

Solutions Factory
Financing the Consumer-Led Energy Transition

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Much of the focus of the energy transition in India is on scaling up the clean energy supply. However, there is a disproportionate lack of focus on creating a commensurate demand for the same. It is because the bulk of the clean energy development in the country has been through government-led commissioning, which results in direct power purchase agreements with distribution companies. While large-scale deployments are likely to continue, it is the availability and implementation of distributed solutions such as rooftop systems, electric vehicles, and distributed renewable energy (DRE) applications for consumers, which would define the pace and timeliness of the energy transition.

Demand is closely, but not only, linked to economic value. Given the capital-intensive nature of modern energy solutions, including distributed ones, financing plays an important role in enabling adoption. In the context of distributed solutions, it takes the form of end-user financing, unlike institutional borrowing common for utility-level deployments. In this session, we focus on end-user financing: its role, pertaining challenges, and potential ways to unlock it for distributed modern energy solutions.

For rooftop solar systems, despite the large potential for economic savings, the adoption among residential consumers and micro, small and medium enterprises (MSMEs) remains low. Lack of access to affordable capital is a significant impediment for these consumers in adopting rooftop solar. For DRE-based livelihood appliances such as solar-powered sewing machines, cold storage, milking machines, printers, and flour mills, availing financing is even harder, even though rural micro businesses could significantly increase their incomes through such solutions.

A similar story is unfolding for electric vehicles (EV) in India. The EV market in India will be driven by mobility service providers such as public mass transit, intermediate public transport, cabs, corporate fleet and urban freight operators. Despite the attractive total cost of ownership, the high upfront cost of EVs, even after subsidies, makes financing solutions central for them to reach market scale.

Some of the key, and at times common, factors affecting access to end-user finance include the lack of capacity and knowledge among bankers to assess techno-commercial viability of these distributed solutions. In addition, relatively smaller loan sizes prohibit lending due to disproportionately high costs of due diligence. Lenders are mostly hesitant to undertake asset financing, seeking additional collaterals or guarantees to unlock finance for these new-age solutions, as secondary markets for these solutions do not exist – making them poor quality collateral. Alternatively, they seek track record: it is often the annual balance sheet of the businesses, which is a challenge for most first-time micro-enterprises; or the credit history of the borrower for rooftop systems or EVs.

The Solutions Factory hosted as part of Energy Horizons 2019, CEEW's annual flagship event, is designed as a candid and interactive 60-minute session, to identify the existing challenges for

end-user financing across clean energy products, and deliberate on potential solutions to address them.

With this session we aim to achieve the following objectives:

- Identify the challenges to end-user financing for households, MSMEs, and e-mobility service providers
- Determine the need and modalities of bundling energy and financial services for end-consumer segments
- Deliberate on the means to create secondary markets for clean energy applications such that collateral requirements can be eased