Interview with Mr. Suresh Shrestha

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Q. We talk about energy crisis and also about energy efficiency (EE), what does EE mean?

A. Energy is an essential factor for economic and social development of a country. The demand for energy is rising day by day in our country. On the other hand the supply side is in pressure to meet the demand. We need sustainable energy for the social and economic development of the country and for this the most cost effective solution is to use energy efficiently and wisely. If energy is used in this way we can reduce the pressure existing in the supply side to much extent. This way of using energy in an appropriate way is termed energy efficiency.

Q. How can energy be used in appropriate way? How can the use of energy be made?

A. In the present situation, people are still using incandescent bulb which is inefficient as it converts energy more into heat than into light. Because of this, less energy is used and more energy is wasted. When energy is used in an efficient way, the energy that is being wasted can be converted into useful energy. Huge potential in reducing the consumption of energy in household and industries is observed. Baseline study also shows consumption can be brought down by significant amount.

Q. Even though the potential is seen, how much effort is put forth and what are the works done in technical and policy aspects so far?

Nepal Government with the support of German Government has been implementing Nepal Energy Efficiency Program (NEEP) since 2009. The program has an objective of introducing EE for the social and economical development of the country. NEEP has three components. Since we don't have energy policy of our own, the need of formulating necessary energy policy was realized. So the first component of this program deals with the drafting and formulation of policy. This component is implemented by Water and Energy Secretariat (WECS). Establishment of Nepal Energy Information System (NEIS) is also one of the activities under this component. For energy planning, data related to energy is required and we don't have proper and well managed data system. So to bring the fragmented data under a proper system, WECS is establishing an information system under this component. This will help in energy planning. Though we do not have an Energy Efficiency Policy yet, Nepal government has already prepared draft National Energy Strategy (NES) which is in the process of endorsement from cabinet. NES also addresses energy efficiency. It is planned to draft Energy Efficiency Strategy under the basis of NES. Similarly, biomass is the major source of energy in the country. For the planned and efficient use of biomass, Biomass Energy Strategy (BEST) is also being drafted. Alternative Energy Promotion Centre (AEPC) and Water and Energy Secretariat (WECS) are working on it. Second component of NEEP is focused on energy efficiency in households. It has two sub-components. First one focuses on EE in urban household (grid connected households). Under this sub-component a minimum energy performance standard is being developed by Nepal Bureau of Statistics and Metrology (NBSM) and Nepal Electricity

Authority (NEA) together with NEEP. With this, the system of labeling electrical appliances will also be introduced as done in many industrialized countries. This will help to increase awareness among people for selecting a right kind of electrical appliance. The main objective of this sub-component is to promote energy efficiency in household by making people aware about the use of energy efficient appliances. Second sub –component works for EE in households focuses on dissemination of Improved Cooking Stoves (ICS) in the rural areas. The third component of this program focuses on EE in industries. NEEP is working in coordination with Federation of Nepal Chamber of Commerce and Industry (FNCCI) for the promotion and implementation of energy efficiency in industries. The necessity of energy audit is realized for EE in industries.

Q. Three years have already passed since the program started. How much is achieved?

A. Talking about the first component, we have already started working on Biomass Energy Strategy (BEST). Case studies relating to biomass are being prepared for different ecological and economic zones. Once the data are available, we will formulate Biomass Energy Strategy (BEST).

Q. Is it in its early stage?

A. Yes, it can be said so. The study is completed and the data is being collected now. As soon as we get the data, we'll analyze and draft suitable strategy in context of our country. And for labeling of appliances, the appliances contributing to peak load is also needed to be identified. And standards and labels for such appliances are to be developed. Hence it is also is in its initial phase.

Q. Is it mere planning or also is in implementation?

A. It is in implementation. Nepal Bureau of Standard and Metrology (NBSM) is working for the identification of such appliances. The study is being carried out.

Q. Has it already started? How much of the work is completed till now?

A. For the study, consultant needs to be hired and so far we have prepared TOR for the consultant. NEEP will be working on this component till January 2014. So by that time we presume to select three appliances and develop standard for it.

Q. Talking about Biogas, it's being used in many places nowadays. How will you study the way it's being used?

A. Biomass refers to firewood, animal dung and agricultural wastes. Under component two, for the case studies for BEST, pilot sites were selected. The sites were chosen on the basis of demand supply situations and different scenarios for each case were drawn. On the basis of such scenarios, suitable type of strategy will be developed. We have set certain criteria for the selection of sites to be studied.

Q. How much of effort is seen to be given for reducing the energy consumption in households?

A. Statistics show that the maximum share of energy is consumed in households. Around 78% of the energy is contributed by biomass that is used in household for cooking and heating. Programs are being

conducted for the promotion of energy efficiency. Like Alternate Energy Promotion Centre (AEPC) is working for promotion of Improved Cooking Stoves (ICS), Biogas, Bio-briquettes etc. Lot of works needs to be done for the sustainable supply of biomass. Strategy will give us guidelines for it.

Q. The consumption of energy is high in household. If the consumption of energy is cut down without compromising the needs, it will help to relax economic burden and also it can contribute in cutting down the load shedding to some extent. How much of effort is given for public awareness in these matters? Since the information regarding these matters should reach to grass root level, how is this program working for it?

A. We have Public Relation (PR) particularly under component one. This is also cross cutting theme as it is integrated in all of the components. Under PR, awareness generating activities are done. Publishing articles related to energy efficiency highlight its importance, activities done in the country etc. in different magazines is one of the activities under PR. Generating awareness by participating in this program (radio interview) is incorporated in PR activity. We are also working how the information for raising awareness could be disseminated with maximum coverage by identifying appropriate media.

Q. We come to know that the program is conducting different activities and also drafting strategy for EE. But how can a person know how he/she can achieve EE whether in terms of biomass or any other source of energy.

A. General public can be made aware on EE through savings in electricity bills by adopting energy efficient appliances. In rural area, Improved Cooking Stoves and Biogas are the major means contributing in raising awareness. With the use of ICS, the users have felt lessening in the burden of collecting firewood. In this way, people understand that with EE, they can have comfort both by reduction on burden and savings on energy.

Q. In terms of policy, by when people will be able to understand EE or introduce controlling mechanism for EE?

A. This (NEEP) is a four year program. We are trying to raise awareness on EE besides working on formulation of strategy which includes awareness generation as well as internalizing energy efficiency technologies and market transformation. For this, energy audit needs to be done. When recommendations and suggestions drawn from energy audit report are implemented, micro level effects such as cost competitiveness and cost effectiveness can be seen and the environmental degradations caused by industries can be brought down. At macro level, import of fossil fuel, shortage of electricity will be reduced. After formulation of strategy, widely proven technologies can be used for achieving energy efficiency. The energy saved by applying energy efficiency methods can be taken as additional energy supply. Energy Efficiency is adopted by international organizations. Sustainable Energy for all under UN also aims to double the EE by 2030. We also need to do and Nepal government is working towards this.

Q. These are our short term programs. But by when will the government carry out in an effective way, as most of the strategies just remain in draft form? The program is there, but by when can we

really feel some changes on the basis of efforts from government? Are there any plans of the government beside this programme?

A. It's not that government has not put any efforts for the energy efficiency. CFL dissemination, incorporation of EE in the Three Year Plan, and use of energy efficiency technologies in street lamps are some of the government initiated activities in the past. We optimistically believe that once the EE strategy is prepared and receives endorsement from the government, we can move forward in this area by giving it prime importance.

Q. We don't have scarcity of resources for energy in our country. Can you elaborate on the plans in harnessing and consuming these resources so that the country can avoid energy crisis?

A. Talking about electrical appliances, use of EE appliances can cut down the electricity consumption. In this regard, trend has started to set Standards and labeling for electrical appliances. Looking at the neighboring country India, they have stated to label certain appliances which inform consumers on the electricity consumed by theparticular appliance. When consumers are informed on the energy efficiency, energy can be saved. Dissemination of Improved Cooking Stoves (ICS) has reduced the use of biomass in rural areas. In case of industries, change in technology can be one of the methods for energy efficiency. The technologies used in the industries here are not modern and consumes large amount of energy. When abrupt technological changes may not be practical, there might be low cost or no cost methods may be applied such as in housekeeping, use of CFL, and gradually switching to EE technologies

Q. In context of industries, particularly the pattern of consumption of energy in industries can you explain what is energy audit?

A. Energy Audit is similar to the other kinds of audit; it's the monitoring of the energy consumption. The way of consumption of energy in industry is monitored. After monitoring, the amount of consumption of energy that can be saved is determined and the energy efficiency potential is analyzed. On the basis of that analysis energy auditor prepares a report and the action plan to be followed to make the industry energy efficient is also prepared. The report given by the auditor should be implemented. Payback is also known from the report. The monitoring done to get the benefit by implementing audit report is called as energy audit.

Q. According to audit reports, what percentage of energy is being consumed by industries?

A. We had a baseline study done under this program. The study was done by separating Energy intensive industries in eight different sectors. The study showed that there is a potential of saving up to 20% in electrical energy and up to 30% in the thermal energy.

Q. Energy Audit is a part of this program. But have you been able to put it into regulation?

A. This means there should be market transformation. It would be easier to implement if the user accepts it. If the economical benefits, environmental benefits can be spread then it would be acknowledged as a step to be taken. For the transformation these issues are left voluntary. If the energy

cost is reduced in industries the cost of any production also decreases and thus will lead to competitiveness.

Q. You are working with FNCCI, How concerned are industries towards EE?

A. They are concerned in Energy Audit but the recommendations like retro-fitting, technology change, replacement etc. are making it less attractive due to the large investment it requires. But government can encourage energy efficiency by introducing financial schemes, providing incentives to the one using energy efficiently. In spite of being aware the industries are not eager to implement energy efficiency as it requires large investment.

Q. As we do not see enthusiasm among the industries for energy audit even after three years of programme implementation, we can raise a question on effectiveness of the program?

A. Talking about the effectiveness of the program, we have set our objectives and according to it we have planned to complete certain number of energy audits. We are working as planned but based upon the experience it is vivid now that sustainable financial schemes and policies related thereof needs to be introduced. So that industries could implement EE easily.

Q. Is this part incorporated under national energy strategy (NES)?

A. Energy efficiency is incorporated as a major strategy within NES. And on this basis of NES, Energy Efficiency Strategy is being drafted under the program. Accordingly, Energy Efficiency will be a major subject in energy sector.

Q. Regional dialogue in energy efficiency has just concluded. What was the international experience?

A. Regional Energy Efficiency Program (REEP) is supported by German government and is based in Delhi. REEP promotes energy efficiency regionally and focuses on enhancing capacity of personnel of related institutions in the region. In this regard, REEP regularly organizes different activities including sharing of EE related information on policy, strategy and energy audit etc. A program was organized under GIZ-REEP on Energy Auditor last month (May 2013). India is way forward in energy efficiency than our country. Due to the implementation of Energy conservation act, they have moved quite ahead. Efforts towards EE have enabled them to conserve energy. Bangladesh doesn't have energy auditors like ours (45 Energy Auditors trained by NEEP following the course prepared by BEE, India). But Bangladesh has Sustainable and Renewable Energy Development Authority Act. But in Nepal as there's no such act. Hence in our side lacking of at the part in the legislation was felt. The process for qualifying, certification and accreditation of Energy Auditors were discussed in the last event. Sharing about the present status of EE in Bangladesh, India and Nepal was done. Besides, the country where energy auditor scheme has already been developed like Thailand was also discussed. Similarly, representatives from Sri Lanka shared their efforts towards EE.

Q. In overall, are the 45 manpower we have are they qualified and sufficient?

A. They should be called qualified because they were trained by resource persons from India following the competitive course of BEE. Nepali auditors have passed the auditor's exam, for which the pass rate in India is only 20%. Observing the demand of energy auditor in the present market they seem to be sufficient but the necessity of strengthening the existing capacity seems necessary.

Q. Are the manpower we have concerned (related to energy audit) only for industrial sector? As you said labeling is done in household, does it works on other areas too?

A. Energy Audit is not only limited to industries. Industrial audit is done in industries but energy audit can also be done in household. The way of using electrical appliances in households, the amount of energy being consumed by these appliances and methods to reduce the amount of energy consumption are observed in household energy audit. Hence, energy audit is for industry as well as household.

Q. Our national energy strategy (NES) is being implemented incorporating all these. When will the NES be implemented and what kinds of issues will it be able to address?

A. Unfortunately, though we have worked for this since 2007, we haven't been able to bring it out as a national document. But the positive thing is that it is in its final stage of completion. We have passed it through Water and Energy Commission. As document is written in English it is also being translated to Nepali. Once the translation is complete, we will try to get it endorsed from the Council of Ministers to make it a national document.