

Challenge of Energy Access in India¹

Before I address the issue of the energy access, let me pay my homage to Shri Anil Agarwal, the great environmentalist, a visionary who fought relentlessly for improving environment and for a development strategy which fully took into account the concerns of clean air, water and sustainable growth. It is only fitting that we remember him with a discussion on questions of energy access, a critical area for the poorer and under privileged segments of the Indian society. It is they who suffer the most when appropriate energy access is denied or provided poorly to them for their sustainable economic growth.

2. It is interesting to note that one of the highest causes of premature deaths is due to asphyxiation because of household air pollution caused by cooking from bio-mass. According to I.E.A reports 2011, use of dirty fuel for cooking was the second-leading cause of premature death behind AIDS, responsible for killing 1.5 million women and children each year. In the 2013 report, this assessment was revised. It was stated that new research finds that there are 3.5 million premature deaths each year as a result of household air pollution from using solid fuels (rising to 4 million, if the contribution of household air pollution to outdoor air pollution is included). This figure is much higher than previous estimates, primarily due to the inclusion of new diseases, such as cardiovascular disease and lung cancer.

¹ Address given by Shri B.K. Chaturvedi (Member) Planning Commission on 27th February, 2014 on the occasion of Anil Agarwal dialogue organised by CSE.

3. It is indeed worrisome that India contributes to lack of energy access in a very significant way. According to World Energy Outlook, number of people without access to modern energy services was 18% for electricity. In addition, 38% of the world population was using bio-mass and thus did not have access to modern fuels. The share of people without access to electricity and using bio-mass was highest in Africa with 57% and 67% of the population covered by this. In developing Asia, 17% of the population was without electricity and 51% was using bio-mass. The share of Indian population without access to electricity was fairly high. According to this database, our share was 306 million HH (25%) without electricity and 818 million HH (66%) using bio-mass. In absolute numbers this is staggering. Nearly 25% of the global population without access to electricity and 31% of such population without clean fuel and using bio-mass were staying in India according to the above figures. Even more worrisome is the projection for India made by I.E.A for 2030. According to these figures, nearly 147 million Indians will be without electricity and 730 million without any clean cooking fuel and will be using bio-mass in 2030. While this shows improved electricity access, clean cooking fuel will continue to be a serious gap according to these estimates.

4. Let me in the above context move on to the efforts being made in the planning process to improve access to energy for all. The challenge first of all has been the policies which were followed earlier regarding electrification. It was till 2004-05 that we defined electrification for a village "if electricity is used in habitat locality within the revenue boundary of the village for any purpose whatsoever." It was then that the definition changed and RGGVY

programme launched. It was provided that the basic infrastructure such as distribution transformers and distribution lines should be provided in the village including in Dalit Bastees, electricity should be provided to schools, Panchayat office, health service etc. and the number of household electrified should be at least 10% of the total number of households in the village. This has made the village electrification programme more realistic. As a consequence of this, over a period of 8 years, progress has been made towards electrification of villages and in providing electricity. Under RGGVY, out of the total number of villages, 1.04 lakh villages have been electrified and 2.49 lakh villages which were partially electrified have been intensified for electrification work. Considering the overall picture of 5.94 lakhs census villages, 5.61 census villages have been electrified by March 2013 including about 10,000 villages under Renewable Energy Programme. These are villages which are either in the interior or otherwise have difficult grid access. This has left 31,981 un-electrified villages up to December 2013. This includes villages which did not comply with the new definition of electrification and villages which had been washed away or population shifted to other places or those going under deep water etc. In the 12th and the 13th Plan, it is now proposed that we provide universal electrification and electrify all the villages. For this purpose, necessary financial provision will be made. Of the un-electrified villages about 10,000 each (33 %) are in Orissa and Uttar Pradesh and the balance are in Jharkhand (3164) , Madhya Pradesh (1198) , Bihar (1161) , Assam (968) , Arunachal Pradesh (946) etc.

5. Providing people with access to electricity, however, is a different nature of challenge. It is interesting to note that during 2001-2011 according to census data and 2004-2009 NSSO data, we

were able to provide electricity to about 250 million people. Both data indicate approximately the similar picture. While this is a good development, the fact remains that according to census 2011, only 55.3% (NSSO 67.3%) of the rural population was using electricity as a main source of lighting, though in the urban areas this number was fairly high at 92.7%. The average access to electricity was 67% (census 2011) as against 75.5% according to the NSSO data. People without access to electricity thus are nearly 350-500 million based on the two estimates. This is a large number. No developed nation can claim inclusive growth if these people are not able to get access to electricity or electric connections.

6. As mentioned earlier, it is proposed to universalize access to electricity during the 12th and 13th Plan. In the current Plan itself, we are taking up expansion of grid network in habitations with 50 and above population. Subsequently, other smaller habitations will also be taken up. It is also proposed to provide support for development of grid network and completion of works which have been ongoing. It is also proposed to take up connection to new BPL families. The intention is, thus to cover all habitations with grid network. It is expected that as grid electricity is available in the village, people would come forward and take connections. Some more policy measures are necessary to ensure this. For BPL families, free connections are targeted.

7. While, electric network can be expanded, there are several challenges in the area. First, the state distribution utilities do not find it profitable to provide electricity in the rural areas or be very enthusiastic about expansion of electrical grid network. They are not able to realize much revenue by providing electricity to rural consumers. As cost of electricity goes up, they find it still more

difficult to be a part of this. The only solution to this problem is for a state utilities to commit 30 units of electricity per household free or at a subsidised rate per month, sag for five years and cross subsidise this with other consumers and with support from the Government. Given the cost of electricity from some of the coal based sources and hydro sources, we can earmark such generation for such supply. An important reason for slow growth is reluctance of utilities to give new connection.

8. Second, most of the un-electrified household are in the northern States. If one considers the access to electricity in different States Uttar Pradesh with (36.8%), Assam (37%), Orissa (43%), Jharkhand (45.8%) and West Bengal (50.7%) have poor access. The access was poor, especially in rural areas including Bihar (10.4%), Uttar Pradesh (23.8%), Jharkhand (22.3%), Orissa (35.6%), Madhya Pradesh, Rajasthan (58.3%), West Bengal (40%) and Assam (26.41%). Of the total households, without access to electricity in 2011, these states formed 84.8% of the total rural household without access, though covering out 56.6% of the total rural household of the country. The programme will, therefore, have to be, especially focussed on these states and will need a lot of support from the state government to ensure universalization of electrification.

9. Third, there are a number of villages which are in the interior areas. In them we will not be able to provide grid connections. It is, therefore, important that we give them renewable energy resource. Already, nearly 10,000 such villages have been identified. We would have to give them solar power and in some case micro hydro or even wind power. We will have to use batteries to store energy. It is possible that we may not provide them 24/7

electricity. But energy access would be available to them with this programme. There are many villages in which solar lights are being distributed.

10. Let me now address the question of access to clean cooking fuel. This is one of the most challenging areas as of now. According to the 2009 NSSO survey, number of household with access of LPG in the rural areas was about 15.5% and in the urban areas, it was 66.2%. Thus, around 31.2% have access to clean cooking fuel. Similar data has been given by I.E.A for 2012-13. According to Ministry of Petroleum and Natural Gas, there are about 16.25 crore LPG connections (31st January, 2014) indicating that out of 246 million households in the 2011 census, nearly 64% would have LPG connections. Considering that a number of people have two connections and others have commercial connections discounting 30% of these, the household covered on this basis is about 46%. Covering the entire population with clean fuel is a challenging task. Number of issues need to be addressed. First, the dealer network in the rural areas is very poor. This needs to be expanded. A new scheme has been launch by the Ministry of petroleum and Natural Gas for expanding the dealer network. Second, the LPG imports will have to go up substantially. On the current level of consumption they will need to be doubled. To that extent, we would have to provide additional resources. Third, it will not be possible to subsidise the LPG to on such large scale. The current losses on LPG imports are estimated at Rs. 57,000 crores. In case we want to provide the same level of support, we will have to reduce the subsidies or target these better.

In the above context, providing clean energy and energy access to our population particularly in the rural areas poses a challenge. We need to address a number of issues and modify our policies in case we have to provide access energy to the people. This will require review in several areas. It may require review by the State Governments of their policies of discoms, particularly for the Northern States. Second, it will also require support from a central government, especially through their mechanism of finance commission which does look into various developments issues. Third, it will need a review of subsidy policies for LPG. Fourth, rural LPG programme will need to be launch. Fifth, development of a modern cook stores and bio-gas will need to be developed. With some of their policy interventions in the coming years, we should be able to move forward towards the provision of minimum energy needs for our citizens.