An Analysis of the Approach Towards Just Energy Transition and Consumers in the National Electricity Plan

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The Plan is appreciated for presenting organised information and timelines for targets it seeks to make. However, the approach with which the plan has been prepared and presented is challenging both for a reader from the general public who is not too familiar with in-depth details of the workings and the problems of the electricity sector, and for an expert who has a deep understanding of the power landscape in Pakistan.

The document straightaway identifies three overarching goals for the power sector, namely (1) Access to Affordable Energy, (2) Energy Security and (3) Sustainability. However, the Plan also has no assessment of the fundamental problems besieging the sector nor any explanation as to how the actors that prepared the plan arrived at the conclusion with regard to the stated goals.

Pakistan's power sector is currently dealing with critical issues of high generation/production cost, capacity payment, and revenue recovery challenges, to mention a few. There are issues related to transmission losses, and fossil fuel based power generation that is costly in terms of finance as well as environment. Moreover, there is the issue of electricity availability on top of electricity access. Availability and access are two different phenomenons. Those with "access" are also being underserved because of the above-mentioned problems. It would have been beneficial for all if the plan had clearly highlighted the issues it is looking to resolve in the next four years. This would have helped the community, public and experts to judge the

performance of the plan on the basis of the targets set and met over the four years that the plan has been designed for.

National Electricity Plan and Communities

How the plan looks at community?

Figuratively, the Plan does not explicitly mention community, barring mentioning them with reference to their role along with other stakeholders in distributed generation; and the linkage of electricity with development of local community through better health conditions, food security, and poverty eradication.

The Plan however refers to consumers repeatedly and repeats the emphasis that they need to be provided secure, reliable and affordable supply of electricity. It sees targeted measures related to subsidies as a means to improve consumer welfare, which it mostly linked with the "provision" of electricity. It also links increase in share of indigenous resources in the generation mix as a way to increase consumer welfare as that is directed at achieving electricity affordability for end consumers through reducing the cost of generation. In terms of welfare, there is also mention of the importance of system efficiency and market operation to "reliably" and "securely" meet the demand of consumers. It has also been observed that the Plan is aware of the issue of affordability for consumers, as it seeks to account for affordability while outlining Tariff Design Strategic Directive related to progressively incorporating fixed charges in the tariffs of all consumer segments (except consumers of protected category).

The Plan also mentions tariff stability and predictability in Tariff Design Strategic Directive outlining the action point for the regulator to revisit existing fuel cost adjustment mechanism so as to ensure financial viability of the sector and equity of the consumers on account of price volatility. This implies that there is awareness and understanding of the impact of high tariffs on consumer welfare.

There is also plan to ensure consumer facilitation through establishment of a central consumer service platform.

Approach towards Consumers

The Plan's approach for consumers is that of a self appointed guardian and protector of consumer interest rather than seeing consumers as partners whose needs, capacities, aspirations and agency need to be accorded respect. This approach harms the Plan in two ways. Firstly, it fails to provide solutions for dynamic needs of the consumers; secondly by failing to recognise consumers as partners, it misses out on providing a plan for several areas where consumers partnership and action would have helped in providing solutions to intrinsic problems of the country's fractured electricity supply system, or where consumers could have switched roles and become producers, protectors and partners in electricity system. Classic examples include consumers' role in renewables-based DER or helping consumers assume a lead role in Demand Side Management.

There has been no demarcation of consumers. Whether they are small scale, large scale, rural, urban, industrial or agriculture, most of the plan treats them as a monolithic entity. It is difficult to imagine how different sectors with different needs can be served with one-fits all solutions.

There is immense diversity between the needs of the household sector (further categorized as rural, urban, peri urban), industrial sector (small scale, large scale), agriculture sector (small scale agriculture sector can also be provider of energy due to land access), services sector (limited land and space, high consumption), and traders/retailers (high consumption). The industrial sector, agriculture sector, services sector have different set of contributions towards the GDP. They are even provided different sets of electricity supply solutions, and incentives for use of electricity, with certain sectors receiving more incentives than the other.

Leaving all these categories of consumers at the mercy of the currently inefficient, expensive and soon-to-be-privatised DISCOS does not make sense. By NOT approaching these consumers as active agents who have a role to play in energy conservation to prevent Pakistan from expensive fossil fuel based energy, and actors that could lead transition to clean energy, the plan misses out on providing specific

details as to the targeted areas that could have assisted in Just Energy Transition on the back of consumers. Moreover, by skipping the recognition of these agents, the plan also presents a disconnect from the national economic agenda which generally revolves around promoting industrial competitiveness, agriculture production, and urbanisation (these are also part of the Vision 2025 agenda). Industries need reliable and quality power at competitive rates to be able to compete for a share in the global market and generate local employment. Moreover, to be able to tap the potential of DER in urban areas there is need for renewed urban planning so that space can be regulated for DER. Such details could only have been elaborated if the plan had treated consumers as dynamic entities with their own specific set of needs, goals, contribution and role in the just energy landscape.

Lastly, the plan misses any mention of the role of the civil society (NGOs, traders bodies, consumers bodies, experts, CBOs and academia) as stakeholders. These actors, as representatives of the community, have a critical role in just energy transition, by negotiating communities' interest, and acting as interlocutors between producers and consumers. India's National Electricity Plan spells out a role for Panchayats, local authorities, NGOs as agents responsible for operation and maintenance, and cost recovery for rural electrification agenda (**https://powermin.gov.in/en/content/national-electricity-policy**)

The Indian Electricity Plan also proposes capacity building of consumer groups and their effective representation before the Regulatory Commissions in order to enhance the efficacy of the regulatory process. The Pakistan plan perceives itself as a protector of consumer interests without any ground research on consumers issues and capacities, and an understanding of diversity in the consumer make up.

Missed Opportunities in Just Energy Transition:

By omitting consumers' role as active agents in energy transition, the plan ends up missing envisioning their role in several other areas and targets that it sets for itself. Two critical areas include Localisation and DERs.

Limited approach towards localisation

The way localisation has been explained in NEP is limited to acquiring equipment and fuel sources, even if they are as disputed as green hydrogen. Again consumers are treated as entities to whom electricity through these disputed sources have to be brought. The Plan prioritizes environmentally harmful and infrastructure-heavy coal and hydrogen as "local source" presenting it as means to generate consumer welfare by way of production of low cost energy.

If consumer welfare was indeed the objective, the plan would have had a more detailed roadmap of DER where consumers would have been assigned the role of producers of electricity through **Renewable Energy Communities**, or rooftop solar or DERs. The plan would have also presented how local production and standardization of DER would be ensured so as to genuinely facilitate local, inexpensive electricity generation.

The way DER has been described:

As the plan produces no analysis of problem areas in the energy landscape, the solutions proposed also sound stand-alone and unrelated to issues faced by stakeholders as producers and users of energy. A good example of this is how DER (Distributed Energy Resources including distributed generation, storage etc.) has been approached in the plan. The chapter on DER not only misses the mark on the real causes behind poor uptake of DER, it also fails to see it as a source of energy democracy empowering consumers that have the opportunity to contribute to the energy basket as producers. A few major problems with the Plan's approach towards DER is presented below:

1. DER is a promising platform for non-conventional and renewables sources of energy. It also provides an opportunity to foster community collectives that could further empower consumers, helping their negotiating power and serving consumer interest informed by their own experiences. Furthermore, if the state facilitates organising of consumers into Renewable Energy Communities, (along the lines of cities in Europe)

there is potential to reduce energy demand and promote flexibility; a role that RECs, established in Europe, have been undertaking.

2. The top-down approach towards DER leads the plan to outline the need to amend the existing distributed generation and net metering regulations due to “new global innovations, best practices & technological interventions”. It is to be noted that researches suggest the major reasons behind failure of DERs in Pakistan are related to poor market development and consumer finance infrastructure that discourages consumers to explore net metering.

3. The plan restricts DER as a function of DISCOS, instruments, and equipment. It keeps DISCOS (that have delivered poorly on DER promotion) as central actors who will set targets for distributed induction of renewable energy and inform generation planning.

The plan also refers to import and quantum of equipment, data solicitation and technology as elements and solutions towards developing a strategy to capture the penetration of installed DERs in the system. There is very limited consumer oriented understanding of factors that really affect DER uptake. This includes issues such as absence of equipment standardization, fixing anomalies in access to finance schemes, to broader environments such as urban planning, land and space regulations and neighborhood collectives.

If DER has to be taken seriously, it needs to be done through citizens’ collective, which the plan makes no mention of. In many countries, Renewable Energy Communities (RECs) in urban settings are recognised as stakeholders who craft cooperative arrangements for forecasting and planning the balance between production and consumption for better energy management and optimized flexibility.

4. The plan also needs to throw light on how DERs will be materialized and made successful in urban settings that are the largest consumers of electricity, and where density and unregulated planning not only obstruct DERs, it also results in higher demand which leads to more reliance on financially and environmentally unsustainable fossil fuel based power.

The plan makes no mention of non-conventional energy sources such as solar, small hydro, wind, bio-mass that could be exploited fully to create additional power generation

capacity. There is likewise energy generation potential in municipal solid waste and industrial effluents, both of which are currently being improperly managed and disposed off. Reliance on large scale financially expensive and environmentally damaging fossil fuel based structures are not only economically damaging for consumer interest, it compromises social wellbeing by way of environment and land damage.