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# E-Scene

The energy outlook brought to you by the Energy Information Centre

## National Energy Symposium

There have been a number of different discussions and number of different gatherings to discuss the energy issues of Sri Lanka. However there is something specific and unique to the National Energy Symposium organised by the Energy Forum of Sri Lanka, which was held at the Bandaranayake Memorial International Conference Hall (BMICH) on 26th March 2002. At this event there were representatives from the different layers of the society commencing with high ranking politicians and officials, to the environmental activists, energy consumers and potential consumers who have been waiting for more than ten years to receive grid electricity.

The symposium had parallel discussions on following energy technologies and sub sectors with the participation of key stakeholders of the sector.

Solar PhotoVoltaic Technology

Solar Thermal Technology

Biogas Technology

Biomass Technology

Microhydro Technology

Wind Technology

Role of Financial Institutions

Role of Provincial Councils

Energy Requirements of the Off grid Community

Role of students for the promotion of energy technologies

National Energy Policies

The objective was to investigate the current situation in the sector and to identify the ways and means of overcoming the barriers involved.

The main concerns of the participants were presented at the final session in the presence of Hon. Minister of Power and Energy in Sri Lanka Mr. Karu Jayasooriya.



### Recommendations of the National Energy Symposium

#### National Energy Policy

Need for a strong national co-ordinating body on energy

Need for a mechanisms to facilitate wide participation of diverse interests

Need to do baseline study for carbon emissions and to consider how carbon trading will affect cost calculations

Need to look at energy conservation and demand-side management both as an immediate measure to alleviate generation capacity deficiencies and as a longer-term effort to reduce wastage.

Off-grid systems need capacity-building and management assistance.

Need to clarify the legal frameworks surrounding small-scale producers

To Page 4

**Total  
number of  
participants  
for the  
National  
Energy  
Symposium  
- 446**

## For the long-term we have faith in alternative energy sources – Hon. Karu Jayasooriya

“ We have recognised the need for a National Electricity Policy for the country. The objective of establishing the National Energy Council was to formulate such a policy. For the long-term we have faith in alternative energy sources. Hence the Ministry of Power and Energy is willing to provide maximum assistance to develop alternative energy sources. ”

Thank you for organising this National Energy Symposium and drawing attention towards alternative energy sources that have the potential of saving foreign currency while satisfying the energy requirements of the people, which is currently not considered seriously. We have recognised the need for a National Electricity Policy for the country. The objective of establishing the National Energy Council with the chairmanship of internationally recognised expert Prof. Mohan Munasinghe was to formulate such a policy. For the long-term we have faith in alternative energy sources. Hence the Ministry of Power and Energy is willing to provide maximum assistance to develop alternative energy sources.

The Ministry has also formulated plans to look into and to assist alternative energy sources such as solar, micro-hydro and bio-gas. We were able to get some financial assistance from World Bank of US\$ 70 million (i.e. Rs. 6950 million) and with this assistance we hope to install over 100 micro-hydro power plants during this year. We have developed a policy to establish wind turbines and have provided information to those organisations and international firms who are willing to contribute to it. We expect to have an install capacity of 20-30 MW out of this. The government is planning to get financial assistance from the European Community to generate electricity from biomass, and the World Bank has agreed to provide finances to have an energy plantation of 2000 hectares.

The government expects to provide electricity to 45% of the Sri Lankan population that currently do not have access to grid electricity, and within the next 5-years we expect to



increase the percentage of electrification to 80%. In addition we plan to remove barriers faced by those committed Energy Provincial Ministers like Mr. Dani Hiththaiyage.

We have investigated the opportunities for locally manufacturing the electricity meters with the assistance of University of Moratuwa. I have already ordered the CEB to purchase and produce the required equipment locally whenever possible.

The CEB belongs to the citizens of Sri Lanka and we are not going to privatise it. However we have taken actions to improve the efficiency of it, which will affect neither the CEB nor its employees. Even though the cost of generation of electricity is high, the CEB provides electricity to low-income consumers at a subsidised rate. Our vision is to make the CEB a profit-making government owned body, which has no political interference.

We appreciate the work done by the Energy Forum for the nation and would like to emphasize that the recommendations made at this National Energy Symposium are very important to us.

**In recognition of an outstanding contribution to the Dendro Power Sector, the Energy Forum honored Vidyajothi Dr. Ray Wijewardana at the National Energy Symposium**



**In solving the energy crisis, partnerships between government, the private sector, and civil society is essential - Asoka Abeygunawardana**



It is necessary to plan very well to overcome the crisis situation in the energy sector. Otherwise we may fall from the pot into the fire. If we look back, we may identify three key issues involved in this energy sector. Firstly, it is the current urgent issue of having a power cut of 5 hours per day during the dry season of the year for those who have access to national grid supply. How can we solve this problem? That is the first question. Secondly, the issue of having a power cut of 24 hours a day right through out the year for 40% of the Sri Lankan population: that is for people who do not have access to grid electricity. Thirdly, there are issues involved in the non-electricity energy sector. We emphasise the need for a well-planned, comprehensive solution to these complex issues.

The original cause of this crisis was the generation plan formulated by the CEB in 1989. During that time, there was a strong feeling that we had exhausted the large-scale hydropower potential. The CEB, based on their 'least-cost' equation, came up with coal power as the chosen alternative. There have been a lot of changes taking place world-wide in the energy sector during the last ten years. Today we talk about carbon trading; a topic not discussed 10 years ago. Renewable energy technologies have gained fresh value over environmentally destructive coal power as a result of the carbon-trading concept.

There is serious concern over proposals to privatise the CEB. Privatisation may create a much worse situation. In the South Asian region, the CEB is considered to have delivered a better service to its consumers compared with other countries. Privatising the CEB as a whole may well result in disaster. We will have to do it very carefully. A monopolistic 'private' sector could be even more damaging than a monopolistic 'public' sector. My proposal is to charge the additional cost involved in generating electricity from oil-based thermal power plants from the people who are using electricity for luxury purposes.

The plan should definitely include provision for

providing energy to the 40% of the population who do not now have access to grid electricity. The poor live in remote areas as they cannot afford to live in urban areas, and it is unfortunate that they have to construct such basic amenities at their own expense. We should provide energy services with a subsidy for the (innocent voiceless) poorer people living in off-grid areas, and towards relieving their burden. (Currently imposed on them). If we have a strategy to address the needs of off-grid communities, then we will be better equipped to develop plans to generate power for the national grid.

While stressing these points, I must also emphasise that we should understand energy requirements in a broader context. Energy is not limited to electricity. We use electricity only as a means of transmitting energy from one place to another place. After transmitting electricity we have to transfer it to another form of energy for use. With proper investigation, we could identify the ultimate energy requirement lying behind our current energy usage patterns. Then, a totally different, simple solution other than providing electricity may arise. We should develop such a problem-solving mentality. We have to seriously consider both international developments in the energy sector and national interests regarding the future of our country. The proposed National Energy Council is a good start, however we do not have a clear idea where it is heading. We should definitely have a comprehensive plan to accommodate the participation of government, the private sector, and civil society in solving the energy crisis. Neither should we privatise the CEB as a whole, nor should we keep everything under government control. Instead, we should strengthen the interactions between the different parties. That is the path to solve development-related issues in countries like Sri Lanka.



From Page 1

## Recommendations of NES

### Provincial Councils

Since the Provincial councils are now determined to address this issue seriously they should be helped to work out the provincial policy that they hope to implement through a statute. A model policy and a model statute are sure to help them so that they could adapt it to suit the circumstances of their individual provinces.

### Financing & Banking for Renewable and Decentralised Energy Projects

External Resource Department should source funding for renewables, especially from sources such as ADB and European Union. This money should be targeted to develop capacity of retailers and also provide refinance opportunities.

Insurance corporations of Sri Lanka should develop a mechanism for mitigating risk for commercial projects, especially for new technologies that are not yet mature of widely accepted

Government should use existing micro-finance networks, such as Samurdhi and others grassroots level institutions to promote renewable.

### Off-grid CBOs

People living in off-grid areas often have community-level organisations with active leadership. When properly guided, community members are willing and able to tap their own potentials for addressing energy needs with local resources.

### Micro-hydro

Electricity Consumer Societies should be better coordinated. Steps should be taken to protect catchment areas. Societies should be provided leadership and management training. Standards for equipment should be determined and enforced

Power station plant factors should be raised

### Solar

Capital cost for rural electrification could be reduced if solar home systems are included as a mode of electrification in the Government energy policy and incentives introduced for investments on solar.

Intervention of the local Government or some other appropriate authority to subsidise the cost to make the service affordable to the needy community of low income levels.

Varied products may be made available in the market such as solar water pumping systems; solar powered computers and refrigeration systems for the food industry and for medical uses.

Consumer protection regulations are also an essential feature for future consideration.

Eventually, cost of solar PV will reduce to a level where it could be installed as grid connected systems to urban roof-tops (with two way electricity meters)



**The Convener of the Energy Forum Mr. Lalith Guneratne, Hon. Minister of Power and Energy Mr. Karu Jayasooriya and a Director of the Energy Forum Dr. Priyantha Wijesooriya at the NES**

### Biogas

Strengthen bio-gas developers by providing the capital investments required for further expansion of the sector.

Conduct research to reduce the dome volume through improved fermentation. Conduct focused research to pilot test supporting services such as water pumps, generators, Diesel and Petrol engines, marketing of fertiliser and pesticides, and heaters for poultry incubators.

### Wind

Sites are limited, as the wind should be available throughout the year. Hence there should be process to identify the potential sites.

Develop and transfer technology to trap freely available wind resource in the region

A subsidising grant scheme, credit scheme and people's contribution up to a reasonable amount to incorporate in the development schemes of supplying electricity to these communities. Link credits via banking institutions

The representing organisation can take up the challenge of grassroots level implementation task.

Train small enterprises to manufacture, repair & maintenance

Train PC engineers to QC arrangement

### Improved Cook Stoves

Proper training to those potters who are producing low quality stoves and entrepreneurship training for producers, retailers, and promoters to ensure proper marketing.

Conducting more research and development on institutional and industrial stoves and new technologies to use biomass residues, such as saw dust and rice husk in the household and rural industrial sector.

Integrating ICS initiatives with other development objectives and activities.

Assisting rural industries for improved biomass utilisation.

Biomass Energy Planning in Divisional Secretary areas should assess the availability and utilisation of biomass and identify possible interventions to fill the biomass energy gap.

Strengthening the national network of organisations and the Information Management Centre for ICS established by IDEA.

### Solar thermal

Look at the national energy problem in a broader perspective and aim at satisfaction of energy needs arising from rural economic development. With proper policies and support, markets can be developed.

Improve institutional framework to achieve better and more effective co-ordination among energy R&D centres and more effective utilisation of R&D funds to share information and experience in different areas; and to be an effective group for lobbying for funding and research policies.

Support market development of commercially available technologies such as solar hot water systems and air heating systems.

