

ECOSOC Annual Ministerial Review

Regional Consultation on Science, Technology a

THE RIO+20 AGENDA AND THE MILLENNIUM DEVELOPMENT GOALS (MDGs)

The Rio+20 agenda identifies energy as a priority area for sustainable development and proposes to build on the Sustainable Energy for All initiative launched by the General Assembly of the United Nations in 2009. The initiative aims to provide universal access to modern energy services for both high consumption and low consumption countries by 2030; improving energy efficiency at all levels with a view to doubling the rate of energy efficiency improvements by 2030; doubling the share of renewable energy in the global energy supply through promoting the use of renewable energy sources and technologies in all countries. In order to achieve the Rio+20 goal, it recognizes the importance of strengthening national energy capacities and efficiency by promoting effective regulatory mechanisms and enhanced means of appropriate enabling technologies.

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1. Shift balance in favor of renewable energy

National governments benefit substantially from it but aid convert proven RETs as well as from promote new RETs. This requires STI policies that primarily on developing RETs suitable for clean energy and include renewable energy target support as well as mechanisms driving force behind deployment renewable energy. Reportedly, at least 118 countries are developing countries had renewable energy target in place by early of early 2010.⁷ This indicates policies are increasingly becoming aware of the benefits stemming from renewable energy including energy security, reduced import of greenhouse gas (GHG) emissions prevent loss of biodiversity job creation, rural development – and energy access more facilities in promotion of renewable energy policies with other policies in place.⁸ This economic effect requires suitable policy frameworks for RET development adapt, product deployment in key sectors of the economy.

Priorities regarding this should include:

- Set target increasing achievable renewable energy target
- Improving policy frameworks for wider use of RETs
- Promote technology innovation for clean energy development and diffusion and adoption of RETs
- Ensuring integration of RETs into national strategies
- Gradual increase in the share of the energy mix of countries
- Mobilizing greatest domestic investment and use of RETs
- Promoting RET-based innovation and industrial development
- Increasing investment for generating more energy through
- Promoting market-based RET innovation
- Creating RETs and promoting their acceptance by

2. Alleviate energy poverty through improving and mainstreaming energy access

Energy access and affordability have been critical issues for rural and urban populations in accessible areas. About 1.3 billion people – one in five globally – lack electricity at home or conduct business and 40% of the world's population rely on wood, charcoal, or animal waste to cook their food bringing in

driving force for the development of RETs and diffusion of RETs practices also being followed in many countries in several other areas of RETs. Promoting technological learning, resource mobilization, RET deployment, service provision of delivery models, standardization, RET equipment testing and production grid RET applications, etc.

1. Developing innovative STI policy instruments and incentives

National STI policies could create a conducive environment that will attract applications in RETs. The energy incentives can have a positive impact on the application of RETs by increasing innovation and diffusion of technologies. Particular incentives to make incremental improvements in RET technology to reduce the cost of production and utility. In part, it could be effective in this regard and should be considered by national regulators, financial institutions, and public financing.¹⁴ Some of the innovative practices in these areas include:

Policy instruments

- Feed-in tariff
- Renewable Energy Target / Quota / Renewable portfolio standards
- Net metering
- Minimizing subsidies for conventional energy sources e.g. carbon intensive fuels

Fiscal incentives

- Grant support schemes for the development and early stage
- Concessional loans
- Subsidies
- Tax incentives
- Energy production payment

Public financing

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One of the major objectives of the National Energy Action Plan (NEAP) in Asia-Pacific countries is to develop and deploy sustainable energy technologies, including renewable energy technologies, to implement the national development agenda. Renewable energy technologies are expected to play a key role in enhancing energy access for the vast, under-served population of energy-poor countries, but it also contributes to the overall economic growth and development. In addition, it helps to reduce greenhouse gas emissions and contribute to the national government's commitment to sustainable development. In this regard, national governments should learn from the good practices of the countries in the region, such as the following:

- Developing a long-term, well-circulated national policy on renewable energy, inclusive of sectoral and sub-national strategies with a policy framework of development and poverty reduction.
- Developing capacities of all key stakeholders, including project developers, technology suppliers, service providers, financial institutions, and consumers (including women).
- Engaging with the private sector and other stakeholders at the national level to ensure support for the energy access project for the under-served population.
- Encourage production and service of sustainable energy options in a sustainable manner.

3. Mobilizing resources for RETs innovation, development and commercialization

Government financial support for R&D and mobilization of funds is critical. Public financing also plays an important role in exploring and promoting commercially renewable energy technologies. Demonstrating that building experience in institutions can allow for innovation, maintenance, and increase the confidence necessary for early market entry.¹⁶ Countries could learn from national good practices related to:

- Establishing RET schemes
- Generating resources through mechanisms for clean energy research and innovation
- Providing grants for research, development and demonstration
- Providing special funding for the absorption and re-innovation of imported RETs

For example, the Government of India has recently established a National Clean Energy Fund (NCEF) to collect through a cess of 50 per cent on coal, lignite and petroleum. NCEF will be used to finance innovative green energy projects and research and development. ¹⁷ print

4. Establish a flexible and favorable intellectual property regime

STI policies can promote a favorable intellectual property environment. However, the promotion of indigenous developed RETs but also for the health of the economy. It is important to have a great intellectual property regime that is able to attract investments and promote innovation. A global IPR regime could provide an impetus to the development of RETs. Suggest -related IPR practices for RETs promotion¹⁸ could include:

- Flexibility in patent registration and innovation criteria
- Exceptions (e.g. for experimental use and from regulatory review) for public good. of RETs
- Parallel import of IPR protected goods
- Bringing RETs under the jurisdiction of competent authority

5. Foster networks, partnerships, collaborations and inter-linkages for the development and promotion of RETs

Successful development and implementation of RETs requires the participation of stakeholders including public government agencies, public research institutions, private industry, academia, venture capitalists and financial institutions. Hence, there is a need to establish a network of stakeholders and appropriate mechanisms for their collaboration.

- ICT enabled network of specialized institutions for knowledge and collaboration
- Regional innovation ecosystem encompassing a whole range of actors – research parks, firms, public bodies, networks, etc.

- Fully subsidized or grant-driven models

Some of the most innovative renewable energy models in the world are private sector-driven cookstoves programmes in China, Sri Lanka, Cambodia; Nepal Biogas Support Programme;

t Wide regional renewable energy technology could be hampered if
 adequate measures bottlenecks national and regional level. Pacific
 regional level, national STI policies fostering regional linkages and
 part on national RED stakeholders and h cooperat
 Net working among national national st akeholders at -border cr
 t technological cooperat ion bet ween count ries

Possible strategies/ challenges to address regional through initiatives
 could include:

- Helping strengthen STI infrastructure t ructure t ure
 developing countries particularly have hich ot ies
 access to es and relationships for ed know .ion and ue
- Addressing/reducing incoherent , and oft en conflict ing, policy
 multi-joint t eral level t o undermine t he wider di

