

INCLUSIVE ENGAGEMENT FOR ENERGY ACCESS: “Rural Solar Innovation - Business As Usual”

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“As we embark on this collective journey, we pledge that no one will be left behind”

Transforming Our World: The UN 2030 Agenda for Sustainable Development

The United Nations (UN) Sustainable Development Goals offer a magnanimous & inclusive probability for the future. Such an audacious vision demands global partnerships between nations & people – across sectors, communities, & borders; engaging the poorest & relying on the richest. Amongst critical aspects, it also assumes greater participation from the private sector to contribute much more substantially – but not just as ‘aid auxiliary’. In order to engage business in development, context is critical.

The private sector is always highlighted as a partner with the potential to contribute in multiple ways to development objectives: by stimulating economic growth & job creation, providing investment & finance and sharing the resources & knowledge needed to shape innovative solutions to global challenges.

Business is driven primarily by profits. We don’t wish to contend on whether this is a good thing or a bad thing. Of course a profit agenda is different from a sustainable development agenda. However, we must continue to render pluralistic efforts, with dogged determination to create compelling cases for businesses’ to partake.

UNCERTAINTY OR EVOLVING FUTURE TREND?

This is a time of unprecedented uncertainty for the energy sector. Safe, reliable, affordable, & clean energy supply is fundamental to global economic growth & human development & in itself presents an enormous challenge. To make things more daunting, it is in the context of this uncertainty that today’s policymakers, strategists, & business leaders have to take in to account while making critical decisions to endorse current & future energy infrastructure development.

Technological breakthroughs are fast evolving with greater promise, benefit & impact. Engineers & researchers are creating novel types of photovoltaic devices that can change the landscape of energy accessibility, endorsing solar power as an extremely practical source of renewable energy. One of the most exciting solar technologies in this regard are decentralized **Pico PV systems**; specifically designed for off-grid rural

communities across the developing world, serving as complete standalone systems to provide electrical power away from the main grids.

From what was once an expensive proposition, solar technology, has the proven potential to tackle global & local challenges by empowering BoP markets. And in doing so, solar solutions also uncover vantage points for the business community that serve as primary economic engines.

THE CHALLENGE

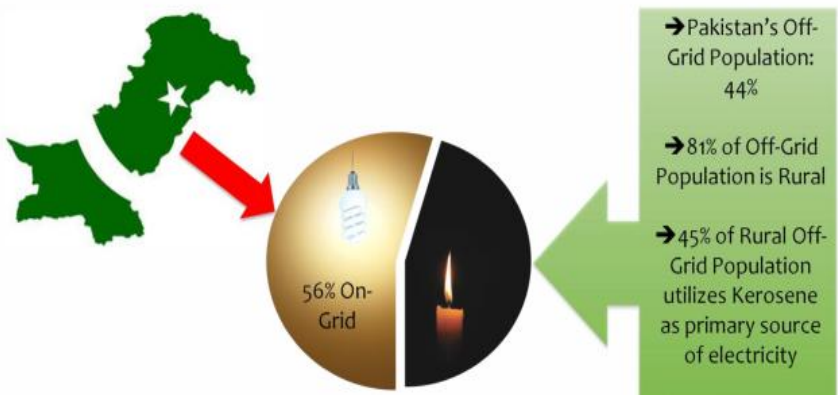
In recent years, energy scarcity has become a great challenge in Pakistan. More than 144 million people across the country do not have reliable access to electricity, either because:

- Not connected to the national grid c. 44% of Pakistan's total population is off-grid; or
- If they are connected to the grid, they experience blackouts that last over 12 hrs/day

81% of Pakistan's off-grid population i.e. an estimated 11 million households live in rural areas.

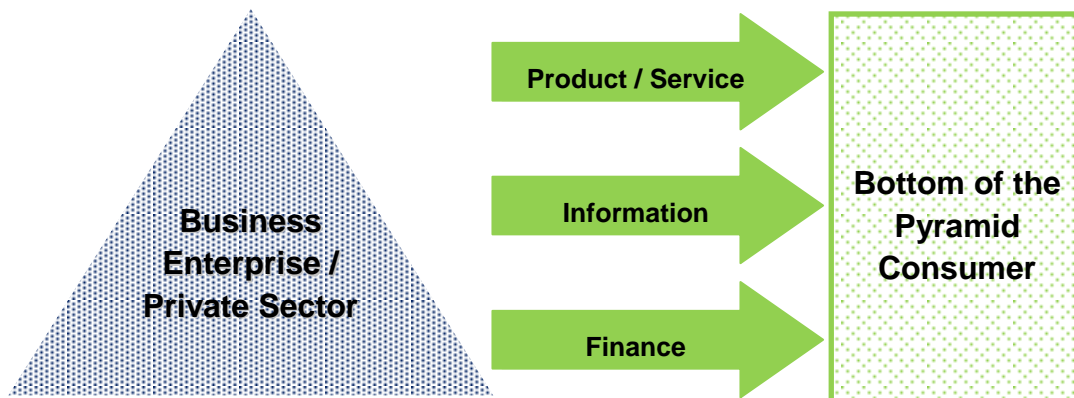
According to the Energy Access Practitioner Network initiated by the United Nations, 60% of the additional generation capacity needed to reach universal access to electricity by 2030 will be off-grid. The undeniable conclusion is that renewable energy is part of the answer to power the needs of the world's poor, & a prerequisite for any efforts towards sustainable development.

Only about 4% of Pakistani households tap into solar power according to IFC's 'Pakistan Off-Grid Lighting Consumers Perception Study', 2015. According to the study, there are several barriers to its widespread adoption including **a lack of consumer awareness, limited supply chains, & a shortage of consumer financing**. Most importantly, the IFC study finds that there is a tremendous opportunity for industry players - that can deliver high-quality, cost-effective products to consumers.



THE SOLUTION

The idea is to create multi-pronged impact & access to scale. The simplest solution for this is to engage the business community for three primary reasons. First, a corporation approaches any challenge with a clear set of objectives, strategy & focus – the purpose of any corporation is to make a profit & it channelizes all its efforts & energy in achieving that. Second, business offers a great share of its expansive resources - extensive market opportunity, strong distribution networks via its supply chains & access to finance – in effect overcoming the very specific barriers identified by development sector for adoption of solar technologies. Finally, there is a growing global concern with regards sustainability of business initiatives, thus corporations make an effort to ensure that there is a health, safety, environmental focus in their endeavors & they follow good governance principles.



The criticality for solar innovation & energy provision, as well as health, micro-enterprise development, food security & other arenas is to deliver improvements to people that need them the most – at scale, effectively, efficiently & sustainably. The art & science of delivering with speed & scale is truly embodied by corporate organizations. **Innovating for Energy Access** is an initiative that aims to bridge the gap in service to the rural BOP consumers in Pakistan by leveraging on capabilities & interests of business enterprises.

EXPERIENCE IN PAKISTAN

Innovation in solar technology in the form of Pico PV systems provided an opportunity to test & apply a groundbreaking business model directed at resolving a very specific social problem: **making low cost energy accessible to all**. With over 20 years of consulting experience, our exposure to business realities & nuances helps in connecting the dots &

misses between development & business. This was the perfect opportunity to test our hypothesis. We realized that the existing gap between development & business can only be bridged through a mutual understanding of responsibilities, taking ownership for the cause & an agreement on contributions. In effect, the terms of the partnership need to be established clearly, transparently & such that all partners speak a common language & are held accountable for their commitments.

Since the core objective of a business is economic growth, it is critical to identify & understand what a corporation requires from the partnership. In the context of Pakistan, the need to do good is an inherent characteristic. Specifically throughout the year, there are numerous occasions (from a religious perspective) where businesses engage on targeted / focused social campaigns. Doing social good is ingrained in Pakistani culture & tradition & it is the optimal connect with consumers. The key is to leverage on this aspect as well as get a sense of specific business requirements to explore how we could synergize with business & make optimal use of business capabilities to achieve our objective.

Business cases & concepts developed:

- **AGRIBUSINESS:** Pakistan is predominantly an agrarian economy. Thus, agri-business companies e.g. fertilizer & pesticide, etc have deep penetration into rural communities. Distribution of pesticides has to be timely & frequent & reach the furthest customer in the most remote vicinities of Pakistan, with minimal or no supportive infrastructure to compliment the journey. Some of these localities have actually been developed by corporations - for example by establishing schools & basic health clinics for rural communities.

One specific pesticide company has been engaged to utilize their approx. 2 million farmers' customer base, managed through their network of distributors & retailers spanning across Pakistan. These distributors & retailers will potentially distribute Pico PV systems; as an incentive, a higher margin will be worked out for them so that they remain engaged to support the product/s. Additionally, companies are also willing to invest in a number of Pico PV systems to give away for personal use as reward to the most promising distributors & high purchasing customers (farmers) – purely to incentivize their lives & those around them with something as significant as light. In Pakistan the concept of contributing to the lives of those less fortunate is primal & paramount to our faith & culture.

- **TEXTILE:** Rapidly expanding retail textile business provides a great opportunity for home-based workers – artisans from rural off-grid areas are engaged to do traditional & intricate handwork & embroidery as well as utilize their stitching skills to prepare products that are sold in urban markets. The challenge faced by these artisans is the lack of electricity that inhibits their productivity severely. Similar to scenarios in other similar developing countries, once the sun settles, economic activity in remote rural locations becomes extinct. Textile companies who employ the craft & effort of these artisans are eager to support financing of Pico PV systems partially, while the end user would pay partial amount on monthly installments, or through other creative sub-financing.
- **FMCGs:** Food, beverage & confectionary companies have essentially strong distribution networks – we have observed frequently that in the most remote locations of rural Pakistan, one may not find something as common as toothpaste but it wouldn't be difficult to find a cola beverage. It is hardly a surprise that FMCGs have the best developed logistics network & retail approach. For the absolute last mile retailer, the company's investment in a Pico PV system enables the retailer to operate his / her shop or kiosk for longer hours, at least 3 – 4 extra hours each day with access to light. This gives them the opportunity to enhance their income as well as enables cost savings due to reduced use of kerosene / alternative lighting means. FMCGs enable increased efficiency & effectiveness in operations of the last point in their distribution chain. In addition to supporting business sustainability, significant goodwill & impact is created for the organization amongst its distributors, retailers & consumers.
- **TELECOMMUNICATIONS:** 90% of off-grid consumers in Pakistan have access to cell phones. Almost 67% of these consumers also access financial services provided by cellular companies in the form of mobile money transfer. Thus, partnership with telcos provides two leverage points: first from a marketing / communication perspective, advocating & creating awareness of the benefits of use of Pico PV systems versus traditional lighting systems. Second, mobile money transfer can be utilized to create a Pay As You Go (PAYG) system where consumers of Pico PV systems can make weekly / monthly payments to avail use of these systems, until such a time that they have completed the total payments of the system & can own it. This is a great avenue to obtain access to finance as an alternate to a traditional financing / micro financing system that may not be suitable for this consumer market.

Based on these interactions in the industry / business context, we see that multi-stakeholder interactions can be leveraged across micro-small-medium enterprises, incorporating global value chains of large and small organizations. At the same time, the product itself needs to be in sync with customer needs and the customer wants whatever is simple, good value for money and cost effective.

SO WHAT DOES IT ALL MEAN?

The inclusion of business as a partner in a development context assumes that:

- The partnership must be facilitating access to service
- Human rights plays a central role to ensure that the poorest communities are served
- Partnership process is guided by social, environmental & governance standards & all relevant stakeholders are engaged
- Innovation of business models is necessary to ensure sustainability of products & services
- Business community will contribute through sharing resources, financial investment as well as philanthropic initiatives
- Transparency of process & accountability are critical to reach desired impact & scale

Corporations have expressed eagerness to engage & support on solar innovation as part of their business philosophies & individual contexts – for them it's *business as usual*:

- Partner on the initiative through their Corporate Social Responsibility (CSR)
- Maximize leverage points in retail & distribution channels - impacting livelihood & creating goodwill by providing Pico PV systems for last mile retailers
- Enable outreach of Pico PV systems through corporations' own distribution network
- Provide financing for end consumer through mobile money transfer (PAYG) systems

The bottom line is not what more can be done, rather how can existing strengths of the corporate sector be leveraged & what synergies can be created to insure win/win for business-development partnerships.