ECOSOC Annual Ministerial Review

Regional Consultation on Science, Technology a

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

The Rio+20 agenda iden enter gy a a i fpire i o r i t uy area t for alinpable deve t and propoe t o bSuild on t t a inable the Energy for All t ia Secre ive launched by General of t he U n The init ted Na providing t universal acce modern o energy ervice for bo t h conump t ion and produc t ion ue by 2030; improving en a t all level wi t h a view t 2030; and doubling t t he ra he hare of renewable energy in t he global by 2030 t hrough promo t ing t he of renewable energy ource and t hnologie in all coun t [2] In order t o achieve t Rio+20 recognize t he impor t ance of t reng t hening capaci t ie, including by promo ting effec t ive mechanim, enhanced mean, appropria enabling he73(ng)290.002 Tc 0.0(en)180 Td [(o180h)-11(.772 0 Td [(62 0 Td148)5(n)11(6

1. Shift balance in favor of renewable energy

National governments can benefit from substituting conventional proven RETs as well as from promoting new RETs. This requires STI policies that primarily on developing RETs suitable for national circumstances, including renewable energy targets and support mechanisms as a driving force behind the deployment of renewable energy. Reportedly, at least 118 countries are developing countries, had renewable energy targets in place by early of early 2010.[7] This indicates that policymakers are increasingly becoming aware of the benefits stemming from renewable energy, including energy security, reduced imports reduction of greenhouse gas (GHG) emissions, prevention of biodiversity loss, improved job creation, rural development – and energy access to more facilities integration of renewable energy policies with policies in other.[8] Their economic, technical requires suitable policy frameworks for RET development adaptation, production deployment in key sectors of the economy.

Priorities regarding this include:

- Setting achievable renewable energy targets
- Improving policy frameworks for wider use of RETs
- Promoting technology innovation for the development, transfer diffusion and adoption of RETs
- Ensuring integration of RETs into other mitigation
- Gradual increase in the RET share of the energy mix of countries
- Mobilizing greater resources for development and use of RETs
- Promoting RET-based innovation and industrial development
- Increasing investments for generating more energy through
- Promoting market-focused RET innovation
- Creating awareness of 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 inaccessible areas. About 1.3 billion people – one in five globally – lack electricity homes or conduct business and nearly 40% of the world's population rely on wood, charcoal, or animal wastes to cook their food breathing in

3. Enable technological leapfrogging

Most of the research, development and innovation in advanced renewable energy technologies are happening in the developed countries. The intellectual property [illegible] held by the developed world, which largely limits the accessibility for the developing countries and LDCs in particular. It is therefore very critical for developing countries to strengthen their technological capabilities. STI policies in these countries need to focus on strengthening national capacity for R&D, localization [illegible] technology, etc. These efforts would reduce their technological dependence [illegible] countries in the long run. In the medium term, in particular, STI policy in developing countries could embark on suitable strategies related to accelerated innovation in RET and leapfrogging. STI policy priorities in this regard could include:

- Promoting technological learning and innovation
- Ou[illegible] R[illegible] lining [illegible] & [illegible] D

driving force for the development, promotion, and diffuion of RET. Innovative practice are alo being followed in many countrie in everal other area of RET-TIP: promotion of technological learning, reource mobilization, RET-baed rural energy ervice delivery model, tandardization, RET equipment teting and producer, off-grid RET application, etc.

1. Developing innovative STI policy instruments and incentives

National STI policie could create a conducive environment for wider application of RET in ... Thee policie can have a poitive impact on the application of RET by fotering innovation and diffuion of cot-effective, ... encouraging RET innovation to make incremental ... to cot that reduce the adoption, and their ...[13] Three policy option that could be effective in thi regard and hould be conidered by national regulator are policie, fical incentive, and public financing.[14] Some of the innovative practice in thi area include:

Policy instruments

- Feed-in tariff
- Renewable Energy Target / Quota / Renewable portfolio tandard
- Net metering
- Minimiing ubidie for conventional energy ource, e.g. carbon tax on carbon-intenive fuel

Fiscal incentives

- Grant-upport cheme for the development and early ...
- Conceional loan
- Subidie
- Tax incentive
- Energy production payment

Public financing

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One of the major objectives of national innovation (NIS) in Asia-Pacific countries is to develop and deploy sustainable energy options including renewable energy technologies to implement the national development agenda. Renewable energy technologies have potential to enhance energy access for the vast energy-deprived populations of energy but contribute to other sectors of national economies, particularly to inclusive and sustainable development. National governments learn from good practices in other countries, such as[15]

- Developing a long-term, well articulated national renewable energy policy on energy, inclusive of sectoral and sub-national strategies with 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 stakeholders at all levels to ensure support for projects and energy access to provide energy-deprived populations
- Encourage production and servicing of sustainable energy options

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 viable renewable energy technologies. Investments in demonstrations build experience in installation, maintenance, increase the confidence necessary for early market development[16]. Countries could learn from national good practices related to:

- Establishing RETs dedicated financing
- Generating resources through innovative mechanisms for clean energy research and innovation
- Providing grants for research, development and demonstrations
- Providing special funding for the absorption and re-innovation, diffusion of imported RETs

For example, the Government of India has recently created a National Clean Energy Fund (NCCF) to collect through a clean energy cess of INR 50 per ton of coal, lignite and peat. The NCCF will be used to finance innovative green energy projects and research ventures reducing carbon footprint.[17]

4. Establish a flexible and favorable intellectual property regime

STI policies can promote a favorable intellectual property environment … promotion of indigenously developed RETs but also for the … ties. In particular, greater flexibility in the international IPR … under … global IPR regime could provide an impetus to the promotion … countries. Suggested IPR-related good practices for RET promotion[18] could include:

- Flexibilities in patent rage to encourage incremental innovation …
- Exceptions (e.g. for experimental use and from regulatory review …) … rights for public good … to RETs
- Parallel imports-provisions of IPR protected goods
- Bringing RETs under the juridiction of competition …

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

Successful development, implementation and adaptation of RETs require the participation of a variety of stakeholders, including public government agencies, public research institutes and centres of excellence, project implementing agencies, venture capital and finance institutions, private sector, NGOs and civil society groups, developers and consumers. … Hence, there is a need to enhance linkages among all the stakeholders in the form of networks, partnerships and collaborations through appropriate measures in STI policy, such as:

- ICT enabled networks of specialized institutions … knowledge and collaboration
- Regional technology innovation systems encompassing a whole range of actors in it – research parks, firms, public bodies, networks, etc.

- Fully subsidized organ-driven model

Some of the innovative renewable energy model implemented in Asia-Pacific countries are private sector-driven eco-cookstove programme in China, Sri Lanka and Cambodia; Nepal Biogas Support Programme;

t Wider regi ina t renewable energy t echnologi could be hampered if adequa measure are STI t bo a t tat h ake he ional and regional level. Pacific t h regional level, na t ional STI policie focu ed fo t t o ering regional linkage and par t ong nea hip am t ional RED t pro akeholder and ouring ou t t h coopera t Ne t working among na t ional t akeholder a t t -board dialogue cro t h t echnological coopera t ion be t ween coun t rie.

Poible t ra t me of egie itue/ tchalenge addre t regional hrough ini t ia could include:

- Helping t reng t hen weak STI infra requir ed t t truc egy o t t ure ra developing coun t rie, par t icularly thave dhe LDC, which o ie acce ing t echnologie and rela -how for t produc ed knowt .ion and ue
- Addre ing / reduc ing inco heren t , and of t en conflic t ing, policy mul t ,il which t t eral level t o undermine t he wider di