

Report from the Renewable Energy: Technology, Markets and Policies in Southeast Asia Conference (6 June 2007)

A. Attendance and Organization of Work

1. *The Renewable Energy: Technology, Markets and Policies in Southeast Asia Conference* was held at the Bangkok International Trade and Exhibition Centre (BITEC) on 6 June 2007 in conjunction with the *3rd Green Growth Policy Dialogue: Greening of Business and the Environment as a Business Opportunity* from 5 to 7 June 2007.
2. The Conference was attended by approximately 50 representatives of Governments, private sector, non-governmental organizations, intergovernmental organizations and civil society organizations. The participants were composed of those attending the Green Growth Policy Dialogue, as well as the *Renewable Energy Asia 2007/Entech Pollutech Asia 2007* conference and exhibition.
3. The Conference was co-organized by the Joint Graduate School of Energy and Environment (JGSEE), King Mongkut's University of Technology Thonburi and the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP). CMP Media (Thailand) Co., Ltd, provided necessary logistical and financial support in organizing the event.

B. Account of Proceedings

4. The keynote speech was delivered by H.E. Dr. Piyasvasti Amranand, Minister of Energy, Thailand, at the opening ceremony. Also delivering a keynote address was Prof. Ali Sayigh, Chairman of the World Renewable Energy Congress and Director General of the World Renewable Energy Network. Welcoming remarks and reports were also delivered by Mr. Manu Leopairote, Chairman of CMP Media (Thailand) Co., Ltd, Mr. Rae Kwon Chung, Director of Environment and Sustainable Development Division, UNESCAP, Associate Professor Kridsada Visavateeranon, Vice President of Technology Promotion Association (Thailand-Japan), Dr. Bundit Fungtammasan, Director of JGSEE and Ms. Pornthip Tuncharoen, Deputy Director-General, Department of Environmental Quality Promotion, Ministry of Natural Resources and Environment, Thailand.
5. Following the opening session, the participants attended Session I on Regional and Local Opportunities which was chaired by Dr. Bundit Fungtammasan.
6. The Conference continued further with five parallel sessions covering issues and options on: i) biomass/biofuels; ii) biomass trade, biogas and waste utilization; iii) solar thermal application; iv) photovoltaic/hybrid systems for off-grid energy supply; and v) best practices in sustainable energy policy.

7. The Conference held a plenary session with a panel discussion on the theme topic on “How can governments and private sector work effectively together to promote renewable energy policies that can be sustainable?”

C. Summary of Discussions

8. H.E. Dr. Piyasvasti Amranand stated that the issues of global warming and rising oil prices raised world concerns and that the conference was timely to discuss on minimizing greenhouse gas emissions. Renewable energy is an important option to mitigate greenhouse gas emissions, but other options such as energy efficiency, conservation, and carbon capture and storage (CSS) are equally essential. Utilization of proven renewable energy technology in Thailand would help to commercialize solutions. In terms of its Power Development Plan (PDP 2007), Thailand has set targets of renewable and alternative energy use of 11,311 ktoe by 2011. Gasohol and biodiesel programme in Thailand is currently operational, but further promotion of their use and technical issues still remain.

9. Prof. Ali Sayigh remarked that renewable energy technology is not a choice but an obligation to counter the growth of population, energy consumption, electricity use and economic growth. The photovoltaic potential particularly in developing countries can be harnessed more efficiently for energy production , including building applications for both homes and offices. Alternate renewable sources such as hydropower, wind, marine current, hydrogen fuel and others require further research for wider dissemination. Biomass technology, biogas, geothermal and biofuels from energy crops are other areas of growth potential for powering the economy.

10. Mr. Rae Kwon Chung stated that the focus of the *3rd Green Growth Policy Dialogue: Greening of Business and the Environment as a Business Opportunity* was on the market opportunities for green business, including renewable energy technology and industry. Greening the markets and business is one of the five major tracks of UNESCAP’s Green Growth approach. He remarked that energy demand is expected to rise as industrialization keeps growing to feed increasing thirst for higher living standards and consumption patterns. He called for an aggressive policy for greater investment in green business and renewable energy.

11. Prof. Naksitte Coovattanachai, Director of the Royal Golden Jubilee Program, Thailand Research Funds (TRF), Thailand talked about policies on renewable energy of the Government of Thailand. The first phase of energy policy research has been undertaken to assess the potential for an increase in renewable energy. Technical potential for renewable energy resources in 2011 suggests biomass residues will have the largest total share with 62 per cent (4,456 ktoe).

12. Ms. Narupat Amornkosit, Director of Bureau of Energy System Analysis, Energy Policy and Planning Office, Ministry of Energy, Thailand provided detailed information on the latest regulations, tariff rates and policies on small power

producer (SPP) and very small power producer (VSPP) that supply electricity to Thailand's grid connection with 11 percent and 1 percent, respectively.

13. The afternoon Session VI entitled Best Practices in Sustainable Energy Policy was chaired by Mr. Rae Kwon Chung that was followed by a panel discussion moderated by Dr. Bundit Fungtammasan.

14. Prof. Ali Sayigh stated that while a number of developed countries have policies to support the promotion of renewable energy, such policies in developing countries, in general, are lacking and inadequate. In many developing countries, the potential to utilize renewable energy is great, in particular, solar.

15. Mr. Pranesh Chandra Saha, Chief, Energy Resources Section, Environment and Sustainable Development Division, UNESCAP remarked that the Asia Pacific region has recently been characterized by high GDP growth, substantial natural resources, and a large population, many of whom live in rural areas with limited access to electricity, but use a large amount of biomass. There are great opportunities for renewable energy development, particularly if supported by policies, institutions, regulations and an appropriate legal framework.

16. One participant from the Government of India stated that the Indian constitution mandates not only the State but individuals to commit towards clean environment. With respect to climate change, India has identified a number of measures for implementation including improving energy efficiency, promoting renewable energy, clean coal technology, and undertaking power sector reform.

17. Dr. Thierry Lefevre, Director of Center for Energy Environment Resources Development/Foundation for International Human Resources Development shared information on the progress of a project implemented with funding support from the European Union to ASEAN in developing sustainable energy policies. In developing these policies, sustainable development indicators (25 indicators) have been developed, which could be the basis in developing policies as well as to monitor the implementation of such policies. Based on the results of this project, it has been recommended to ASEAN to develop a regional framework to develop sustainable energy policies that include sustainable energy supply, measures addressing social and environmental issues in developing strategies and instruments to ensure effective implementation of the policies.

18. Mr. Dipal Chandra Barua, Managing Director of Grameen Shakti provided an overview of the success and challenges of the Grameen Shakti programme and highlighted some of the factors which have enabled the programme to work. These included the lack of direct subsidies; an innovative micro-credit scheme; a vast rural network; trained and motivated staff; community engagement and empowerment, particularly for women; local technical training; energy services linked to income generation; and local manufacturing of solar home system accessories.

19. Mr. Narayan Prasad Kafle, Deputy Executive Director of Alternative Energy Promotion Center (AEPC), Ministry of Environment, Science and Technology made

a presentation on policy experiences in renewable energy programme implementation for widening access to energy for rural communities in Nepal. Policy in Nepal focused on integrating programmes with local governments, bringing private sector in renewable energy business, transforming programmes from subsidy to credit system and integrating different programmes to maximize the benefits to local people. In the development plans of the Government, energy has been identified as one of the major components for reducing poverty. Nepal has also developed an institutional mechanism to involve various donor partners, national governments, local governments and other stakeholders in implementing renewable energy programmes.

20. Mr. Samai Jai-In, Specialist of National Metal and Materials Technology Center, National Science and Technology Development Agency (NSTDA) remarked that the agriculture sector in Thailand has been very significant to the economy for some time, and this has led to some significant degradation to the environment. In addition, the agricultural market has previously experienced price collapses and the cost of imports of petroleum products has far outweighed the funds gained from the export of agricultural products. Therefore, he suggested that Thailand should utilize their agricultural strength and significantly develop the ethanol and biodiesel market.

21. Dr. Bundit Fungtammasan commented that even with a supportive regulatory and policy framework, sustainable energy will not be realized without private sector investment and technological development. Effective communication among all stakeholders is necessary to promote such investment and technological development in achieving sustainable development.

22. The following paragraphs are summaries of a panel discussion. Prof. Ali Sayigh indicated the differences between the public and private sector, and the important role of the government in developing an energy policy, supported by legislation, institutions and programmes that will facilitate private sector involvement to expand the market of renewable energy technologies in a profitable manner.

23. Mr. Pranesh Chandra Saha expressed that the private sector is already a key player in the region in promoting renewable energy. However, some countries have not reached the optimum level of participation by the private sector. The regulatory framework of these countries needs to be more transparent to encourage private sector participation. It is increasing becoming more important to identify effective policies to further encourage the participation of private sector as well as to encourage private sector to address corporate social responsibilities in addressing poverty reduction and social issues.

24. Mr. Samerjai Suksumek, Director of Strategic Energy Policy and Planning Division, Energy Policy and Planning Office (EPPO) remarked that the Thailand energy sector is facing many challenges and these are being tackled through a number of policies and programmes. These policies include the purchase of power

from renewable energy sources at a higher premium than the typical power price and selling gasohol and biodiesel at a lower rate than gasoline. An organization was also set up to undertake educational activities related to renewable energy and these programmes are supported by the *Energy Conservation Fund*. Key factor in promoting renewable energy is to set good rules in making the energy market function better.

25. Dr. Somsak Vivatpanachart, Vice Chairman of Committee on Energy, The Thai Chamber of Commerce remarked that the promotion of renewable energy cooperation among the private sector and the Government could be in the following areas: (a) Government needs to raise public awareness on renewable energy in order to gain further support from the public; (b) The private sector could play a major role in raising such awareness through the chamber of commerce in provincial governments; (c) Long-term government renewable energy development policies and strategies need to be clear and credible in encouraging investment, while balancing pricing of renewable energy at a competitive rate; (d) Establish fund to support the promotion of renewable energy development; (e) Setting priorities in selecting renewable energy projects based on locally available resources; (f) Promote more construction of distributed generation system based on local biomass to support communities; and (g) Local production of renewable energy equipment to cut the production cost, which would also create employment.

26. One representative from Asia-Europe Foundation (ASEF) advised the forum that cooperation and policy dialogue is occurring at the interregional level between Asia and Europe. In 2004 a roundtable on renewable energy was organized which highlighted similar issues and conclusions as this meeting, in particular, the role of policy frameworks to encourage investment in renewable energy. Some recommendations included feed-in strategies so that renewable energy has a share in grid distribution schemes and a quota system established to maintain the investment in the market once the system has stabilized.

27. Another participant indicated that there needs to be a win-win situation. Governments need to provide incentives to attract investors as many developing countries do not have sufficient funds to develop the sector alone and need to rely on outside investments.

28. According to Mr. Narayan Prasad Kafle, capacity building activities have been implemented in Nepal. Currently, 40 to 45 per cent of the total investment is made by the private sector.

29. Mr. Pranesh Chadra Saha responded by thanking everyone for their comments and presentations and that UNESCAP will take note of the suggestions. He commented that one strategy of UNESCAP already includes promoting south-south cooperation. On another issue, he indicated that to really push renewable energy it needs to be mainstreamed into overall energy and economic development policies. This should be done at the policy, the programme and project level. He

noted that a dedicated institution is needed to aggressively promote renewable energy, stakeholders' partnership and investment.

30. Dr. Somsak Vivatpanachart remarked that establishing a supporting fund is necessary to promote renewable energy. The fund has to come from the Government through energy tax from power producers. Nuclear energy is not renewable energy and is not an option at this time for developing countries, but preparations could be undertaken.

D. Key Recommendations

31. There is a need to utilize energy and electricity more efficiently. It is important to not only identify best practices in promoting renewable energy but also to apply and replicate those best practices through various policy and regulatory measures.

32. Some of the measures to strengthen the promotion of renewable energy could include abolishment of various taxations on imports of renewable energy equipment, encouraging local manufacturing industries, providing preferential financial terms to individuals wanting to install renewable energy devices and forcing electric utilities to buy renewable energy with tariff rates.

33. Policy recommendations that would further develop opportunities for renewable energy penetration include introduction of tax breaks for solar accessories, development of an energy institution as one point of contact, development of the human resource base knowledgeable in renewable energy and transfer of knowledge on best practices, including exchange visits between countries.

34. A number of countries such as China, Indonesia and Thailand have already implemented policies and programmes that have been successful in supporting renewable energy market development, but more work is needed to increase the market penetration, awareness and provide innovative financing mechanisms.

35. Country specific situation needs to be taken into consideration in formulating policies to encourage private sector participation.

36. Good practice policy measures for grid-connected PV, biofuel production and utilization, and micro-credit schemes could be replicated through UNESCAP.

37. Sustainable energy policies need strong political will. Unless governments commit stronger political will to funding from external sources, regional policies will face difficulties in implementation.

38. UNESCAP could encourage south-south cooperation to facilitate sharing knowledge and experiences, in particular best practices and strategies of various countries in promoting renewable energy development.