

## Short Note

# Financially Solvent Utilities for Improved Energy Access

### Background

The United Nations High-Level Dialogue on Energy estimates that an annual investment of USD 35 billion will be required to make clean and affordable universal energy access (SDG 7) by 2030 a reality. For this, the financial solvency of utilities is a prerequisite.

In this regard, Indian think tank the Center for Study of Science, Technology and Policy (CSTEP), and Southern Voice—a network of 51 think tanks from Africa, Latin America, and Asia—organised a closed-door discussion “Financially Solvent Utilities for Improved Energy Access” on 22 September 2021 (3:30 to 5:30 p.m. IST), as part of the UN Global Goals Week (17 September to 26 September).

The virtual event brought together researchers, policymakers, philanthropists, and other important stakeholders to deliberate on the financial challenges faced by utilities in making energy accessible to all.

### Presentation and Panel Discussion

As part of the event, CSTEP presented its draft policy brief which was followed by a panel discussion.

While the panel provided region-specific perspectives and insights on the broader theme of how utilities can become operationally efficient and financially sustainable in the long run and translate the 2030 energy access plans into effective delivery on the ground, the panellist also gave pertinent comments to strengthen CSTEP’s draft policy brief further.

The recommendations from the discussion will feed into CSTEP’s policy brief to be submitted to the United Nations (UN) Secretary-General.

### Key Insights

The following are some important insights from the panel discussion:

1. **Future of Utilities/ Future Preparedness:** There is a strong need to look at the structure of the system, as to how it will operate in the future, and how utilities will deal with the evolving frontiers [changes in generation technology and energy systems; technology disruptions; challenges of the evolving energy services (new loads, electric vehicles, and cooling—both opportunity and challenge)]. The “Utilities of Future” should be looked at from the angle of the 3Ds (decarbonisation, digitalisation, and decentralisation). There is also a need to discuss utility scenarios from the point of view of centralised, distributed, and even micro utilities framework. The current focus is on grid extension and variable renewables. The distributed resources should be seen as an opportunity to reorient the power sector.

2. **Business Model:** Financially sound utilities are indispensable for attaining net-zero emissions by 2050 and are also key to installing grids and mini-grids. Debts have been growing considerably and have been worsened by the pandemic, increasing the vulnerability of utilities to market shocks. Financial sustainability is linked to cost recovery (CAPEX, OPEX, profit margin), and there is no other way to attain sustainability than a good business model. Transparent and autonomous ownership models should be thought about and can include integrated least-cost plans and universal access. An important aspect of utility business model is MBC (metering, billing, and collection). The least-cost business model should factor in bridging the investment gap in digitalisation (specifically metering) to ensure a self-sustainable utility. Further, the cost of power-sector resilience needs to be factored in the least-cost planning. Also, the models of delivery in developing nations must focus on small to medium size projects, and do away with bulky power plants (fossil-fuel based).
3. **Financing:** There is inequality in financing/funds within and between regions. The regional disparity has to be corrected to ensure equitable allocation of resources. It is important to see where the resources go, and how can private financing for countries that are not getting these resources be unlocked. Another financing inequity that needs to be addressed relates to the power sector processes/divisions. While a significant amount of it goes into generation (leading to over-capacity), the investment in infrastructure, grid extension, transmission lines, etc. is poor. To improve efficiency (especially looking at the utilities of the future [RE]), we need to look beyond generation, to enhance overall efficiency. Further, the power investments need to double for clean energy transitions through 2030 for a sustainable scenario. There is also a huge gap between the need for improving the smartness of grid elements versus the on-ground investment in emerging markets and developing economies (for example, 2 billion USD were invested in smart meters in emerging markets and developing economies during 2016-2020, while 10 billion USD were invested in advanced economies).
4. **Cost-Reflective Tariffs:** Cost-reflective power tariffs are desirable but it is important that they are made cost-effective not by increasing customer power tariffs, but by lowering the cost of power generation. A good way of doing this would be by utilising RE, instead of the costly fossil fuels/conventional fuels. Grid-scale renewables should be adopted by developing countries to bring the cost down and reduce the burden. Delinking political influence/politics from the utilities' operations and tariff determination process could further help arrive at cost-reflective tariffs.
5. **Data Reporting/Data Gaps & Linkages with External Policies:** In India, the data on subsidies for the sector (at the national and state levels) is either unavailable or inaccurate/unreliable. Better data reporting is needed, therefore, to understand which subsidies go to which consumers. There is also a need to coordinate better with the relevant/related policies outside of the power sector. For instance, coordinating with irrigation policies can help relieve financial pressure on DISCOMs by deploying solar irrigation pumps (KUSUM scheme). Similarly, the social safety net can be utilised better.
6. **Nature of Business:** This is a social-commercial business (also a political one), and so welfare will be a necessary part of it, always. The challenge is to make the welfare aspect less distortionary and to de-risk the business.

7. **Consumer Behaviour:** Utilities need to understand their customers since they are a service organisation. Consumers can be very different in different geographies, and understanding specific consumer behaviour is important for the success of decisions regarding metering and billing, etc.
8. **Power Purchase Agreements (Sub-Saharan Region):** The utilities in the sub-Saharan region have been marred by debts due to excessive signing of Power Purchase Agreements (PPAs). Most of these PPAs come under a take-or-pay condition (the cost for idle capacity has to be passed to the customers). As a result, most of the commercial entities have started on-site generation. This trend needs to be reflected upon by utilities, in terms of modifying their business models.
9. **Over-optimistic Demand Forecasts & Excess Power Capacity (Bangladesh and Pakistan):** Over-capacity, driven by over-optimistic demand estimates, has been developed in some countries. This is an expensive practice, as it increases the cost of power generation, stressing the sector further. Bangladesh and Pakistan have a serious overcapacity problem, which is endangering affordability (leading to increased government subsidies and increased capacity payments in the future). Therefore, more realistic demand forecasts are needed (to deal with the issue of over-capacity).