

Recommendations

APO Workshop on Renewable Energy 20–24 June 2011, Nadi, Fiji

Preamble:

A workshop on renewable energy was organized by the Asian Productivity Organization (APO), 20–24 June 2011, in Nadi, Fiji, in collaboration with the National Training and Productivity Centre (NTPC), Fiji National University, and with support from the Colombo Plan. The workshop was attended by 26 renewable energy professionals and expert facilitators from 15 countries in the Asia-Pacific region.

The workshop discussed renewable energy policies and programs, the present status of renewable energy generation, technologies available, barriers to renewable energy promotion, and other issues. After intensive discussions and careful examination of various aspects, the workshop made the following recommendations in the order of priority.

Recommendations:

1. Awareness Raising and Access to Information: The participants noted a general lack of awareness of the importance, benefits, and potential of renewable energy both among the general public and major stakeholders, thus constraining rapid adoption. There is an urgent need for a comprehensive awareness-raising program on renewable energy with allocation of adequate financial and other resources that would enable the general public to appreciate, accept, and support the widespread adoption of renewable energy and involve businesses and other stakeholders more seriously in tapping renewable energy.

To enhance access to information, national information centers (one-stop shops) on renewable energy should be established. These should be easily reachable and widely publicized by governments to provide easy access to complete information on renewable energy schemes, financial incentives, and requirements and to provide guidance to consumers, businesses, and the public at large.

2. Developing Academic Curricula for Renewable Energy: While conventional energy technology and policy are widely taught in universities, renewable energy is not systematically taught in most countries. The participants noted that their countries did not have adequately trained professionals and technical personnel to design, operate, and maintain renewable energy systems; formulate renewable policies; etc. Because renewable energy covers a wide field (solar, wind, hydro, biomass, and geothermal) and involves varying degrees of complexity, it is important to develop technicians and professionals with a general grasp of renewable energy who specialize in specific areas. Graduate and postgraduate courses need to be started to develop a cadre of renewable energy professionals and thus enhance the development of the renewable energy industry. This will also boost R&D activities in the technological, economic, and social aspects of

renewable energy. Training of trainers programs also need to be launched to disseminate knowledge.

3. Removing Policy and Regulatory Conflicts/Gaps: Discussions on country scenarios brought out instances of policy and regulatory conflicts/gaps in some countries. Major gaps emerging from the discussion included discouraging incineration in some countries, fertilizer and/or fossil fuel subsidies, lack of guidelines on renewable energy tariffs, inadequate financing frameworks, etc. It was recommended that a comprehensive analysis of current policy and regulatory framework in all linked sectors be carried out to identify areas of policy and regulatory gaps and develop measures to overcome them.

4. Renewable Energy Act: The participants felt that renewable energy policies by themselves do not have enough teeth and thus need to be supplemented with legislation to stimulate the promotion and development of renewable energy as well as to regulate exploitation and utilization at a later stage.

5. Tackling Imbalances through a Regional Grid: The country scenario discussions revealed serious imbalances in overall demand for energy and tapping of potential supplies of renewable energy not only within a country but also among different countries. Recognizing the growing emphasis on regional cooperation in various fields, the participants felt that the time had come to think of setting up a common renewable energy grid at regional (e.g., mainland Asia) and/or subregional (SAARC, East Asia, ASEAN, and APEC) level. Such a regional/subregional grid should have open access standards for transmission of power from one part of the grid to another across national borders, including mutually agreed upon transactional aspects.

6. Strategic Development of a Renewable Energy Industry and Markets: Apart from policy, technology, and infrastructure, the development of renewable energy involves markets and sociopolitical aspects and requires a systematic approach covering all factors. Governments should therefore draw up comprehensive programs for developing a renewable energy industry and markets including technology (R&D, demonstration projects, and commercialization), supportive infrastructure, financing mechanisms, and the use of market-based instruments such as renewable portfolio standards, green pricing, feed-in tariffs, net metering, and tradable renewable energy certificates.

7. Energy Security vs. Food Security: The issue of energy security compromising the capability of countries to meet their food needs has come up at several forums. The participants recommended a definite shift from first-generation biofuels, i.e., biofuels that are based on food crops, with second-generation biofuels made from inedible feedstock. Further development of biofuels should not compete with food crops and cropland. To promote second-generation biofuel plantations, schemes could piggyback on existing agricultural development programs, for example, marginal land development programs could be used to promote the farming of biofuel-producing plants such as jatropha based on sustainability criteria.

8. Product Standards for Biomass-Derived Fuels: Despite tremendous growth in the field of biomass-derived fuels, the participants observed that standards varied widely from country to country. In some cases, e.g., briquetted fuels, there may not be any standards at all. This adversely affects the ease of use of biofuels and in the long run may also affect trade in them. The participants recommended developing common biomass-derived fuel standards, which should be adopted by all governments, including those that are already in place.

9. Resource Mapping of Renewable Energy Sources: The participants observed that in many countries comprehensive mapping of all renewable energy resources had not been carried out. It was recommended that governments should urgently undertake comprehensive resource mapping and make the information available in the public domain to attract the interest of entrepreneurs in exploiting the potential.

10. Tapping Biomass Energy Potential: Most countries in the Asia-Pacific region have a large untapped pool of biomass as a potential source of energy due to such reasons as a lack of detailed assessment, access to technology-related information, etc. Exploitation of biomass as a source of energy also has a strong energy–poverty linkage through, e.g., increased employment opportunities. The participants recommended that governments should include a detailed assessment of the availability of biomass and guidelines on technology assessment and selection, including a road map for technology development and appropriate fiscal incentives.

11. Hydropower as Renewable Energy: During discussions, it emerged that the definition of hydropower as a renewable energy varied from country to country. In some countries, hydropower facilities with wattage above a certain output are not considered to be renewable energy, thus resulting in nonuniform reporting of the share of renewable energy in total energy. It was recommended that an internationally accepted, common definition of hydropower as a renewable energy source should be followed and that governments should include all hydropower under the renewable energy category.

12. Smart Grids: Full exploitation of renewable energy is often constrained by grid limitations, even at national level, such as mismatch between supply and demand, inability of the grid to cope with wide fluctuations in renewable energy supply, etc. Often renewable energy projects are not connected with a grid. It was therefore recommended that smart grid technologies should be developed and deployed to support grid connections with renewable energy and enhance the use of renewable energy.
