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**The case for energy cooperatives**

The cooperative movement was founded when people felt that they were not getting a fair deal in terms of products’ or services’ availability or pricing. Long before communism, in 1761, the Fenwick Weaver Society was formed to sell discounted oatmeal to local workers.

The most visible examples today are fair price shops run by students and labour unions – both of which do not exist in Pakistan, though. There are consumers’ and producers’ cooperatives and credit unions. There are workers’ cooperatives to manage and share businesses etc. There are building and housing societies which promote affordable housing. Sometimes, governments encourage the formation of cooperatives to be able to distribute and develop land for housing, the likes of which have been a success example in Pakistan. Keeping in view the extractive role of middlemen in agriculture, it appears that cooperatives in agriculture may improve the lives of farmers and boost the agriculture sector. However, our focus in this space is on the possible role of cooperatives in the utility/energy sector.

There are three million cooperatives in the world serving more than one billion members and employing 12.6 million persons. All cooperatives combined have a turnover of $2.9 trillion; assets of $19.5 trillion; half of the world cooperatives are in the agri/grocery sector; and two-third cooperatives are located in Asia. The dominant sectors are banking, insurance, agriculture, grocery, education, health, housing, utilities and workers. There are 1714 cooperatives in the utility sector. Robobank of The Netherlands and Agricole France are two major cooperatives engaged in banking in Europe. Amul and IFFCO in India have a large presence in the milk and fertilizer sectors.

By 1936 in the US, 90 percent of urban areas had electricity and 90 percent of rural areas had no electricity. The Rural Electrification Act of 1936 allowed establishing electric cooperatives to provide electricity in rural areas which hitherto did not have electricity .Later on telephone and water services were added. The 1936 Act allowed groups of people to buy or generate and distribute electricity in their communities and areas. Long-term loans (35 years) at low interest rates were provided.

Cooperatives played a great role in improving rural life in the US. At present, there are 900 electric cooperatives, spread over 47 states and serving 40 million people. Electrical cooperatives in the US have a market share of 12 percent serving 19 million customers. The median number of customers per cooperative is 13000 vs 400,000 for normal utilities. The initial cooperative size was much smaller.

We may require much smaller cooperatives. For identical reasons, some other countries in Europe and Asia have also adopted cooperatives in rural areas; Spain and the Philippines are noteworthy in this respect. In India, Microgrids are being organized for rural electrification, although not under cooperative framework. It does provide a technical model, however.

Rural areas in Pakistan stand at a comparable situation of 1936 of America. Overall access to electricity in Pakistan is 67 percent. Twenty percent of the urban population has access to gas, while the rural population has no piped gas. Many rural areas have the physical and organizational, if not financial, resources to generate their own electricity (solar, wind and small hydro) and biogas resources. Their scale, volume and distance do not allow the organized main utility sector to serve them. They can organize small and micro grids, install biogas plants and lay gas pipes to distribute biogas produced out of crop and animal waste. Some may already be doing it. Cooperatives are great organizational instruments to organize people on a self-help basis.

Why cooperatives? Off grid areas, both in gas and electricity, remain un-serviced and may remain so for quite a while. Eighty percent people are off network in case of gas. Neither utilities nor NGOs would be able to mobilize local resources. It would also be expensive. There are abundant opportunities to install solar-based systems. Not much activity is visible in that respect. Biogas resources are abundant. Pakistan is an agricultural country with a large cattle population and milk production. Enthusiasm, autonomy, participation and organization seem to be lacking; these may be provided by cooperatives. Cooperatives are more stable and sustainable than a private corporation.

Energy cooperatives ala USA may be of great help. First of all, the licensing and legal lacunae may be removed by awarding licensing exemptions (or dilutions) to cooperatives, and soft financial resources may be funnelled through them. Cooperatives may be organized on the democratic principles of one-member, one-vote and may thus be saved from exploitation by the local powerful. Cooperatives may or may not be non-profit, depending on the local circumstances. Rates may be approved by local governments or administration in case of profit seeking cooperatives. Government funds may also be diverted through non-profit cooperatives.

It is quite conceivable that these cooperatives may develop the technical and organizational capabilities to install solar panels, local grid, and water pump thru supplier’s market channels. Otherwise district administrations or development organization bodies like the NRSP/RSPN may be able to assist. Similarly, gas supplies and crop and animal waste resources are widely and freely available in most areas. Individual biogas plants have been installed, even in very small numbers as compared to the regional numbers. Community biogas plants are not there, except for some politicized and expensive LPG-Air-Mix Plants which have been found highly unsustainable. Community biogas plants are much more affordable as these are built by the community based on local raw material resources.

A cooperative framework is required not only for financial reasons but also for operational and management purposes. While electricity networks may not require much of an O&M effort, biogas would require considerable O&M cooperation from waste collection to running the biogas plant. Biogas need and potential is very high. Only 20 percent of the population has access to gas under the existing utility based gas system. If 10 percent of the population gets biogas under the proposed scheme, it may not be a bad idea. And, it would be perpetual and sustainable, while conventional gas fields tend to expire within a decade.

Are cooperatives for the poor? That is a difficult question. Pakistan’s energy sector, both electricity and gas, are subsidized by government and cross subsidies. The poor pay Rs5.0 per unit as against Rs25 by the rich, and similarly for gas. On the other hand, cooperatives would not be burdened by the high T&D losses, leakages and over-heads etc and may be able to offer electricity at an average price of Rs10 per unit or lower – based on solar and other renewables. It may also have tax exemption. Similar is the case of gas.

Cooperatives may be able to mobilize cheaper biogas. However, it would be difficult to cater for the low price regime for the poor. Some kind of subsidy, in cash or kind, in addition to no-taxation would be required. Existing utilities may offer only high cost difficult areas out of their franchise areas. Small cooperatives (100-500 members) appear to be more feasible than the larger ones on the lines of the US. A pilot project scheme is recommended which may provide a firm basis to evolve the requisite policy.

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