



**Off-Grid Practitioners' Views:
Customer Service Challenges in Rural Off-Grid Solar PV Markets**

January 2018



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Background and Purpose

As part of Stimulus on-going efforts to enhance knowledge experiences for Bottom of the Pyramid (BOP) market segments – especially solar PV, Stimulus initiated a research focusing on behaviour and communication scenarios that impact overall customer experiences in rural off-grid markets as well as promote use of quality solar products.

During 2017 Stimulus undertook a series of consultations, engaging with solar suppliers, retailers, system developers, specialists, consultants and academia from Pakistan as well as other countries in Asia, Africa and Latin America to understand industry perspective on “customer experiences” in rural off-grid areas. Views and insights were solicited from 75 experts across 10 countries on:

- Most significant challenges faced at both consumer end as well as service-provider end; and
- Suggestions on how challenges could be overcome

The underlying hypothesis for this research suggests that a more dynamic *user-service provider relationship* based on high-level trust and one that builds customer confidence will encourage customers to seek and use quality solar products. As a result, customer confidence with regards solar technology is established and win-win situations are cherished by customers and service-providers alike.

However, it is critical to understand mind-sets and behaviours of service providers alongside consumer needs and preferences. The manner in which a service-provider engages / interacts with the customer makes all the difference. Solar service-providers must improve their interactions with customers to empower them to choose and use solar products. From expert’s feedback, customer experiences can be classified according to:

1. Preference and selection of products and service-provider/s
2. Engagement with product and service-provider/s

Respondents unanimously indicated that the challenge is not so much at the customer end, but rather at the supplier / service-provider end. While educating the customer is essential, the attitude and behaviour of service-provider creates an experience for customers that aids in developing market and ensuring that customers become manageable. Respondents were clearly of the opinion that solar industry experts and businesses need to come together to ensure that the supply side is developed technically as well as on good management practices - specifically customer service and creating experiences that will ultimately lead to sustained customer awareness and support for solar growth in the long-term.

Outcomes

- A *customer profile* was defined highlighting needs and aspirations of customers within the rural off-grid market segment
- *Challenges faced in this market segment as well as key insights and recommendations from practitioners to overcome these challenges* were ascertained
- A *framework for customer engagement* in the rural off-grid segment was devised
- A *training program, “SUN SERVICE: passion to serve”- a customer service foundation workshop* to enhance customer service and user experiences in the off-grid segment (BoP market development)

Off-Grid Practitioners Customer Service Insights

Engagement with Experts

A total of 120 experts actively practicing in off-grid solar PV markets were contacted by Stimulus via meetings, email, LinkedIn, telephone and Skype to solicit their responses on most significant challenges faced by customers and service-providers during interactions as well as suggestions on how to overcome challenges.

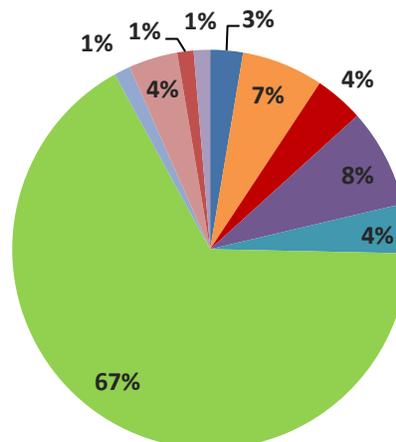
75 experts representing the following 10 countries agreed to share their experiences and inputs with Stimulus:

- | | |
|---------------|-------------|
| 1. Bangladesh | 6. Pakistan |
| 2. Germany | 7. Peru |
| 3. Ghana | 8. Syria |
| 4. Namibia | 9. Tanzania |
| 5. Nigeria | 10. UAE |

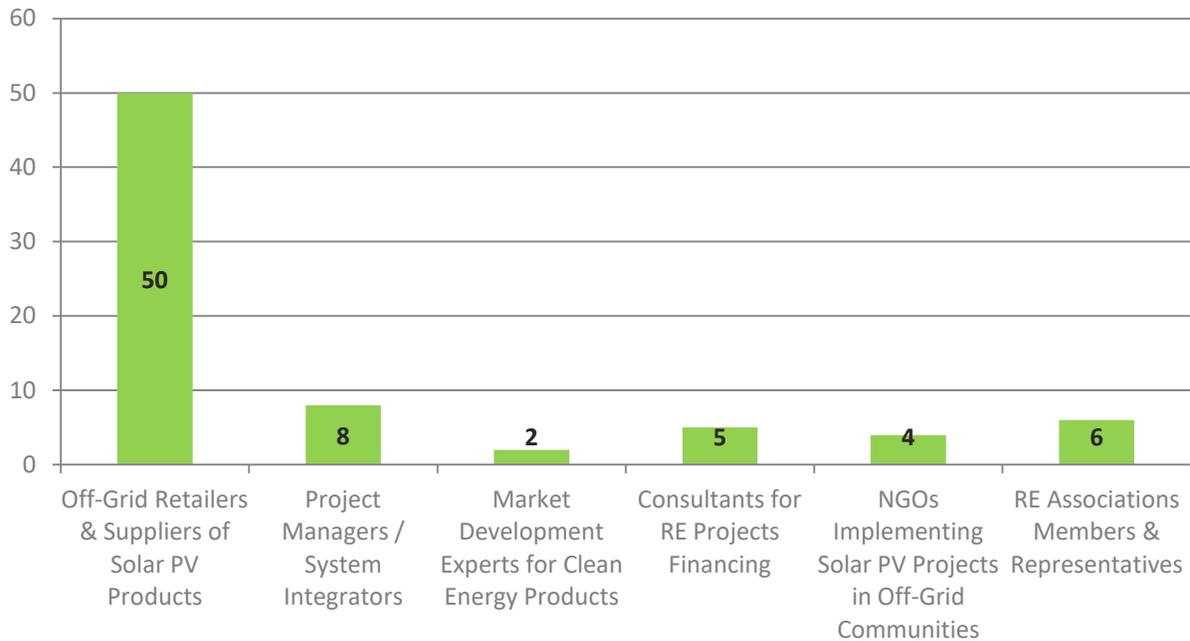


Percentage representation of respondents from each country:

■ Bangladesh ■ Germany ■ Ghana ■ Namibia ■ Nigeria ■ Pakistan ■ Peru ■ Tanzania ■ Yemen ■ UAE

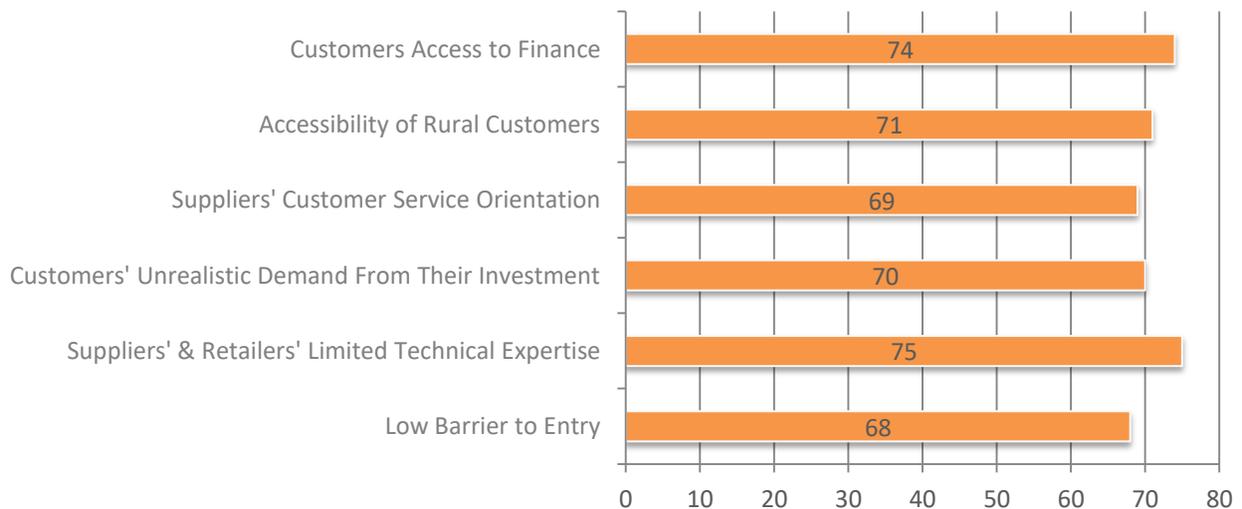


The graph below indicates interviewees' profiles, number of individuals representing various expert groups:



Challenges Highlighted by Experts

Experts were asked to identify challenges they face during interactions in off-grid markets. Each service-provider shared an individual list of challenges from which common themes were analysed, extracted and summarized in the graph below, indicating number of experts who identified with each challenge.



Upon deeper probing experts shared the following insights:

1. *Low Barrier to Entry:* The solar PV industry presents very low barrier to entry. In Pakistan for example, anyone who can invest in solar products is able to set up shop. Similar views were indicated by some other experts from Latin America and Africa. In such unregulated markets there are no rules to follow or permissions required. Also the wide range of solar products available means that service-providers do not have to work with limited type of products. There is no defined quality control / quality assurance on imports. As a result, low quality and sub-standard products enjoy a much bigger market share.

Often part-time retailers are supplying low quality, low cost equipment – while the customer is sold the equipment as a long-term investment, most retailers have only been in the market for a short time (only 1 or 2 years) or operate seasonally and are not available for post sales engagement. In addition, there is no culture of written agreements and people prefer to work on verbal agreements.

In this regard, two interesting insights obtained from Pakistan and Africa:

- *Seasonal Suppliers:* Often vendors purchase solar PV modules in bulk from China and set-up shop in Pakistan during summer months, when demand for electricity to operate fans is high. These vendors are only available during May and June, when they provide a large number of modules to directly operate fans in off-grid areas. Once their product is sold, these vendors are nowhere to be found and there is no way to trace back or trace the product that was purchased from them
- *Check Warranty:* This is a concept of a warranty where any solar system, most commonly a solar operated fan or lighting system is checked within the premises of the seller. The customer can check the product and warranty or exchange on the product lasts only as long as the customer is in the sellers' premises. Once the customer steps outside of the sellers' premises, the warranty ceases

As a result, acceptance and trust that customers associate with the technology overall and service-providers in general, is severely affected. Especially because once the sale is made, suppliers are often not available for after sales service or consultation

2. *Suppliers' and Retailers' Limited Technical Expertise:* Within the network of suppliers and retailers, lack of technical expertise is a huge challenge. Service providers in general may not be equipped with requisite education, training and understanding of the technology. As a result they are not bothered about quality of products or educating their customers on what solar technology is and how it works. Customers generally don't know what to seek and suppliers / installers don't know what to offer in terms of quality, technical requirements and financial incentives. **Every single expert indicated that this is a critical aspect for consideration and the most significant challenge for customer service: that service providers are not equipped with the technical knowledge and skills required to promote solar PV products, to emphasize on quality and to deliver a standard of service**
3. *Customers' Unrealistic Demands from Installations:* Customers demand and require very specific output from their investments. It is very common for off-grid customers to expect that just acquiring a solar panel will somehow provide them with free of cost electricity for 24 hours each day. Customers usually do not understand the need for balance of system components and that only 30% cost of their installation is the module, whereas BOS components make up remaining 70% cost. Customers will always compare cost with cheaper product available in the market. Also, customers are not clear what to verify in terms of quality and system performance
4. *Suppliers' Customer Service Orientation:* Customers also have significant expectation for after sales customer service once they have invested in a solar system. Experts shared that for the most part, rural off-grid customers found it a challenge to trace back the supplier of their system or engage the supplier to visit

them and resolve their queries. As a result, they approach other suppliers for help. Any other supplier is of the opinion that it is not their responsibility to assist or manage a system they have not installed. In this regard, experts felt that suppliers' / installers' management practices and customer service orientation needs to be significantly improved and enhanced

5. *Accessibility of Rural Customers:* With rural areas, one significant challenge is that population is quite dispersed and mostly target customers are in areas that are remote and do not have easy access to transportation networks. Often, when finalizing a deal with a customer, a service-provider overlooks proximity, distance and transportation challenges. This is something that service-providers need to factor as part of their customer profiling, prior to providing a quotation for their offerings

An example was narrated by one company in Pakistan who forgot to inquire customer's location when closing the deal. When delivery was being made, after reaching a certain location by road transportation, it was realized that there is no way to travel further by road. As a mock arrangement, camels had to be used to deliver the solar system and transport the installers team as that was the only means of transport. The converse of this is that accessibility to these customers is a commercial challenge and thus often not observed as worth the stress by most service-providers

6. *Access to Finance:* Customers' access to finance is yet another significant issue especially in the off-grid segment. While service-providers are open to trying a variety of options such as micro-finance schemes, leasing of equipment, pay-as-you-go models as well as supplying equipment on credit, payback and recovery is extremely tricky. The challenge is that off-grid customers have no credit history with limited understanding of savings and commercial loans. As a result, suppliers are hesitant to invest their own assets.

Additionally, in rural communities there is a strong community association and major pressure on service-providers to offer service free of cost or at very low cost to community members. This is always a challenge for service-providers to deal with

Rural Off-Grid Customer Profile

Respondents shared insights on type of customers they interact with in off-grid markets, based on which an off-grid customer profile was developed by Stimulus.



- *Personal Experiences Matter:* Respondents believe that customer expectations and reactions to using solar products are based on their knowledge. Customers are aware there are alternates available in the form of solar energy solutions to solve energy access challenges they face. However, a customer may expect and make demands for output of solar products in their own context that may be unrealistic, realistically. Often customers have a misconception that purchasing and installing a solar plate will support all their electric energy needs. Perceptions of customers and their actions are strongly driven by their education, familiarity with technology and experiences within their own communities.
- *Influence of Community:* Generally, customers access to and use of service is determined by what is familiar and a norm within their community. Most customers become aware of solar through word-of-mouth and experiences of other community members who are already deploying some form of solar energy solutions in their home. This affects the type of products, choice of service-provider, as well as expectations from product and service-providers.
- *Positive vs Negative Experiences:* According to experts, customers are always able to communicate and learn from negative experiences, however, positive experiences are more difficult to identify and communicate.
- *Demand by Access:* Cross-selling and up-selling of solar products is common, on the condition that the customer is engaged enough to become a user of solar products i.e. experience the technology at the very basic level. Most customers lack confidence to try a product that they are not familiar with.
- *Familiarity with Services:* Experts shared that majority customers do not understand the technology at all and have unrealistic expectations from solar systems especially with regards need for energy storage; cabling and distribution of stored energy; and structural support. Once customers become familiar with technology and service, they are able to compare amongst products and service-providers and demand specific value from their product and the services they receive.

Preference and Selection of Products and Service-Providers:

- Decision to become a solar products-user is driven by circumstances and influenced by community experiences
- Choice of service-provider is driven by familiarity – that a particular supplier / installer has provided services to family or community members, takes precedence in selection over another service-provider
- Proximity and local access of a supplier also contributes to preference of choice of service-provider
- Customers are generally unable to make a choice between range of products available as they do not understand the difference (for example) between a standalone SHS or solar home system designed as per their specific requirement
- Once a customer becomes familiar with technology, there is an evolution of choice and customers feel the need to upgrade or make further investments in their solar systems
- Due to limited financial capacity, customers will most often compromise on quality of product to ensure they remain within budgetary constraints
- Very often, customers believe that energy services are something that governments should provide and therefore have little acceptance and trust for private service-providers

Engagement with Products and Service-Providers:

- Lack of awareness is a key barrier to customer acquisition of solar products, however this could be overcome through the right information being communicated by service providers
- The first experience is always important as confidence in product, technology & service is impacted by familiarity
- Confidence / belief in a solar product / system is not developed from just delivery of information or one interaction, rather it is an ongoing process & requires engagement over time
- First time users also require a lot of hand holding & explanation with regards using their products. One expert from Pakistan shared that a new customer in off-grid location was complaining that his installation does not work. Upon site visit, it was discovered that the customer had been instructed to protect the solar panel from dust by the installation team & he had placed a plastic bag over the panel for protection, that affected performance of the solar panel
- Physical access of a service provider is important particularly in giving customer the confidence that someone is available when they require input. How a service provider responds to and handles customers influences preference for service provider of choice
- Customers often face unreliable after sales service & maintenance support, which sets a bad precedence for solar service providers & the industry in general

Experts' Suggested Solutions

In view customer profiles, experts interface with, complimented by general market trends as well as challenges experienced, experts shared recommendations that would enhance customers' experiences, resulting in improved market and better business growth opportunities for solar industries:

1. Service providers should build a customer-centred system within their businesses that revolves around quality service and reliability. A clear framework for customers' and installers' agreement needs to be implemented. Service-providers need to communicate clearly what the energy product is and what it can do from the onset of discussions
2. Education and training is critical to enhance skills of all involved parties
 - a. Training for customers / consumers: Mass awareness campaigns about the benefits of PV and quality verification as well as what service to expect
 - b. Training of suppliers to ensure they provide quality: It is the responsibility of every business owner / service-provider to hire skilled staff and / or ensure that staff capacities are developed to address needs of customers appropriately
3. Prior to making quotations, suppliers / installers should ask customers about:
 - a. Needs and aspirations
 - b. Type of infrastructure in place (existing)
 - c. Location of installation and transportation accessibility
4. Service-providers should design / suggest solutions according to needs of customers - not push what exists in supply or what can be provided within customers' defined budget with need being backed
5. Installers need to be trained to deal with customers' technical queries (those that may be posed at the time of installation or may not be posed at all)
6. Collaboration of industry, academia, government and quality certification bodies to ensure implementation of standards for imports and installations

Tying It All Up

The key premise at the start of this engagement was to explore an alternative scenario to quality concerns and challenges in the solar off-grid market segment – one from the service-providers' perspective that could validate or refute customer concerns. Most of the time customers' concerns are dismissed casually on the pretext of low level of knowledge about solar technology, products and quality. It is not only a product challenge – rather human interaction and engagement is critical as well.

Based on interviews, two specific aspects of customers, especially in the off-grid segment become evident: 1) customers need excessive handholding & 2) they desire consistency in service. Another point that was highlighted by all respondents was that it is critical to talk to customers to educate them about the technology, to enable them to make informed choices in purchase rather than remain fixated on what they can manage within their specified budget. The stress again and again was on communicating with the customer.

In our interactions with off-grid customers, Stimulus discovered that the very first off-grid products in the form of solar lanterns and solar home systems came into Pakistan during early 2000s. There are users of these products who still show committed belief in solar technology despite not ever having any information about quality. Most important for these users was that they acquired these products from reliable sources, particularly suppliers they trust because of the relationship developed by the suppliers with users.

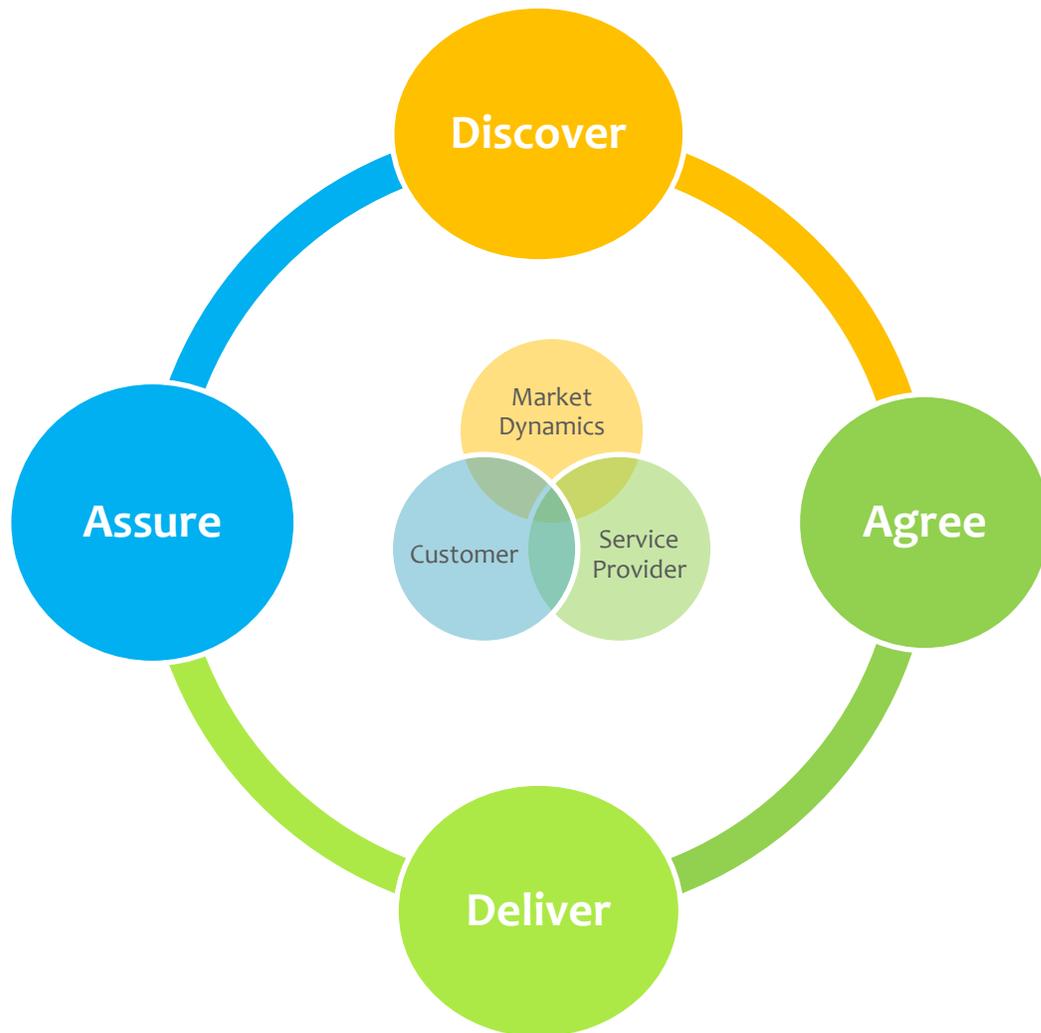
Also, respondents unanimously agreed that the challenge is not so much at the customer end, but rather at the supplier / service provider end. While educating the customer is essential, the attitudes and behaviours of service-providers create experiences for customers that aids in developing market and ensuring that customers become manageable. Respondents were clearly of the opinion that solar industry experts and businesses need to come together to ensure that the supply side is developed technically as well as on good management practices - specifically customer service and creating experiences, that will ultimately lead to sustained customer awareness and growth for solar businesses in long run.

This leads us to believe that the key here is for suppliers to develop relationships with their customers, based on suppliers' product knowledge and technical skills but more so in their interactions and engagement with their customers. In this regard, Stimulus has developed a framework to capture:

1. Contributing factors to user experience: Market Dynamics, Service Provider, Customer
2. Steps of engagement that a service provider needs to take in order to ensure a wow user experience: Discover, Agree, Deliver, Assure

Based on the user experience framework, Stimulus also developed SUNSERVICE: a customer experience workshop for off-grid solar PV experts, to enable them to create experiences that engage customers again and again. The user experience framework and overview of workshop is shared in the following pages.

Stimulus User-Experience Framework



SUN SERVICE – Passion to Serve *A Customer Service Experience for Solar PV Service Providers*

Program Overview

Always putting your customer at the heart of your business creates a service driven culture. The best and most successful businesses clearly understand this fact. **Passion to Serve** will motivate individuals involved in solar PV business to become more customer focused and more passionate about delivering outstanding service by understanding the logical and emotional motivations of a customer to buy or continue using their service.

Participants will learn how to become more flexible communicators and engage better with customers, portray energy, commitment and ownership in each customer interaction. This one day program will energize participants to deliver world class service that leaves customers with a lasting positive impression.

Objectives - This program will enable participants to:

- Identify who their customers really are
- Have a better understanding of customers' needs
- Become more customer focused in their approach
- Handle difficult customers more effectively and confidently
- Become more aware of the link between good customer service and organizational success
- Learn the importance of Attitude, Behavior & Communication in customer care

Who Should Attend

- Individual contributors and front line employees of retail solar business
 - Small business operators working in the solar PV domain
 - Self employed individuals engaged in the business of solar PV
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About Stimulus

Stimulus is an innovative consulting firm working across developed & developing countries with key focus on supporting emerging economies in two core domains: **renewable energy** and **sustainable economic and social development**. Stimulus offers innovative business solutions to its large international network including social enterprises, energy access companies, donors, I/NGOs, multilateral and bilateral agencies, and the public and private sector institutions and organizations.

Our vision is to enhance global socio-economic sustainability by stimulating the business of development. Economic independence; women and gender; children and youth; entrepreneurship; impact evaluation; and sustainability serve as cross cutting themes for Stimulus. With over two decades of diverse consulting intellectual capital, private and public sector expertise, network, experience, credibility and authenticity; Stimulus was established to bring efficacy to existing, evolving and emerging socio-economic and public goods policy, planning, implementation and sustainability.

Stimulus supports social enterprises and energy access companies by offering:

- Strategy planning & implementation
- Training & capacity building
- Market intelligence
- Business model innovation
- Scaling up impact
- Helping towards investment readiness

For further information on how we can work with your organization please contact:

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