

All India Seminar on “New Renewable Energy”

PROCEEDINGS AND RECOMMENDATIONS

EXECUTIVE SUMMARY

The All India Seminar on “New Renewable Energy” organized by The Institution of Engineers (India), Meghalaya State Centre, Shillong on 17th and 18th September 2010, was a unique event in-as-much as the spirit and tempo of a Revolution was sustained throughout. The participant strength was well in excess of 150 number anticipated for the first day and there was hardly any erosion on the second day.

Altogether, 20 speakers, drawn from all over the country, presented papers on renewable energy technologies, case studies of grid connected, megawatt-scale power stations, policy matters, financial options and government incentives. The participants interacted and exchanged views.

A panel of eminent specialists in the field contributed its profound thoughts on different aspects of the seminar topic and provided clarity to the view points of the participants.

A set of Recommendations emerging out of the seminar duly classified for attention of the implementing agencies / departments, is appended hereto.

PROCEEDINGS

INAUGURAL SESSION

His Excellency R.S. Mooshahary, Governor of Meghalaya was the Chief Guest of the Inaugural Session. The Inaugural Session was presided over by Er. J.B. Poon, FIE, Chairman, Institution of Engineers(India), Meghalaya State Centre.

Inaugurating the seminar, the Chief Guest said that there is urgent necessity to protect the environment by generating clean and given energy through renewable sources. In the backdrop of the recent launching of National Solar Mission by Dr. Farooq Abdullah the Hon’ble Minister MNRE, Government of India on this aspect has assumed great significance.

The Chief Guest pointed out that, today, there is no development possible without electricity and in daily life, there is no quality without electricity. If we go on using coal for the generation of electricity, the resource will soon get exhausted. By the use of non-conventional energy, however, we can conserve coal. There is therefore, the need to generate electricity through solar, wind and biomass routes. He hoped that the State would take a major share out of the 20,000 MW solar power generation targeted for the country by 2022. The recommendations of the seminar, he asserted, to be brought to the notice of the State Government.

The Guest of Honour Power Minister of Meghalaya, Er. A.T. Mondal delved on the length and breadth of the renewable energy and present programs taken up by Meghalaya and constraints thereof.

Shri. B.K. Dev. Varma, IAS, Additional Chief Secretary to the Government of Meghalaya incharge Power etc. delivered the key note address on the theme.

Chairman of The Institution of Engineers (India), spoke about the multi-disciplinary professional body of Engineers of the country, the biggest in the world and narrated its activities and strengths. He expressed happiness over the initiative of Energy Conservation Mission to engender the Green Power Revolution in the country. He assured that the 90 odd centres of the Institution would extend the necessary support. He gave an account of the applications of Solar Energy and its utilization in India and abroad. He explained the limitations of solar power generation, as of now and the need for extensive R&D to improve its practical viability.

Vote of thanks was given by Er. K. Marbaniang, FIE, Chief Engineer (T), Meghalaya Energy Corporation Limited, Shillong.

Exhibition was also held by displaying the renewable energy equipments etc. by Meghalaya Non Conventional Renewable Energy Development Authority which attracted a huge crowd.

PANEL DISCUSSION

A panel discussion was held with eminent speakers as panelist. A set of recommendations was drawn as given in the subsequent pages. The programme concluded with vote of thanks to all sponsors, co-sponsors, advertisers, speakers, delegates, press, electronic media and all those who have directly or indirectly contributed to the successful holding of the seminar.

CONCLUSIONS AND RECOMMENDATIONS

GENERAL

1. A green power revolution is needed in the country in order to achieve a sustainable energy base that will support the goals of economic development, energy security and environmental protection.
2. To be termed as a revolution, it has to involve and benefit all sections of society and all sectors of the economy. There is a need to promote awareness on a massive scale about the need for the green power revolution as also about the possibilities and potential in the country.
3. All available energy sources including conventional and non-conventional, have to be utilized to the full extent possible to meet the growing energy need of the country. In order to gradually shift to a greater share of renewable energy sources, there is a continuing need to further develop and utilize these sources to achieve their known potential in a reasonable time frame.
4. In this context, the seminar welcomes the Jawaharlal Nehru Solar Mission and compliments the Government of India for launching it. It is necessary for industry, utilities, investors and financing agencies to rise to the occasion and make the Mission a success.
5. Efficient use of energy in all sectors is also equally important in achieving a green energy base.

WIND ENERGY

1. Wind power generation has made impressive strides in India in the last decade, having crossed the 10000 MW mark in 2009. Given a right mix of policy and support measures, the sector can move faster towards the projected potential of 45000 MW.
2. There are variations in policies among different states. It would be desirable to evolve a reasonably uniform set of policies and guidelines. For instance, banking of energy and open access for interstate transfer should be considered by all states.
3. The generation based incentive scheme should be extended to cover captive generation and sale to third parties also.
4. Small wind generators can be used to meet local loads and also to feed power to the grid, as in the case of roof top solar systems. Appropriate net metering facilities should be provided in such cases also.

BIOMASS

1. India needs a policy framework for starting and supporting a dedicated energy crop industry for power generation.
2. Our farmers should be enabled to become “energy producers” also through knowledge transfer, financial assistance and support for marketing.
3. Government of India may incorporate some mandatory steps in the form of regulation for the use of at least 5% blend of biodiesel in CI engines in all sectors.

NATIONAL SOLAR MISSION

1. The first phase of Mission should be flexible in terms of technology mix and overall targets. There need not be rigid quotas for any technologies. Any achievement above 1000 MW should also be supported and encouraged.
2. In the solar thermal power generation in the country there is no manufacturing base. In this scenario, it would be difficult to arrive at a specific capital cost per MW and not feasible to assess the O&M costs. The CERC and other regulatory bodies, therefore need to be more flexible in respect of solar thermal power.
3. The CERC tariff based on a uniform capacity utilization factor across the country needs to be reexamined. It can lead to concentration of solar projects in just one region of the country and deprive other regions of the possibility of utilizing the solar resource. It will be desirable to evolve at least 3 sets of tariff calculations based on solar resource.
4. There is a great need for establishing facilities for testing and certification of various components needed for photovoltaic and thermal power generations and for the developing appropriate standards.
5. Manpower can be serious constraint in achieving the goals of the National Solar Mission. There is a need to train people at every level, from technician and mechanics to engineers and designers. Existing training academic institutions should develop suitable programmes for this.
6. The high interest rate prevailing in India pushes up the cost of solar power and hence the effect on the price that utilities have to pay. Every effort should be made to utilize the clean technology fund of the World Bank and bilateral funds to reduce the rate of interests to

develops the solar projects. It is also necessary to provide loans for an extended term such as 15 years. The Government of India should waive any additional costs such as guarantee fees.

7. The acceleration of non-grid applications and solar thermal application through the Mission is also welcome. There is a need to expand the channels of implementation and financing, including bodies such as NABARD. Applications in rural areas need to be provided subsidy in all regions of the country, not just in special category states, so that basic energy needs of people are met. The quantum to decentralized generation should be increased all over the country.
8. There are several departments and agencies involved in implementing the various components of the Mission. There should be a clear understanding, of the role and responsibilities of each organization. A single window arrangement is desirable.

MATTER PERTAINING TO MEGHALAYA

1. As a state Meghalaya should take the lead in implementing the National Solar Mission in the state.
2. Although the tariff by CERC is likely to govern the purchase of solar power, it is necessary for the state to have its own policy in regard to solar power in order to support projects less than 1 MW and roof-top systems. The tariff under the policy can be closely aligned to that of CERC.
3. Me.E.C.L. should play a pro-active role in developing and assisting green power projects in the state. Green Power cells should be created in each of these corporations.
4. Considering the recurring power shortage in the state, Me.E.C.L. should be asked to purchase solar power even beyond the minimum obligation. This is unlikely to have a significant impact on the basket cost of power at least in the first few years.
5. The state should also actively encourage the use of solar energy for off-grid and decentralized applications. Advantage should be taken of the Solar Cities and other programmes of the Central Government. Solar water pumping should be promoted widely with the assistance of MNRE, NABARD and other bodies, to provide relief to farmers from power shortages.
6. Steps should be taken to quickly establish the solar test facility in Shillong with the cooperation of the Fraunhofer Institute of Germany.
7. The investments in wind power generation in the state should be started. The State Government and the Electricity Regulatory Commission should formulate further policies to encourage this so that the wind energy potential in the state can be exploited to the maximum.
8. A National Data Base on longitude and latitude values with respect to continuous rainy and sunny days, if available may be released for general use which will help in designing of SPV system.
9. Solar Charge Controller, the most critical component of an SPV system should be standardized under a relevant code, thus eliminating chance of wrong selection.
10. Indigenous manufacturer should be encouraged to develop new generation MPPT (Maximum Power Point Tracker), type charge controllers.
11. Both tea waste and cooked waste can be good alternative feedstock for biogas generation.

12. There is a possibility in using bioethanol production as a transport fuel in the North East India.
13. Research into production of petroleum alternatives using microalgae is important to the future of Meghalaya.
14. Introduction of renewable energy certificate mechanism will go a long way to improve our country's carbon footprint and also remove the geographical barriers for green electricity exchange across the states.
15. Experienced energy professionals associated with the Institution of Engineers (India), stand ready to advise and assist the State Government and its agencies in formulating policies and plans and in implementing activities that will usher in the Green Power Revolution in the state.

