

QUALITY CAN'T BE THE OPPORTUNITY COST OF SOLAR ACCESSIBILITY  
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# Quality Can't Be The Opportunity Cost Of Solar Accessibility

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by Ashish Khanna

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Solar comes with a noble aim - reducing India's dependence on imported fossil fuel and providing electricity to millions of citizens disconnected from the grid. It has become every energy expert's talisman to fix India's power woes - and rightly so. As per a 2016 Mercom report, solar energy is the fastest growing new renewable energy source in India, contributing 2.5% of total installed power capacity in India, up from 1.4% last year.

This is being achieved in the price-sensitive Indian context by making solar more accessible in terms of cost. However, is it coming at the expense of quality?

The industry is witnessing some of the lowest entry barriers in a 'high-growth-high-impact' sector, posing the risk of unregulated providers entering the market and deploying substandard material to protect margins. The solar opportunity also has the potential to attracting substantial interest from foreign investors, but they benchmark plant quality and longevity against global standards. Solar energy comes with a 25 year commitment - few consumables match this assurance. Any compromise on quality, directly or indirectly, can have significant long term impact:

- 1. Reduced ROI:** When one invests in solar, it is for an active utility period of 25 years. So any reduction in its life or higher degradation can severely reduce the ROI on the investment.
- 2. High maintenance:** Panels which are not built for the long haul can start aging much before their guaranteed life. After an already significant upfront cost, ongoing repair and maintenance of suboptimal quality panels only increases total cost of operation.
- 3. Curtailed performance:** Low quality panels, even if they are functional for their intended years, might perform sub-optimally, producing a fraction of the power they are supposed to.

If the industry has to grow sustainably, we need to create a win-win for all stakeholders - which, our single minded focus on lowering costs will not help achieve. What we need, therefore is strive for cost effectiveness and accessibility while ensuring optimal quality.

For this, we need the Government, regulatory bodies and solar specialists to design standards and codes that benchmark quality and service levels. These industry-wide standards need to:

- Ensure products deliver at par with certification criteria for performance and safety
- Make sure installation and after-sales service levels are delivered at defined standards
- Ensure retail consumers have access to all relevant information
- Build a robust redressal system

The Indian solar standards' needs to look into the following codes and standards in order to holistically transform the industry into one that comes with a long term vision of sustenance.

**- Standardization and safety:**

- o Accreditation process that take panel standardization into account
- o Certification of manufacturing equipment for meeting required safety standards
- o Ensure basic level of competence among installers through certification
- o Assign responsibility to electrical bodies for licenses, safety, and electrical product compliance
- o Provide a standardized guide to installing solar for households and businesses

**- O&M consumer guide:**

- o Guide consumers on maintenance and support for systems, especially in the current scenario that is increasingly moving towards solar as a retail commodity

**- Professional development programs:**

- o Design training programs taking into account the solar industry's potential as an employment generator and its currently low entry barriers in terms of skill
- o Attested courses to train resources for solar competencies. In some countries like Australia, industry stakeholders advocate the role of renewable energy training as part of the electrical national training package.

A more challenging next step will be implementing these standards. One approach would be to incentivize purchase from certified installers / manufacturers, while penalizing poor manufacturing, installation practices through a demerit point system.

Accreditation bodies should undertake independent inspection, thereby maintaining a log of complaints as well as substandard / unsafe products. This will also lead to collation of data by the accreditation agencies. As in other mature industries, data will be key to track and understand trends and consumer requirements. It will help the nascent industry to take data driven decisions and resolve potential issues early in the solar adopters' lifecycle.

On the consumer front, building delight is critical in driving adoption. Therefore more attention is needed on platforms and tools that help them decipher differentiators and brand promise of different solar players, and hence make informed choices. Standardization will also help consumers maintain and monitor their systems better.

As the solar industry enters a significant growth phase, the intent should be to establish a high level of trust between industry and consumers. The experience of early adopters will shape the market. It must be ensured that while we work towards reducing solar energy costs, we take a sustainable, quality-centric approach for solar uptake and customer delight.

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