

Inaugural Address by Shri KC Pant, Deputy Chairman, Planning Commission  
at the Workshop on Household Energy, Indoor Air Pollution and Health  
on May 9<sup>th</sup>, 2002

I am glad to be here with you at this workshop on "Household Energy, Indoor Air Pollution and Health" organized by the World Bank and Tata Energy Research Institute in collaboration with several international agencies and Ministries/Departments of Government of India. This is indeed an important issue, and it is essential that we evolve a suitable strategy as rapidly as possible.

2. Recent surveys show that of the total domestic fuel needs, 59.2 per cent in the rural areas and 35.5 per cent in urban areas is being met from fuelwood. Together with dung and agricultural residues, these three non-commercial sources of energy still meet 80 per cent of fuel needs of rural areas. Of these, the use of dung and agricultural waste as fuel is widespread in agriculturally prosperous regions with fertile soil and controlled irrigation, such as Punjab, Haryana, UP and north Bihar, but wood continues to be the main domestic fuel in less endowed and poorer regions.

3. Biomass, such as firewood, agriculture residue and dung cakes, is still the dominant source of fuel in our rural areas. Women and girl children are the key players in collecting and using these fuels. They spend a major part of the day for these activities leaving hardly any time for other productive uses. The improvement in burning efficiency of these fuels and provision of assured and clean fuels would help not only in reducing their drudgery but also in saving time for other productive works and improved health.

4. The energy use patterns in urban areas are changing with greater use of LPG and kerosene. It is, however, unlikely that fuelwood will be completely replaced in near future, as poorer sections of the community may lack the capacity to purchase the minimum quantity of kerosene or LPG, or the appliances for use of these fuels.

5. The supply of LPG in the rural areas has just begun. It is not, therefore, easily available to the villagers. Kerosene is used in villages, but mainly for lighting. Its use as a cooking fuel is rare, and it is also not preferred in villages for heating. Since firewood is obtained almost practically free of cost, there is no inducement for the villagers to shift to other sources. Thus, their dependence on fuelwood is likely to continue in the near future.

6. These bio-fuels result in very high levels of indoor air pollutants. Pollutants released indoors, due to their proximity to human beings, are far more dangerous than those released outdoors. In poorly ventilated homes women and children are forced to breathe this polluted air. Studies reveal that the pollutant levels they breathe in are many times higher than the acceptable limits set by the Central Pollution Control Board. High exposure to these pollutants has been associated with serious health problems. Major diseases associated with it are acute respiratory infections (ARI), chronic obstructive lung disease such as chronic bronchitis and lung cancer, and possibly tuberculosis, adverse pregnancy outcomes, blindness, heart disease and asthma. In India, the most important disease associated with indoor air pollution is probably ARI that includes infections from a wide range of viruses and bacteria, with similar symptoms and risk factors.

7. Women and children below five years of age are most affected, as they are regularly and severely exposed. There is a need to pay more attention to the plight of hundreds and millions of women and children living daily with exposure to indoor air pollution. Specially designed health programmes with clear focus would go a long way in alleviating their plight.

8. Despite uncertainties in assessing the impact of indoor air pollution, it now appears that in India and other countries where solid fuels are used in simple stoves, indoor air pollutants may rival unsafe water as a cause of ill health.

9. Socially sensitive and sustainable development strategies frequently involve vexing choices between what is desirable at the micro level and what can be justified at the macro. The choice of household energy sources is clearly a case in point. As I have already said, solid biomass fuels have extremely deleterious and unacceptable consequences on the health of our women and children. On this count, it is clearly preferable to initiate measures to promote the use of modern cooking fuels. However, most of the so-called 'modern' sources of energy, whether it be kerosene, LPG or electricity, involve the use of depletable natural resources. Therefore, we are faced with the choice of either continuing to use the traditional renewable energy sources, which have most undesirable health consequences, or shifting to nonrenewable resources, which may not be inter-generationally sustainable.

10. The problem is further compounded by issues of availability, accessibility and affordability. Traditional fuels are not only available locally, but have the distinct advantage of requiring mainly just labour power to access them. In this

sense they are not costless, but they do not require the conversion of labour power into income, which is necessary for commercial energy. Therefore, the shift to cleaner fuels would necessarily involve not only the provision of alternative sources of energy, but also additional income generating opportunities. This is easier said than done.

11. In view of these factors, the solution to the problem may not lie in following the path that has been taken by developed countries during their development process. It would perhaps be preferable for us to take these factors squarely into account while devising a suitable strategy for mitigating the ill effects of indoor air pollution. In a sense, the strategy that has been followed by the government does reflect these concerns, and is therefore, based on a four-pronged approach.

- Improved ventilation in the cooking area;
- Better stoves which require less fuel and generate less smoke; and
- Clean fuels for cooking - Biogas, LPG, kerosene etc.
- Solar Cookers.

12. Improved biomass stoves and improving ventilation are likely to be most cost-effective options for near and mid term. Social forestry and afforestation of degraded forest land by the community should help in increasing availability of biomass. But in the long term, the option must be to transition to high quality alternative energy sources for cooking. In general there is a preference for cleaner fuels, and a transition to clean household fuels comes as a natural consequence of economic development. Such a transition can be accelerated if clean fuels are made available at affordable cost. Local micro credit facilities for meeting the upfront costs, to low-income households, for switching to clean fuels will have to be provided.

13. The sun is an inexhaustible source of energy to mankind. India is ideally located for utilization of the radiant energy of the sun. A solar cooking device cooks food with the help of solar energy and saves conventional fuels to a significant extent. The Ministry of Non-Conventional Energy Sources had been promoting the use of solar cookers through capital and interest subsidies. Over half a million solar cookers have been installed so far. Presently, different types of solar cookers are being propagated under the market-oriented and demonstration programme of the Ministry.

14. The Ministry of Non-Conventional Energy Sources has taken up programmes on Biogas Development, Improved Chulhas, solar cookers and Integrated Rural Energy Programme (IREP) for meeting the rural energy needs,

specially cooking energy. Over 32 lakh Family type Biogas plants have been set up against the potential of 120 lakh biogas plants so far in the country. In addition, more than 3,000 community, institutional and night soil based biogas plants have been set up. The number of improved chullahs installed in the country is over 34 million against the potential of 120 million chullahs. In addition, 860 Blocks have been sanctioned for establishing Block level IREP Project Cells.

15. People's participation through Panchayats, other local bodies, cooperatives and NGOs would go a long way in realizing objectives of the above programmes. The achievement in Sagar island in Sundarban area, West Bengal, has shown what community participation can do. There are other examples too which are worth emulating for meeting the energy requirement in rural areas. We need to consolidate our experiences to devise a strategy which addresses these issue in all its dimensions.

16. I understand that World Bank has been undertaking a multi-sectoral study, "India : Household Energy, Indoor Air Pollution and Health", to improve knowledge and raise awareness of indoor air pollution issues and identify mitigation strategies and policies. This Workshop is being organized with the objective to disseminate the results and recommendations of this study to wider audience. Further, the World Bank is now taking up a study on "Access of the Poor to Modern Household Fuels in India". We look forward to the outcome of this study and are ready to the appropriate policy decisions

I wish the Workshop all success and look forward to its proceedings and conclusions.