to Manila, Mr. Peter Rosting, stated that the new development strategy of Denmark is to contribute to the reduction of poverty by building partnership with developing countries to strengthen capabilities for reducing poverty. The Danish government is also revising its Energy Policy to integrate economic, social and environmental concerns. In pursuance of this strategy, they are negotiating with the ADB on setting up a Trust Fund to support climate change projects of ADB.
-

6. Secretary Jose Isidro Camacho of the Department of Energy of the Philippines, delivered the keynote address of the workshop. He started by acknowledging the significance of climate change and its social and economic impacts, and sharing the Philippine experience in addressing such issues. The Philippine Energy Sector is taking a proactive role in the promotion of energy efficiency in the country. He stated that the goal of the PREGA project is similar to the commitments of the Philippine Energy Sector Strategy. The Secretary also mentioned the country's energy status, the activities undertaken by his department, as well as the potentials for new and renewable energy. He concluded by assuring that the country is committed to respond positively to the PREGA project.

## II. WORKING SESSION 1

### **ADB Activities in Renewable Energy and Energy Efficiency**

7. Dr. Aminul Huq, Senior Project Engineer of the ADB Energy Division (East), presented the role of the ADB in sustainable energy. He discussed the evolution of ADB's energy operations, from being a project financier to being a catalyzer; and modifying its approach from energy provision to institutional development. In 1996, the ADB energy projects started to focus on poverty reduction and policy reforms. The relationship between poverty and energy was stated, including the social issues that need to be addressed. The ADB's focus now is on clean energy through support in the areas of policy development, capacity building, technology, and finance. Dr. Huq's presentation addressed also the ADB's financing schemes, supported sectors, and projects, both recent and proposed initiatives, and their development impacts.

### **ADB Activities in Climate Change**

8. Dr. Prodipto Ghosh, Senior Environment Specialist of the Environment Division, ADB, presented the ADB Activities on Climate Change. Dr. Ghosh started by briefly explaining the global warming mechanism and its impacts on climate change. He showed the relationship between energy use and carbon dioxide emissions, and the possible scenarios. The ADB's previous technical assistance projects on climate change were presented focusing on the ALGAS project. He discussed the results of the project and its significant contribution to capacity building activities for the Asian region. He also mentioned the capacity building aspects of the Kyoto Protocol and Clean Development Mechanism (CDM). In conclusion, Dr. Ghosh underscored the willingness and capacity of ADB to assist its developing member countries (DMCs) in the provision of REGA technologies. The PREGA project will further develop the capacities of DMCs and access to finances and technology.

### **Global Environmental Facility (GEF)**

9. Mr. Nessim Ahmad, Environment Specialist of the ADB's Environment Division, presented the GEF's role, concerns, history and structure. GEF is a financial mechanism with focal areas in biodiversity loss, climate change, international waters pollution and ozone layer depletion. GEF recognizes that there are many opportunities to improve energy efficiency. The presentation explained GEF's approach to energy conservation and efficiency, commercial and non-commercial renewable energy, and the opportunities and barriers to project implementation. The financing modalities were also addressed, in particular on how GEF grants may be accessed.

---

## **Kyoto Protocol and Clean Development Mechanism (CDM)**

10. Dr. Prodipto Ghosh presented the development of the Kyoto Protocol, and its key provisions on climate change. He explained the CDM as a cooperative implementation mechanism in the Protocol. He discussed the models for CDM implementation and the unresolved issues. The Kyoto Protocol is not yet ratified but negotiations are ongoing. The PREGA project will move forward for the countries to immediately benefit from the CDM when its operation starts.

### **III. WORKING SESSION 2**

#### **Country Statements on Approaches to Promotion of Renewable Energy, Energy Efficiency and GHG Abatement**

11. **Bangladesh:** The energy sources of Bangladesh include natural gas, oil, coal and hydropower. Of these, biomass provides 73% of the country's energy requirements. Of Bangladesh' total population, only 25% has access to electricity. With the increasing population, the demand for energy is high, and in 1996 a situation of energy shortage was declared in the country. Because of this, the current energy sources are being exploited, while other sources should be explored. In the National Energy Policy adopted in 1996, the potential renewable energy sources identified are solar, wind, hydropower and tidal and wave power. At present, there is a draft policy on renewable energy and some issues addressed in the policy are tapping new energy sources, capital investment, and cost-effective technology. Different organizations are undertaking activities to address the energy problem of Bangladesh. Some of these are the launching of photovoltaic (PV) pilot projects, rural electrification, wind turbine installation, and research and development. The government recognizes that the country has untapped renewable resources; thus, there is a need to explore and develop them the soonest time possible. A national counterpart agency has been identified to implement the PREGA project. It is expected that the PREGA project will promote renewable energy in the country, and prepare project feasibility studies for implementation. Financial assistance from multinational and bilateral agencies may be needed for project implementation.

12. **Cambodia:** Efficient and sustainable energy and power supply is a priority in Cambodia. One of the thrusts of the government is to ensure reliable electricity for the people to promote national economic growth. The main source of energy in the country is biomass, which supplies 93% of the total energy demand. The hydropower potential is high, although electricity derived is still insignificant. Development of solar energy has started but due to high investment cost, its use is insignificant. The country has discussed plans to improve its energy status. Recently, the World Bank instituted training and capacity building to strengthen the energy sector. Lighting audits were also performed in some of the factories. The country has identified baseline and abatement scenarios, and GHG abatement plans. It is expected that the participating countries would benefit from the PREGA project.

13. **People's Republic of China (PRC).** The Government of PRC believes that the PREGA project has similar objectives and strategies as outlined and integrated in their sustainable development strategies. Renewable energy in the country cannot compete with traditional energy, as there is no market due to its high price compared to fossil fuels. The

---

---

country is looking for financial institutions, which will assist in the promotion of renewable energy. There is also a plan to formulate a policy to push and encourage provinces to use renewable energy. Currently, the World Bank has a project in the country on creating and managing market share. PRC has initiated projects to mitigate climate change through capacity building, institutional arrangement, and participation in international fora and programs. A number of energy projects have already been implemented by funding agencies such as GEF and ADB. PREGA is timely for working together with the PRC government. The wide scope and work plan of PREGA may be integrated with other energy efficiency projects of PRC such as urbanization and construction.

14. **Indonesia:** The current major source of energy in Indonesia is oil. The demand for energy is high since only 53% of the household population has access to electricity. The use of PV was previously introduced, but due to high cost, and as an effect of the recent economic crisis, its operation stopped. Its use is being promoted again. Generally, the use of renewable energy in the country cannot compete commercially with conventional energy because of its high cost. Indonesia has already initiated activities in energy conservation by conducting training, education campaigns, and research. With the country's natural reserves, the opportunity for renewable energy is significant. However, there are barriers to successful implementation and these include lack of policy, finances, technology and awareness. A development strategy to address the barriers, which aims to formulate policies and identify financing scheme to increase research and development in the energy sector, has been designed. The PREGA project is anticipated to assist in the implementation of Indonesia's energy projects.

15. **India:** Coal is the major source of energy in India supplying about 54% of the total commercial energy requirement. The supply of coal in the country can last more than a hundred years but in spite of this, India is dependent on imported oil, and more than 60% of the rural population has no access to commercial energy. The oil and gas reserves in the country are nearing depletion, which is a cause for alarm. Continuing the use of coal on the other hand would increase greenhouse gas (GHG) emissions. Given this scenario, India recognizes the need to shift its energy approach from increasing supply to efficiency enhancement. The energy conservation potential for the different sectors in India is high. However, despite efforts to benefit from energy efficiency activities, barriers such as lack of awareness, financing, technology, and national coordination, have restrained the effective implementation of the projects. To address these barriers, an Energy Conservation Bill was formulated for enactment. The PREGA project will directly address the problems hindering the implementation of energy efficiency projects in India.

16. **Mongolia:** Mongolia has an Energy Law that aims to increase energy efficiency, introduce new technologies, create economic incentives, and abate GHG emissions. To improve the electric power plant efficiency and reduce CO<sub>2</sub> emissions, the country plan is to upgrade existing obsolete machinery and equipment, and promote the use of renewable energy. Commercial energy is available for public consumption, representing 40-50 % of the energy supplied. The energy consumed by the public is not metered and this results in energy wastage and the consumers' lack of incentive to conserve. To address this problem, the country is implementing energy efficiency actions and measures. PV systems are being used in some parts of the country, and PV technology can compete with the cost of conventional energy. Other possible sources of energy are wind, hydropower and geothermal, which have already been implemented in 43 project sites. It is expected that PREGA will assist in providing the necessary financial and technical requirements to implement the energy efficiency projects of Mongolia.

---

---

17. **Nepal:** The government of Nepal is very keen on developing renewable energy. The main source of energy in the country is hydropower, and the country uses only 15% of the potential energy supply. There are plans for developing the biomass potential of the country. The government's initiated project on energy efficiency targets the industrial sector. The government needs to institutionalize capacity building and to formulate a national energy policy. The country is inviting foreign investors to support the country's need for energy efficiency projects. Government officials also want to know if there has been successful implementation on energy efficiency, what kind of technology is appropriate for the country, and the investment cost. The PREGA project will be helpful for capacity building in Nepal, especially in the industrial sector.

18. **Philippines:** The Philippine energy sector is moving towards privatization as reflected in the Energy Plan. Currently, 44% of energy supply is from hydro and geothermal plants. Some projects undertaken by the government in relation to climate change include retirement of oil-fired plants, deregulation of the oil industry, and use of renewable energy in rural electrification projects. Other projects are now being developed. The Department of Energy has already identified a strategy for the effective implementation of these projects, through partnership with the private sector. The country hopes for a future committed to renewable energy program. The PREGA project is in line with the thrust of the Energy Department. The Philippines joins other countries in the PREGA project in helping to solve the climate change problem and achieving sustainable development.

19. **Samoa:** Samoa, through the assistance of the Japanese Government has 90% access to electricity, with hydropower plants supplying 40% and diesel sharing 60% of the energy demand. Currently, the government is planning to formulate an Energy Policy to address energy efficiency, renewable energy, and environmental impacts in the country. A Climate Change Policy is also ready for approval. Other plans of the government include creating an energy information database, which highlights energy supply and demand. The Electric Power Corporation is also undertaking programs on demand and supply side management. Samoa has a National GHG Inventory completed through the assistance of the Pacific Climate Change Program. This inventory reveals that Samoa emits insignificant GHGs by world standards. There is a lot of existing information in the country, and the government of Samoa wants the project to be implemented. The PREGA project is applicable to the country because it addresses energy issues such as technology transfer, economic issues, and sustainability. It is expected that PREGA will help remove the barriers faced by the island by providing realistic and practical ways to promote energy efficiency.

20. **Viet Nam:** The application of renewable energy is taken seriously in Viet Nam. In fact, the country has great potential in new and renewable energy, which includes solar, wind, biomass and geothermal power. Viet Nam is currently drafting an Energy Policy for the approval of the Prime Minister. The policy gives emphasis to the promotion of renewable energy. Activities undertaken on climate change are formulation of the Renewable Energy Masterplan, development of a microhydro project, and rural electrification. The systems loss in the distribution of energy is high due to obsolete powerplants and distribution network. The country expects that the PREGA project will provide solutions to the difficulties encountered in the areas of financial, technical and management capability. It is also expected that a work plan would be formulated during the workshop for implementation in Viet Nam.

---

#### IV. WORKING SESSION 3

##### Objectives, Scope, and Institutional Arrangements of the PREGA Project

21. Dr. Prodipto Ghosh explained the details of the PREGA project and defined its objectives and the detailed scope. The different levels of institutional arrangements for the project implementation and evaluation were also discussed. Comments and issues raised and the corresponding ADB responses are presented in the table below:

Comments/Issues	Country/Organization	ADB Response
Is there flexibility in the project in its capacity building activities since some of the activities have already been done in some countries and they may have existing information necessary for the PREGA implementation?	UNDP-Philippines, PRC, Nepal	PREGA will not reinvent ALGAS. PREGA will be executed and be built on what has been done, not only by ADB but other projects implemented by other agencies. PREGA will involve different national agencies in the participating countries. The PREGA project will be implemented with flexibility. Individual countries will formulate their own work plan within the project scope. The work plan should be based on what has been accomplished before and what is currently being done. What will be done is to utilize existing institutions and enhance their skills and capabilities.
Is the institution building activities of the PREGA to gain access to the CDM or GEF?	UNDP-Philippines	CDM is a moving target and will be redeemed in the later stage on the project when the CDM concept/mechanism is clearer. But human capacity building will be undertaken and will not wait for the formalization of the CDM.
How will be the selection of the National Technical Experts (NTEs) undertaken? And how will they fit in the existing organization? Who will choose?	UNDP-Philippines	The NTEs may be from different agencies, government offices and NGOs. NTEs will be coordinating with the National Counterpart Agency (NCA) and the National Implementing Committee (NIC); they will provide information on appropriate technologies, and institute capacity building in the government agencies. They will be selected in terms of ADB guidelines on selection of consultants.
There will be demonstration projects in PREGA. If the demonstration becomes unsuccessful, who will carry on the project and how?	Bangladesh	Demonstration projects would be operated by a host entity as a normal commercial operation. PREGA would provide technical support and facilitate concessional supply of equipment from vendors.
PREGA is ADB's project; what is the role of GEF in the management?	Bangladesh	GEF may be a source of cofinancing for projects, which meet their financing criteria. PREGA will be managed by the ADB.
The PREGA's goal is sustainable development and small countries are given priority. Will the Asian scenario be the same in all countries?	Samoa	Different countries may have different sustainable development priorities. The stakeholders should identify these. The scenario will not be same for all countries.
It is suggested that for the institutional arrangement, the National Technical Experts (NTE) should be drawn from the Executing Agencies. The government/participating countries should approve the outputs of the project.	Viet Nam	The selection of the NTEs will abide by ADB's procedures in selection of consultants. The ADB will make sure that the NTEs have the expertise needed for the project. However, in the selection of the NTEs, the national agencies will be consulted. One of the responsibilities of the NIC is to review all the documents submitted by the NTEs and give

Comments/Issues	Country/ Organization	ADB Response
		guidance.
Translation of the information gathered and results to the local language are necessary for better understanding of the project.	Nepal, Viet Nam	ADB will provide the resources to translate the outputs to the local language, where necessary.
With all the institutional arrangements, who will be responsible for the implementation of the project? National representative should be included in project implementation for better understanding of the project. How about accountability and responsibility for the project?	Mongolia	A steering committee will be organized within the ADB to make arrangements for the implementation of the project. The steering committee will consult with the national agencies. The project will rely on existing information. National agencies will be involved in the capacity building activities.
The involvement of the locals in the financing schedule is very short. More pilot projects should be implemented so the locals will have more involvement in the project. The people should see the project and not in paper.	Mongolia	The budget resource is not included in the plan. The budget should be included in the work plan and feasibility study, to include all appropriate resources needed. PREGA is a technical assistance project and ADB will provide the software (technical) and not the hardware (demonstration). The project will not only promote technology but also innovate financing and institutional models.
At least how many pilot projects per country will be implemented?	Nepal	The ADB will consider several projects in each country work plan.
There are price distortions in the cost of renewable energy. What is the external cost of fossil fuels?	Nepal	External cost of fossil fuel means external environmental cost of fossil fuels.

### Ongoing and Upcoming Activities for Promotion of RE/EE/GHG Abatement

22. **World Bank Prototype Carbon Fund:** Mr. Ken Newcombe, PCF Manager, discussed how renewable energy and energy efficiency projects can be profitable and promote sustainable development, as well with an end goal of alleviating poverty. He cited why countries are getting involved in the PCF, and what benefits they derive from it. He also explained the PCF project cycle and its similarity to the CDM project cycle. He identified the PCF investment projects and processes involved, and cited the constraints in PCF business deals. He also clarified the relationship of PCF to the CDM with regard to the purchase of carbon dioxide emissions. He said that it is important for ADB and other funding agencies to give developing countries the opportunity to experience and facilitate transactions and trading of carbon dioxide emissions.

23. **Institute for Global Environmental Strategies:** IGES is an international research organization established by the Ministry of Environment of Japan. It covers mainly the Asian region in addressing climate change issues, including the mechanisms of the Kyoto Protocol. IGES has conducted researches, i.e. the GHG Emissions Model Development in the Asian Region, and the Asia Integrated Model Development. Some of the results of these researches were shown during the presentation of Mr. Tae Yong Jung, IGES Senior Research Fellow.

24. **UNEP Collaborating Center for Energy and Environment:** Dr. Kirsten Halsnaes, Senior Research Economist stated that the UNEP Collaborating Center in Riso is the support Center of UNEP's program on industry and energy. The Center links with various universities, and it is composed of multi-sectoral and multicultural staff. The activities of the organization are centered on sustainable energy, climate change and sustainable development. It is fostering partnership with the private sector related to business and

management of renewable energy. The Center has a sustainable energy advisory group that provides advisory services related to sustainable energy development. Projects of the UNEP Collaborating Center include the development of methodological framework and sustainable development policies.

25. **UNDP Manila:** UNDP has implemented numerous projects on climate change through GEF financial assistance. Some of the global projects implemented were on methane emissions, national communication program in collaboration with UNEP, formulation of intervention strategy options for fuel, among others. Ms. Amelia Dulce Supetran, Senior Programme Manager, UNDP Manila, also indicated that at the regional level, UNDP has ongoing projects in Africa, Eastern Europe, Central America, Caribbean, Pacific Islands and Middle East. UNDP has projects that are not funded by GEF, i.e. rural electrification in Japan and enabling activity in Cambodia.

26. **Asean Centre for Energy:** ACE is an inter-governmental organization composed of country leaders in Southeast Asia. Mr. Guillermo Balce, ACE Executive Director, stated that the Association of Southeast Asian Nations (ASEAN) Plan of Action for Energy Cooperation for 1999-2004 focuses on renewable energy and energy efficiency. The current projects of the organization include the abatement of GHGs. The strategies and action points are stated in the ACE Environmental Programme together with its future programs.

27. **Asian Institute of Technology:** Presented by Mr. Thierry Lefevre, the Asian Institute of Technology has a Center for Energy, which has been working for 10-12 years now. It has rendered its services to different organizations, including the implementation of a number of technical assistance projects of ADB. AIT also has a cogeneration team that provides technical expertise on renewable energy. It has recently finished a renewable energy project in Thailand, and is currently working with the Department of Energy of Iran. It has other ongoing projects in coordination with the UNDP and UNEP. AIT is now working on a model on valuation of a CDM project. PREGA is a regional capacity building initiative while AIT and other organizations, are financing agencies.

28. Dr. Ghosh, once again, explained the objectives of the PREGA project, its actual outputs and its difference with the projects of the other institutions. He said that the PREGA project and the works of other agencies are complimentary. Information about completed and ongoing projects of the various institutions/organizations will be useful in the identification of appropriate REGA technologies. He stressed the importance of collaboration and touching base with these different agencies.

## V. WORKING SESSION 4

### Generic Country Work Plans Under PREGA

29. The key objectives and outputs of the PREGA project were recapped and the generic country work plan (CWP) was discussed. The preliminary tasks are divided into four categories. Each category enumerate the outputs, the deadlines and the capacity building activities of each institution. The time lines of the PREGA projected were also shown in the presentation.

30. Comments and issues raised by different countries and organizations on the generic CWP and the responses from ADB are presented in the following table:



Comments/Issues	Country/ Organization	ADB Response
What is the difference between PREGA and the ALGAS project? Is it a new project or a continuation?	IGES	The major change in conception from ALGAS to PREGA is in the context of project preparation. PREGA's focus in project preparation is much more explicit on sustainable energy concerns of the participating countries. PREGA projects focus on RE and EE, many of them may have GHG benefit and to that extent, may qualify for financing from available mechanisms like CDM. But it is premised on sustainable development, not GHG abatement. A concerted effort has to be made not only in the project preparation aspect but also to address policy, institutional and financial barriers to promotion of REGA technologies. This included capacity building to enable the countries to access the specialized financing mechanisms.
Are there any guarantees that project financing will be forthcoming for the investment projects up to the PREGA pipeline that would be developed?	PRC, India, Mongolia, Samoa	ADB will submit some of the projects for consideration by the Board for financing. ADB will be proactive with respect to the specialized financing mechanisms and will do whatever is possible & feasible within the project but cannot give guarantees. It should be ensured that the projects are developed in terms of rigorous, consistent methodologies that address the concerns of project sponsors/financing agencies, and address the sustainable concerns of the participating countries.
Some of the tasks presented are already done in the country level and some projects have been launched. Can the process be fast tracked by utilizing the existing information or by jumping or combining other tasks? Can the countries select what tasks to implement?	Bangladesh, PRC, Mongolia, Nepal, Samoa, Viet Nam, UNEP, COGEN-AIT	If there are project concepts, which are sufficiently developed and in which the concerned countries are keen that they must be fast tracked, this must be done. Another fast track is in respect of ADB's own project processing. This can be discussed between the concerned ADB departments and the concerned government agencies. We can definitely fast track projects, which have been sufficiently developed.
Countries have different needs and barriers to address. The presented tasks at the different levels should be clarified to avoid duplication of efforts. The objectives should be more focused to promote facilitation and to lessen the workload.	PRC, Mongolia, Philippines, Samoa, Viet Nam	The draft work plan discussed was presented as a basis for discussion. Countries need to evaluate what exactly is in their interest and what will be useful and relevant to them among the sequence of options. Individual CWP need to be prepared keeping in view what it has accomplished, what capacities already exist, and what would be useful at the current stage. Collaboration should be institutionalized among different agencies at the country level to avoid duplication of efforts.
Issue on the allocation of resources among countries.	Samoa	Resources for the whole program, though significant, are limited. Available resources must be apportioned to support the agreed CWP. ADB will sit down with the NCA and NIC & agree on a work plan and see what other resources are necessary to support the work plan. Other available resources and the parallel programs happening in the country will be taken into account.
Clarify the roles of the NCA and the NIC, and the need for resources to support them.	Mongolia, Nepal, Philippines	There will be no creation of new organizations. NCA would be an existing agency, which is principally charged with promotion of sustainable energy in the country. It would perform tasks identified by the NCA as part of normal duties of promotion of sustainable energy. Similarly, other members of NIC will participate in deliberations as part of their normal functions. The time

Comments/Issues	Country/ Organization	ADB Response
		spent of the NCA/NIC staff and office space are considered in-kind contributions of the DMC in the project.
CWP needs to distinguish between different levels of capacity building - macro, micro, miso level, the requirements of the capacity building and focus of associate tasks.	ITP Indonesia	The project and the CWPs will focus on the different levels, and it will make use of what is already done. Micro level capacity building relates to project development & dissemination of project pre-feasibility studies. Macro level capacity building relates to policy and institutional development for promotion of REGA technologies. For meso level, capacity building required is in respect of financial institutions & requirements of domestic manufacturers. When it comes to focus of associate tasks, we can separate core task of development of the portfolio of REGA projects up to pre-feasibility and the dissemination of these projects & the associate task in relation to macro, and meso level of capacity building for policy & institutional analysis and of financial institutions.
The capacity needs to be built countrywide not just for technical experts and some policy makers.	Indonesia, Samoa	What can be done is to ensure that there are significant capacity building activities at the national level to address also the needs of subnational entities. There is sufficient outreach to different stakeholders in the country as spelled out in the description under Task F. The project outputs will also be available in the PREGA website. With these efforts, some measure of capacity building among a broader group of stakeholders in the country would be accomplished.
The need for greater emphasis on pilot and demonstration projects and also their distribution across countries.	Indonesia, Mongolia	The idea is not only to demonstrate technology but the entire package including the financing, the policy/ institutional support package & the management structure. The budget that was developed earlier did not take into account the resources that have subsequently become available & should therefore be revisited. There is a need to look at provision of resources to realize the optimal outcome by leveraging the hardware contribution & hardware component from technology vendors & other bilateral donor agencies.

Comments/Issues	Country/ Organization	ADB Response
There should be a south-south cooperation		Though south-south cooperation was not explicitly mentioned as an ALGAS objective, many of the capacity building activities relied on regional institutions & experts who provided expertise to the region as a whole. Similarly, this may be done in the course of the PREGA project. Specific suggestions would be welcomed on how, within the overall scope of PREGA, the TA may actually realize South-South cooperation in practice.
What are the selection criteria for the NTEs and their nationality? What is the assurance that the NTEs will stay with the project?	Nepal, Philippines	The NTEs will be from the participating countries and not expatriates. They would be a group under contract directly to ADB & not through intermediaries like ITEs. Thus, their engagement process will follow the guidelines and selection procedures of ADB. In some countries, there would be national agencies & institutions with strong capacities, while in others, research oriented NGOs or universities or other research institutions may have well-developed capacities. In some countries, there may be private consulting firms. It should be ensured that the best possible expertise available in the country is deployed in the project & that the concern expressed with regards to the retention of this capacity would be kept in mind. NCA & NIC will appropriately be consulted in constituting the NTEs teams for the project.
Task A is not necessary.	Samoa	The tasks indicated are generic descriptions, which may or may not be necessary in some countries. The overall thrust of Task A is to ensure that there no reinventing the wheel, no duplication of efforts, & that the outputs of Task A would be helpful in realizing synergies with other agencies.
Is PREGA a one shot affair or a long-term program? Is our sustainable energy concerns a short-term or a long-term concern?		It is a long-term concern. ADB's long-term strategic framework makes it clear that poverty, gender, and environmental concerns, is a long-term program. The continuation of this project would depend a great deal on the actual accomplishments & the great responsibility falls on the government, NTEs, ITEs, besides of course ADB & the collaborating institutions.
Will ADB provide for a long time credit for project implementation? PREGA should facilitate GEF/CDM bilateral funding. Financial models for different kinds of projects should be developed.	PRC, India, Mongolia, Samoa	ADB is proactive in the financing aspect and in implementing its pipeline of projects. Horse and water analogy. ADB can lead the horse to the water but it cannot make it drink. ADB can ensure the projects are developed but cannot give guarantees on whether investors will take into the project.
Tasks D 2.2.2. and 2.3 should be merged.	Samoa	The background of reasoning behind the delineation of these tasks is as follows: Three categorically different tasks were identified at different levels of integration of REGA technologies into a unified structure. One set related to the integration & regulatory aspect of RE in existing grids. A second set of issues related to integrated resource planning relating to the integration of diversity of technologies (RE, EE) so that the playing field is level for all these technologies. The third is that of nested grids in which micro-level grids can be

Comments/Issues	Country/ Organization	ADB Response
		integrated into regional level grids to be related to countrywide grids. This is however open for discussion & it is really up to each country what exactly it wishes to avail from the program.
Translation of the outputs to local language is necessary.	Nepal, Viet Nam	ADB recognizes the importance of translating the outputs to the local language & will endeavor to provide the necessary resources so that the key outputs will be available in the local languages.
Issue on methodological consistency: PREGA should use analytical tools and qualify the assessment of the project by combining some of the concepts and by being consistent. The different aspects of the assessment should be described and the evaluation of the projects should be more detailed. The PREGA project should not be trapped with the CDM process. It should assess the different components of the project, and all reports/outputs done should be as generic as possible.	UNEP	There should be collaboration with different institutions, which have worked on the methodological aspect. This is an important issue. There is a need to touch base with colleagues from different development organizations as well as research institutions to make sure that a greater level of methodological consistency in this project is reached. PREGA takes into account of the possibility of the CDM, but is not premised on it.
Sharing of the different agencies experiences in similar projects will be of help in the PREGA project.	World Energy Council	ADB welcomes cooperation and collaboration with other agencies. The ALGAS capacity building activities were accomplished through regional institutions. The PREGA project welcomes specific suggestions on how to collaborate realizing the PREGA project objectives.
Local small-scale manufacturing system in the countries should be given focus in the PREGA project to avoid competition among countries.	ACE	The PREGA project will definitely look into the problems of the local small-scale manufacturer. There is a possibility of addressing this issue on a regional basis & certainly by undertaking more dialogues on capacity building in this area, and collaboration with our partner agencies.

31. After Dr. Ghosh and other ADB staff responded to the various comments and issues, Mr. Paul Hassing indicated that the Netherlands Government intends to stay engaged longer than 3-4 years. Their focus is long-term and they want more investments on renewable energy to be brought on the table, not only by ADB, but also by the developing countries. If however the program is not effective and not indicating viable results, there should be no reason to continue. He stated that the PREGA project should address the sustainable development priorities of the countries. Of course, it is the decision of the DMCs to make up their minds to participate or not in the program that is being offered.

## VI. TECHNICAL SESSIONS

### Draft Technical Training Manual

32. Dr. Jayant Sathaye of Lawrence Berkeley National Laboratory, USA presented the draft Technical Training Manual for Greenhouse Gas Abatement Projects. He discussed the manual's draft outline, and the topics and subtopics under each section. He explained sustainable development as the primary goal of CDM and showed a flowchart on how it might work. Dr. Sathaye in his presentation discussed each of the five barriers encountered in the implementation of GHG abatement programs and provided specific examples from

previous projects. More studies should be conducted to improve other areas of the draft manual.

### **Baseline issues for Decentralized Renewable Energy Technologies**

33. Mr. Jan-Wilem Martens of the Netherlands Research Foundation discussed the Baseline Issues for Decentralized Renewable Energy Technologies. He presented the other activities of his organization. Mr. Martens described the baseline methodology of the Solar Home Systems (SHS) and the challenges posted by CDM to the system. He analyzed how the CDM and SHS can be combined together and the benefits that can be derived. He gave an illustration by presenting the case for off-grid electricity supply projects. He described one method of fast tracking CDM small-scale projects and streamlining the CDM process. He presented the possible roles of PREGA in the streamlining process. Attachment I is Mr. Marten's presentation.

### **Policy and Institutional Reforms, Financing Models for Promotion of REGA Projects**

34. Dr. Aminul Huq started his presentation by defining the role of energy and the different energy scenarios, the trends of energy demand and investment, and sustainable energy. Dr. Huq further stated the different environmental energy policies and clarified the concept of clean energy. He also discussed the emerging issues and barriers, and its implications on the different levels of implementation. The four approaches to sustainable energy were discussed in detail as well as the different financing mechanisms. In conclusion, Dr. Huq stated that the energy sector is undergoing major changes and countries are modifying their energy policies.

### **Clean Energy - People's Republic of China Experience**

35. The energy consumption of the People's Republic of China (PRC) is projected to increase rapidly in the next 20 years. Due to its increasing energy consumption, PRC ranks the second highest in CO<sub>2</sub> emissions next to US. The country is targeting to reduce its energy and emission growth rates by adopting a Clean Energy Strategy. Mr. Wei Zhihong of Tsinghua University presented the country's achievements in conserving energy by renovating the technologies applied and adjusting the structures of different industries. He also enumerated the barriers to implementation and the detailed ways of overcoming them. He stated that for PRC to conserve energy, the financing mechanisms of new technologies need to be addressed. PRC has development targets for renewable energy, possible sources of which are solar, wind, geothermal and biogas energies. Substituting coal with natural gas and/or nuclear power is another option. For PRC to realize its goal towards clean energy and sustainable development, the completion and perfection of its laws and regulations play a big role.

### **Clean Energy - India Experience**

36. The energy demand and electricity required in India is high. If the current energy sources are not be substituted, either the country's environment or economy will be at risk. There is a need for India to shift its energy policy from basic energy supply to energy efficiency. Energy saving in India is possible for the different sectors through end-use energy efficiency. This strategy could be cost-effective, but there are policy and financial barriers limiting its application. The Energy Conservation Bill 2000 is expected to address

these barriers. The financing problems were explained in the presentation as well as the various financing scheme applied in India.

### **PREGA Website Presentation**

37. Ms. Rachel Angeles presented the temporary PREGA website, which will soon be launched under the ADB website. She showed how the site can be accessed and enumerated the various information that can be obtained and downloaded from the site, as well as how the participating counties and different agencies could interact with each other. All the reports/outputs submitted by the participating countries would be published in the PREGA website. Ms. Angeles also showed how the PREGA website is linked to the existing ALGAS website.

## **CLOSING SESSION**

### **Next Steps**

38. The next steps to be undertaken for the PREGA project as presented by Dr. Huq are as follows:

- (i) recruit the three international technical experts (renewable energy specialist, energy efficiency specialist and climate change abatement specialist);
- (ii) identify generic areas of expertise needed for the national technical experts; and
- (iii) exchange information about PREGA's objectives and scope with potential partner development agencies, and establish the NCAs/NICs, and NTE teams.

39. Further comments and issues discussed during the session chaired by Mr. H. Satish Rao, Manager, ADB's Energy Division (East) include:

- (i) Bilateral discussions between ADB and concerned DMCs (inception missions) should be done in the next month or two to come up with viable CWP's and the corresponding resource requirements. ADB staff will be backed up by the three ITEs during the inception missions and would be available to help as required during project implementation.
- (ii) Existing institutional capacities, resource requirements and common project documentation will be considered in the implementation of the PREGA project in each country.
- (iii) The country energy program should be strengthened and fine-tuned by focusing on priorities and incorporating RE/EE initiatives in the various sectors i.e. urban development, agriculture, etc. The key idea must be sustainable energy development in terms of the objectives and priorities of the country.
- (iv) The ADB Energy Policy emphasizes among other things, fuel switching and clean coal technology. Fuel switching is one of the major ideas for promoting energy efficiency and that would be considered as part of the activities to be undertaken under PREGA.
- (v) The use of coal in Asia cannot be completely ignored. It cannot simply be replaced with natural gas or any other cleaner fuel. Perhaps it would be better to improve the technology for coal that will lead on to GHG abatement.

PREGA is being undertaken to stimulate an accelerated program on sustainable energy. At the same time, immediate problems have to be addressed in the short term, and in the short and medium term, coal will be used. If the use of coal can be reduced and its efficiency increased, at the same time that renewable energy market is further developed, then the goals can be accomplished in parallel tracks.

- (vi) There should be country ownership of the outputs of the PREGA project. Any country that does not want to participate certainly does not need to. It depends on the country up to what extent they can make optimum use of the technical assistance. The intent is to give opportunity and assistance to where it is needed and work hand in hand to make some meaningful progress.

## **Conclusion**

40. Mr. J. Warren Evans, Manager of ADB Environment Division gave the final remarks by thanking the participants for attending the workshop. He said that the ADB looks forward to partnering with the countries, and tries to provide assistance where it is needed. ADB's door is open always and its phones are always available. He encouraged the DMCs to voice their problems and the things they need, for ADB to address the best way it can given the limited budget. The PREGA project will yield significant impacts to the countries, to the region, and to the energy sector lending of the ADB. It will also provide an opportunity for ADB to generate feasible and viable package of investments towards the achievement of sustainable development in the countries, and for the global good as well. He also thanked the representatives of the donor countries, who have been working hand and hand with ADB staff on the project.

---