



# Energy Management Centre

An Autonomous Centre under the Department of Power  
GOVERNMENT OF KERALA

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## Day-02 Session

Moderator-Ms. Veena Joshi

### Day 2

#### Session 3 – Gender and Energy Soma Dutta

Gender Mainstreaming

Soma Dutta suggested to Identify women as a vulnerable group while designing a proposal or workshop and every small component. taking local configuration of technology and multi functional platform into account.

It was mentioned that Women are involved in identifying the need and technology should be a bundle of services. Finding ways to reach women where there is need was stressed upon.

Requirement of portal was mentioned. The question of how networks can be made available in the local level was discussed.

The networks of ENERGIA was explained along with the capacity building, Policy influencing , Gender audits of national energy policy, developing an action plan for involving gender in energy projects, international experience in ongoing energy projects.

Challenges in Networking, Choice in Partners, Identifying Niche Areas and Networking with other networks were covered in detail.

It was stated that capacity building capacity building can be a training for trainer (ToT) programme which is being followed by ENERGIA.

Many best practices in the south Asian countries can we share this through this lines and Energia website has capacity building modules

ENERGIA plans its programme in India, Nepal and Sri Lanka by 2008 and in Pakistan by 2009

#### Session 2 – Renewable Energy

AIWC Lalitha Balakrishnan

Through 550 branches AIWC transfer knowledge to the young generation and closely work with Ministry of New and Renewable Energy, Government of India in Rural Energy Technologies.

The following programmes were discussed :

Solar Energy - Solar gold field with the support of Shell Solar Improved Chula



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Short lead time of renewable energy projects offer advantages. Women in renewable energy has the benefit of social transformation, development of self respect, builds confidence and partaking in the noble cause of implementing sustainable energy conservation measures. This is well suited for the emerging economies developed country.

Biogas Programme covered 1200 biogas plant.

Parabolic stove is suited to the way side cafes. It is been propagated all over India. The advantage over grid system is that by renewable the consumers get the power whenever they wanted. Carbon credit facilitates renewable energy programmes, substantially.

Solar dryer technology, making use the solar thermal and solar PV developed by the SEED developed, is a proven in commercial viability for drying the fruits and vegetables at a micro enterprise level.

This is going to be scaled up to help the widows of the farmers. It may be noted that about 30% of all the horticultural produce are wasted in the country and Solar dryer provides hygienic drying process

Banks are willing to provide loans for RE programmes . Mention was also made on Schfler model of Solar devices.

Train barefoot technicians are deployed to maintain the RE systems or Solar PV systems. They are going to train women through the partnership with the Indira Gandhi Open University (IGNOU); and if we all efforts are combined the training of trainers (TOT) can be accomplished.

Bangladesh delegate stated that the solar dryer to be provided to fisher men; but the expense is the major challenge.

### **Merle Kindred**

Building an EE house in Kerala

Design and construction characteristics of a house in the COSTFORD technology and Grass root architectural practice was very well explained with all salient points which invoked keen interest among the delegates. It was mentioned that west shall also learn from this energy efficient and environmental friendly construction methodology

Session 5 - Bio-Gas:

Biogas a NEPAL - case study

### **Mr Ramesh Nepal**

With the briefing on renewable energy he stated that Nepal has already a law to use 5% ethanol with petrol.



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In 1975 peace corp volunteers started trying the biogas model. He explained the technology and application of the same in Nepal in detail, backed up by site specific R& D. Production of the gas valve, tap and lamp

He attributed Govt subsidy paved way to the success o this programme in Nepal as, . - even if it is small there should be a govt hand. The govt label gives credibility.

He mentioned the significance of availability of loans- micro credits, and technical support and O & M training. He mentioned there are 118 micro finance institute financing the biogas project out of 74 district; and .98% of the installed biogas plants are successfully in operation. availing carbon credit facility as well.

Various technicalities influencing the best performance and practices are well explained to the keenly interacted delegates.

### Day-03 Session

#### Session 6 – Electric Energy Conservation –Mr.. K.M. Dhahesan Unnithan

The significance of the subject was highlighted through the questions:

For whom we want to conserve energy?

Why conserve energy?

Shortage of conventional fuels, increasing cost of energy, global warming, net importer status of petroleum in the case of most of the SAARC countries, growth and development and merits of renewable energy programme were debated in answer to these questions.

Energy efficacy of incandescent bulbs Vs. CFLs , Electronic Chokes, electronic regulators for fans, efficient use of Electric Iron, advantages in selecting energy starred energy efficient home appliances/equipments such as refrigerator, air-conditioners and energy efficiency rated to several home appliances such as mixie, grinder etc. were explained in detail.

Programmes such as CFL - Bachat Lamp Yojanab(BLY), wherein CFL lamps are propagated through government campaign and support came up for the discussion.

One of the Indian delegated supplemented the point by explaining the Energy conservation tips being propagated through EMCs energy clinics and efforts being made by Kerala State Electricity Board.

Delegate from Pakistan stated that as energy efficient equipments are costlier, Government level intervention such as subsidy may be required to encourage poor people to purchase such equipments.

Delegates from Nepal stated that domestic energy efficiency improvement substantially helped in the reduction of system loss.

Delegate from Sri Lanka highlighted the initial experience of lighting for the poor in most efficient and best way



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One of the Indian delegate suggested that NGOs should take care of domestic energy efficiency improvement and electronic media should be effectively made use for propagation of energy conservation programme. The commendable role being played by NGOs such as “Kencos” in Talassery, Kerala and several ongoing campaigns through media were explained in detail.

### **Session 7 – Renewable Energy – Discussion on renewable energy benefits, costs and option – Mr. R. Harikumar**

Harikumar made an overview of renewable. The feature of decentralised production of renewable energy which has a reach to the deprived section has a remarkable score on energy security.

While discussing the prevailing commercially available RE technologies, feasibility of solar, especially solar thermal and Solar lantern, which is very common in urban area were well explained.

Need of government mandate in the implementation RE programmes was mentioned.

Question came up whether biomass is renewable or non renewable.

Different roots of biomass were come up in the discussion and need for a policy addressing sustainable harvesting of biomass was emphasized.

It was pointed out that several kitchen waste fed bio gas is very much popular in Kerala

In response to the question of delegates from Pakistan on subsidy on RE projects, it was stated that provision for subsidy exists for Biogas plants, Solar PV for the rural villages where the grid electricity will not reach for about 15 years and Solar thermal.

Bangladesh delegate commented that, biomass based RE programmes could help in achieving the millennium developments goals.

The performance of biogas plants has strong bearing on right operation and maintenance; thorough monitoring of waste preparation/segregation is essential in the case of community based biogas plants. Maintaining the right quantity of water, pH etc. calls for special attention.

India has a national bio fuel policy and the State of Kerala has a RE policy.

Project conceptualisation, implementation, operation and maintenance, funding and financing and other technicalities were deliberated in detail.

### **Session 8 – Cook Stoves and Health – Dr. R.V.G Menon**

Traditional wood stoves being used by many cause health hazard much more than a smoking about twenty cigarettes a day.



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About the case of improved wood stove, he stated that “if only men were doing the cooking then the improved cook stoves would have been invented earlier” The priorities are male oriented.

He stated that in Kerala biomass is a sustainable source of cooking energy; and producer gas is combustible, which gas can be distributed through pipeline lines.

The significance of health hazed is highlighted with the following:

“One million children die every year with the pollution due to cooking smoke. The total death toll is about 1.6 million every year. A life lost every twenty seconds. One of the major reasons for anaemia among women is due to this smoke from kitchen”

Success story of one of the tea estate, where all the employees were provided with smoke less stove was well explained.

Comparison of kerosene stove and wood stove was also made.

He stated that stove chimney may have soot sticking to a chimney walls; smokeless cook stove with an exhaust fan would be another option.

He also suggested that biomass gasification could provide a sustainable and acceptable solution.

### Day-04 Session

#### Session 9 - Energy and Income Generation Activities - Mr. V. Kesavan Nair,

Energy and Income generation Activities, V. Kesavan Nair, Kudumbasree

The Malayalam word “Kudumbashree” means prosperity of the family. Kudumbashree is one of the very successful socio economic models with accent in women’s empowerment. Eradication of poverty through empowerment of women is the focus of this programme.. Kudumbashree brings all the poor families into a community based structure through local self govt, particular reference is made to 73<sup>rd</sup> and 74<sup>th</sup> amendment of the constitution during 90’s which brought some key features of socio-economic programmes to the local self govt. that is some of the functions such as poverty reduction, housing programme, health programme which was thereto handled by the state govt got transferred to the local self govt.

Under State poverty eradication mission kudumbashree was formed. Kudumshree has made its own indices for identifying the poor.

Neighbourhood groups aiming at area development and further community development are formed and presently there are 3.6 million families as members of neighbourhood groups. A woman from a family is selected as the member in the group.

Normally, hitherto low profile activities are welcomed by women and women have inhibitions to scale up the same to large scale activities.



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The challenges of the programmes are inadequate working capital, problems in transportations and low grade technology, pricing, packaging, repayment; such problems lead to the mortality rate of enterprises.

Regarding the marketing facilities, new marketing models , direct marketing as an enterprise model, integrated approach for marketing model enterprises are developed and implemented.

Through Kudambashree , large number of women are successfully employed in ventures such as domestic/small to medium commercial solid waste management, data processing, hardware assembling units, coconut oil processing, IT education mission. Youths who are trained from industrial training institutes (ITI) formed a multi purpose job club such as laundry club, .direct, paper cup manufacturing unit, screw pine mat weaving unit etc. Performance and financial auditing of

substantial number of these spread out small group activities within the Kudambashree is also being taken up by trained members formed as another within the Kudambashree. Some other enterprise groups in operations include Govt policy to give nutrition to the children, Health care enterprise- to check life style diseases like BP, BMI, Blood glucose etc., Nature fresh – dairy farm, including raring of milk animals.

All of these make the programme Knowledge Based enterprises

### **Session 11 – Building Insulation - Dr. Edgard Dezuari and Ms. Hosay Rahimi**

The Speakers spoke on the Architecture changes required in the perspective of Afghanistan to reduce the heating and cooling loads. The topics covered are

Bioclimatic architecture (combines the climate the housing and the occupant) and  
Passive Solar Architecture.

The session covered the 3 rules in this architecture which are to capture the heat, transform and diffuse the heat and then

#### **How to do it?**

Reduce heating and cooling needs

Use solar gains in winter

Avoid summer heating -

Stock and retribute

#### **How to Capture the heat**

South orientation

We the large face of the building to face the south

Avoid Shadows

Building shape

Roof Overhangs

#### **Diffuse the Heat**

- Heavy materials inside the south parts



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### Internal Insulation and external insulation

- Double glazing
- Plastic sheet veranda – in winter in summer no plastic sheet

Bioclimatic is the solar architecture and thermal insulation. The types of materials required were also described like Poly styrene ; glass or stone GI cover and bed n stone

And glass wool.

As a reply to the Pakistani delegate he said that Pakistan has a energy efficiency policy and they are much more advanced material.

They have done the insulation with sometimes less than 5 % of the total cost of the building in some cases.

Bioclimatic house would cost about 10 – 12 %, more than the normal the other building. It can be compared with the cost of saving from heating.

### **L RadhaKrishnan, Special Session on Eco Friendly Building**

Buildings use up most of our energy. Green Architecture focus on the life cycle energy consumption. Spoke on the LEED certification. Differential tax rate for greener building has been recommended to the Kerala state govt. Water Management has been covered.

Reduction of the weight of the building without reducing the strength then we are moving more towards greener architecture. Use natural available material using local resources meeting th cultural requirement and the aesthetic sense of the people. Explained the use of recycled material in buildings. If the building fell then the material should be something that could be reuse it. He demonstrated these points using the some similar green building. He urged the delegates to publicise the concept of green building.

### **Session 13 – Way Forward Mr A M Narayan**

Narayanan covered the key factors to be considered while designing the Way Forward in Women in Energy, in detail.

The session highlighted Global Consensus on the Centrality of women’s Achievement, which takes the Gender Mainstreaming with regard to environment & energy and drawn attention to the United Nations Development Fund For Women, (UNIFEM) strategic plan, 2008-2011 with following quote:

“Gender mainstreaming with regard to environment and energy (EE):

Integrated strategies that promote creativity and innovation in support of expanded economic opportunities linked with environmentally sound natural resource management, micro finance, market access/creation, strengthened access to goods and services and an enabling policy environment”

The session focused the existing global policies in women centric energy and environmental issues.



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He suggested that while designing decentralised energy projects, there is strong case to link with the support economic diversification like agro-processing, cottage industry, tourism, and similar activities engaged by women

Emphasize was made in:

- Understanding this role of women for designing effective and sustainable interventions
- Identifying Barriers
- Location Specific Approach
- Key stakeholders interventions
- Engaging the organised sector in developing energy initiatives.
- Encourage women to identify the projects like tree plantations.
- Training support and award for women.
- Different perception has to be identified in urban areas to address women's energy needs.
- Decentralized Planning & Implementation.
- the legal frameworks to support and institutionalise
- The performance indicators to evaluate various women – in- energy programmes.
- Strong, well-supported regional coordination among women to provide technical expertise, analysis and leadership

Capacity development is a critical element to be pursued, through knowledge/technology transfer and the adoption of good practice.

Discussion called for developing sustainable eco-village model with the involvement of women, protecting traditional energy efficient and eco friendly practices rural life and to create new urban model.

The need for preparing and disseminating and periodically updating resource compendium documenting successful initiatives and best practices on women in energy and environment was stressed upon,

It was stated that Efforts to ensure involvement of women at all levels of policy-making, planning and implementation forms an integral part of Way Forward

During the course of discussion there was a suggestion that men should be equally involved any designing and implementing projects.

**Day 5**

**25/04/08**

### **Session 10 – Energy and Health of Women - Dr. C. R.Soman**

Dr Soman give an outline on the various health issue of women like indoor air pollution, lot of physical energy required for less cooking energy etc.. The discussions were on the lines of supply of energy from food. Later he focused his attention to a major emerging killer among people including women. The emerging killer called obesity. In our countries we have been focusing on underweight while the signs of over weight is being neglected. He mentioned about unmentionable consequence in females due to this silent epidemic. Life style related energy requirement of women has been assessed and has to be implemented.



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### **Session 14 - Women in Energy Supply Chain Experiences– Mr Niranjan Khatri**

The session eco-designing and environmental sustainability. He dealt extensively on water harvesting and water conservation measures as primarily on the Energy Efficiency activities in Energy and Water. Mentioned about the incentives and the second dimension of thoughts in the website [www.ide.org](http://www.ide.org). He said unless we have a successful model at micro level we will not be able to do things at the macro level. He introduced among the delegates Individual Social responsibility. He said we need to create symbiotic relationship transfer from top to bottom which is easy. Bottom to top approach is difficult.