THE
SUSTAINABLE ENERGY FOR ALL
CHARRETTES
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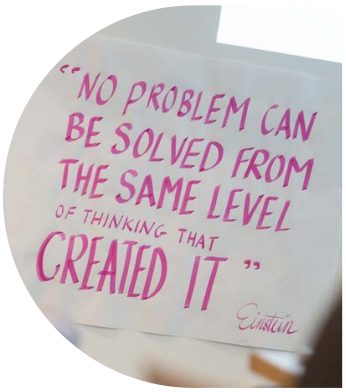
2019 SEforALL CHARRETTES REPORT



#SEforALLcharrettes

We have little more than a decade to achieve Sustainable Development Goal 7 (SDG7) —affordable, reliable, sustainable and modern energy for all. But progress is not moving at the scale and speed needed to make this goal a reality.

Existing approaches to energy access are not working well enough. Governments, businesses and NGOs all recognize and express the importance of bringing energy access to underserved groups, but action lags behind words.

We should not keep doing the same things, expecting different results. Understanding what needs to change and building partnerships to shift approaches to ensure universal access to electricity and clean cooking was the impetus for the Sustainable Energy for All (SEforALL) Charrettes. We created an event where the goal was to spark disruptive solutions. We eschewed keynote speeches and expert panels. Instead, participants were invited based on their ability to contribute new perspectives and a willingness to roll up their sleeves for two days of design-thinking.

We had no planned outcomes. We put our trust in the combined creativity, wisdom and experience of the participants. If potential solutions emerged, we wouldn't know if they would be consequential with a clear path to implementation. We took a risk. And we think it paid off.

As you will read in the coming pages, four charrettes were designed to address specific impediments to SDG7, and for each one, participants generated multiple disruptive solutions.

I am struck by both the depth and breadth of participants' thinking. The diversity within each charrette was clearly an advantage. Participants approached their designated topics from different angles, leading to comprehensive and cohesive solution sets. Nevertheless, each individual solution is rigorous, identifying concrete steps and the stakeholders needed to drive them. You will see several common themes across the solutions. First, we need bottom-up thinking to ensure precise needs are better met and to inform market participants and policy makers. We need to build collaborative platforms that allow different stakeholders to come together and have access to the same body of evidence for decision-making. Such platforms can help us overcome fragmentation in funding, so that markets can grow at speed and scale. We also need to view energy as a public good that provides the means for achieving other development priorities.

I encourage you to review each of the proposed solutions carefully. Executing each of them will require commitments from a much larger group than those who were assembled in Amsterdam for the charrettes. Be inspired by the proposed ideas and consider how your knowledge and resources might contribute to their development. Join in. With your help, we can go further and faster in bringing sustainable energy to all.

Rachel Kyte
Special Representative of the UN Secretary-General and
Chief Executive Officer of Sustainable Energy for All

EXECUTIVE SUMMARY

Over two intensive days in June, Sustainable Energy for All (SEforALL) brought together a diverse group of individuals to generate new ideas to help achieve Sustainable Development Goal 7 (SDG7) to ensure access to affordable, reliable, sustainable and modern energy for all by 2030. In four concurrent charrettes, participants used a design-thinking approach to address specific issues inhibiting the speed and scale needed to achieve access to electricity and to clean cooking. There were three mantras that guided the 2019 SEforALL Charrettes: be disruptive, be experimental and be visionary. This report provides the context for this approach and highlights the solutions presented at the end of the two days.

Each charrette group focused their efforts on one of four areas of inquiry, with the goal of each to generate one or more disruptive solutions and an initial plan for implementation by the end of day two. All four accomplished that, with a range of comprehensive solutions presented.

Clean Cooking Charrette: *What is required to create a sustainable, investable, private sector-led market for fuels for clean cooking?*

This charrette centered on the issue of market viability and the widespread deployment of clean cooking solutions to reach the 2.9 billion people on the planet who currently do not have access. The solutions conceived include:

- Clean Cooking Market Catalyst, which seeks to align donors on a common vision and approach to prove the viability of and scale the clean cooking market.

- Clean Cooking Government Challenge Fund, which would incentivize governments to enable clean cooking by tackling policy and commitment barriers.
- The Next Generation Solutions Data Platform, which would provide an open, accurate and timely data platform to drive the decisions of investors, enterprises and governments to allocate resources and funding to viable and scalable solutions.

Data and Evidence Charrette: *How do we improve the data and evidence on who and where they are, what they need, and what is working and why in order to improve decision-making and speed progress?*

This charrette addressed the issues of how to identify, collect and utilize the right data for both the public and private sectors in order to drive the decision-making to scale up electrification. The solutions conceived include:

- Fulfilling Data Needs, which would focus on data collection that aligns the needs of delivery stakeholders with an informed view of the electricity user.
- Data Collection and Management, which would integrate different data sources into a single platform validated by peer-review and crowdsourcing.
- Disseminating Evidence, which would provide decision-makers with evidence and impact options for the systemic value of universal access to quality electricity.

Bridging the Gap Charrette: *What is required to bridge the gap between supply and demand for appropriate finance for electricity access in those countries with the largest energy access deficits—i.e. the high-impact countries (HICs)—to meet SDG7?*

The charrette explored instruments that could help bridge the gap between supply and demand for electricity access finance. The solutions conceived include:

- DFIs for Universal Energy Access, which would prioritize "development" in development finance institutions (DFIs) through an operational partnership focusing on the electrification target of SDG7.
- Energy Access for 100 Million People, which is envisioned as $1 billion of first-loss capital showcased through an online platform and leveraging additional sources of capital.
- Domestic Finance for Energy Access, proposed as the Renewable Energy Access to Local (REAL) Finance Accelerators, which would mobilize domestic sources of finance for energy entrepreneurs.

Last Mile Charrette: *What changes are necessary within the finance sector (including development finance) to increase risk appetite to fund market-based last-mile electricity access?*

The priority of this charrette was on how to electrify those last-mile communities that won't be reached by business-as-usual approaches due to income, remoteness or social exclusion. The solutions conceived include:

- Last Mile First, which is premised on the notion that access to electricity is a public good and on country commitments to redirect fossil fuel subsidies to a Last Mile Service Fund.
- Leave No School or Clinic Behind, which would provide adequate and reliable electricity to power critical services for public health and education facilities.
- Mini-Grid Finance Platform Association, which seeks to expand the mini-grid financial product offering and close information gaps through improved coordination and knowledge sharing among mini-grid developers.

These proposed solutions will continue to be developed over the coming weeks and months by charrette participants and with support from SEforALL, but a broader network of partners will be needed to move them forward to implementation. This report highlights the opportunities for others to join these efforts and to contribute to achieving sustainable energy for all.

INTRODUCTION

António Luís Guerra Nunes Mexia,
Chair of the SEforALL Administrative Board,
CEO of Energias de Portugal (EDP).

The global community is not on track to achieve Sustainable Development Goal 7 (SDG7) to ensure access to affordable, reliable, sustainable and modern energy for all by 2030—as evidenced by *Tracking SDG7: The Energy Progress Report 2019*. Notably, 840 million people around the world still do not have access to electricity and 2.9 billion lack clean cooking solutions.

Recognizing that you cannot keep doing the same thing and expect different results, Sustainable Energy for All (SEforALL) held a set of charrettes in Amsterdam, Netherlands from 18-20 June 2019 to identify impactful but pragmatic solutions to accelerate progress on SDG7. Designed as intensive and collaborative working sessions, the charrettes brought together diverse groups of participants to look at issues in new ways, to challenge the status quo and generate new ideas in the areas of access to electricity and clean cooking.

This was not a typical conference or workshop. The SEforALL Charrettes were purposefully designed to produce 'disruptive solutions' for issues identified as inhibiting the speed and scale of progress needed to achieve SDG7. Four charrettes took place in parallel, with each group focusing their efforts on one of four areas of inquiry.

CHARRETTES QUESTIONS FOR INQUIRY

Clean Cooking: *What is required to create a sustainable, investable, private sector-led market for fuels for clean cooking?*

Data and Evidence: *While there is progress in securing electricity access, some countries which account for the majority of the 840 million people without access risk being left behind. How do we improve the data and evidence on who and where they are, what they need, and what is working and why in order to improve decision-making and speed progress?*

Bridging the Gap: *What is required to bridge the gap between supply and demand for appropriate finance for electricity access in high-impact countries to meet SDG7?*

Last Mile: *What changes are necessary within the finance sector (including development finance) to increase risk appetite to fund market-based last mile electricity access?*

Careful preparation was a key ingredient for the charrettes. A concept note and detailed background material for each of the four charrettes were provided to participants a few weeks in advance, followed by a video conference to further prepare participants and set expectations for the sessions. This preparation ensured participants arrived in Amsterdam with a shared knowledge base in addition to their own individual expertise, knowledge and perspective.

The intensive two-day sessions followed a design-thinking approach with professional facilitators leading each of the four groups. Each charrette also had a visual facilitator to create in real time graphic representations of the ideas generated. The approach was meant to tease out creativity and collective insights. Participants were forced out of their comfort zone, needing to reconcile diverging views and specializations within their groups for the sake of converging on the most impactful solutions. There were three mantras that guided the charrettes: be disruptive, be experimental and be visionary.

The challenge presented to participants in each charrette was to generate one or two disruptive solutions to their respective questions by the end of day two, along with initial action plans for implementation. While a general structure was common to all four of the charrettes, each followed a unique course during the two days to come up with their solutions.

This report provides highlights of the four charrettes, the context for their design and the solutions presented at the end of the two days. Engagement by charrette participants is expected to continue to take these solutions forward over the coming weeks and months, but support from a broader network of partners will be needed. Crucially, this report provides a view to those who were not in attendance in Amsterdam of the range of opportunities available to help implement these 'disruptive solutions' that will help bring sustainable energy to all.

The charrettes took place at the Eye Filmmuseum in Amsterdam. They were conducted under Chatham House Rule.

LAST MILE CHARRETTE

QUESTION FOR INQUIRY

What changes are necessary within the finance sector (including development finance) to increase risk appetite to fund market-based last-mile electricity access?

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THE ISSUE

While progress has been made in recent years to increase access to electricity, it is nowhere near the speed and scale required for meeting the SDG7 target of universal access by 2030. This demands a rethink of current electrification models, especially for last-mile communities in developing countries. "Last mile" in this context is taken to encompass not only those living a long distance from the central electricity grid but also those who are unserved and who won't be reached by business-as-usual approaches due to income, remoteness or social exclusion.

The traditional "generation–transmission–distribution" model applied in developing countries, largely driven by public sector investment from DFIs, has demonstrated mixed success in closing electricity access deficits. Providing further grid connections to people in remote locations is, at best, expensive and time consuming, and oftentimes near impossible due to geographic barriers. Off-grid solutions—defined to include all decentralized solutions from small appliances powered by renewable energy through to mini-grids—have the potential to deliver electricity access to the last mile more quickly and at lower cost.

Off-grid solutions will play a pivotal part in delivering SDG7 by 2030. *Energizing Finance: Understanding the Landscape 2018* reveals that while finance commitments for off-grid solutions almost doubled between 2013-14 and 2015-16, increasing from $210 million to $380 million annually, the investment still represents a mere 1.3 percent of the total tracked commitments to electricity access. Achieving scale in the off-grid solutions sector will require financial institutions collectively to provide access to appropriate, affordable finance to both off-grid energy consumers and enterprises.

Those living in off-grid communities typically have low and vulnerable income, which means they have limited, if any, access to finance with which to purchase or lease off-grid solutions. Their irregular incomes often limit them to seeking finance from microfinance institutions, rural credit operators and informal credit sources.

Meanwhile, off-grid entrepreneurs face financing challenges typical of small to medium enterprises (SME) operating high-volume, low-margin businesses in developing markets. These businesses tend to demonstrate high upfront capital requirements for asset/inventory purchases, no or limited access to well-priced local currency finance, logistical challenges in reaching last-mile consumers and inconsistent cash flows. As a result, off-grid entrepreneurs with limited capitalization face genuine challenges in demonstrating the sound financial and operating histories required to secure commercial finance, especially the working capital facilities necessary to support their growth.

These issues carry actual and perceived risks that inhibit financial flows in support of off-grid solutions deployment in last-mile communities. This charrette focused participants on what is needed to change the risk appetite of financial institutions whose commitments and resources are essential to unleashing the true potential of off-grid solutions. This included probing themes such as how to better understand last-mile consumer needs, improving the economics of off-grid solutions, addressing affordability constraints, data required to inform financiers' investment evaluation and capacity building within local financial institutions, among others.

DISRUPTIVE SOLUTIONS

This charrette focused on the supply-side of energy access finance, with the goal that:

- Within three years, implementing changes that would shift the risk appetite of financiers to unleash significant investment in electrification for last-mile communities.

DISRUPTIVE SOLUTION 1
LAST MILE FIRST

Context: Last Mile First is premised on the notion that access to electricity is a public good that enables sound socioeconomic development outcomes. It recognizes that developed countries have benefited enormously from successive governments prioritizing electricity service delivery to their citizens via public funding, and that it is therefore inequitable to expect developing countries to adopt purely market driven solutions at this stage in their growth cycles.

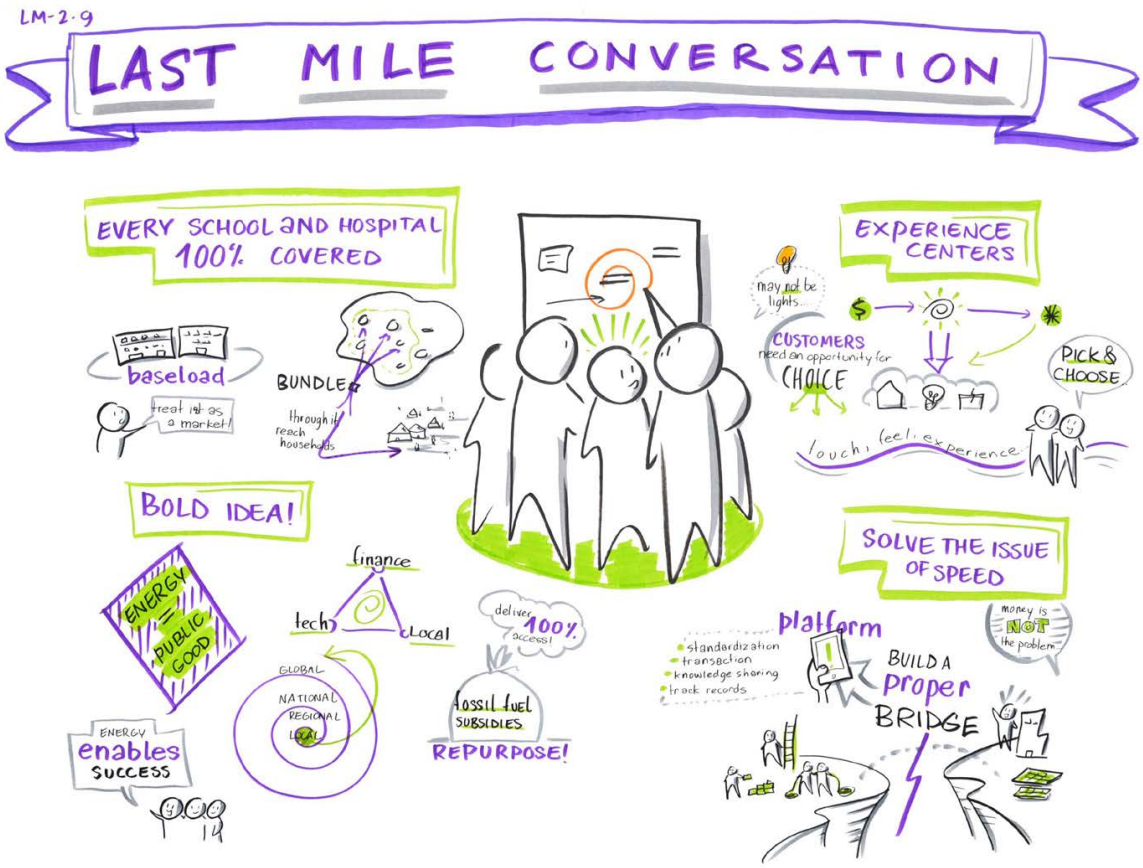
Solution Concept: The concept prioritizes a bottom-up electricity user needs assessment to inform action at local, regional, national and global levels, initially in one pilot country or region. It envisages collaboration between local stakeholders and providers of appropriate finance and technical solutions, respectively. Access to electricity for last-mile consumers would be priced according to a sliding scale based on ability to pay, with access to the poorest consumers most heavily subsidized. No new funding is envisaged to deliver on the concept; rather it is premised on a country's commitment to repurpose existing funds, notably the redirection of fossil fuel subsidies, in order to capitalize a Last Mile Service Fund.

DISRUPTIVE SOLUTION 2

LEAVE NO SCHOOL OR CLINIC BEHIND

Context: Health clinics and schools provide essential public services. Clinics require regular, reliable electricity supply to provide vital health services to ensure the well-being of people in remote areas. Among other benefits, electricity in classrooms allows for lighting that can extend the school day and provide access to technology and information. By providing the core electricity infrastructure to meet the needs of these facilities, follow-on connections to last-mile communities could occur.

Solution Concept: The solution identified is to provide adequate and reliable electricity to power critical services for public health and education facilities. Each of these sectors will be treated as a market to which bundled electricity services would be provided as an initial conduit to reach individual last-mile consumers and achieve universal electrification at an individual country level. Proposed activities to advance the concept are centered on: government engagement to identify one country to act as a first pilot location; recruitment of private sector investors and energy service providers; donor engagement to support the overall project development; and a robust monitoring and evaluation framework.



DISRUPTIVE SOLUTION 3

MINI GRID FINANCE PLATFORM ASSOCIATION

Context: Mini-grids are projected to contribute substantially to closing the electricity access gap by 2030. However, the sector is fragmented and marked by a lack of data and knowledge sharing among market participants. This in turn results in high transaction costs and replication of process in each new project development and financing.

Solution Concept: The Mini-Grid Finance Platform Association will seek to expand the mini-grid financial product offering and close information gaps through improved coordination and knowledge sharing among mini-grid developers. This approach recognizes the mini-grid sector's relative fragmentation and lack of consolidated market data and that information sharing is more valuable to the sector than individual actors developing transaction documentation and processes in isolation. The overall objective is to enable a faster flow of funding to the mini-grid sector globally.

NEXT STEPS

Recognizing the solution's broad scope of ambition, in the short term, Last Mile First proponents aim to have developed a concept note that sharpens the solution's focus and defines roles for consortium members. They will leverage their common attendance at relevant convenings prior to the SEforALL Forum in May 2020 to discuss and advance the solution. SEforALL will support these discussions by hosting side meetings at the convenings on request and by remaining involved in solution development. The proponents' longer term objective is to have identified and costed consumer needs in a select number of pilot countries/regions; successfully advocated to governments for the repurposing of existing subsidies to fund concept implementation; and be tracking several governments referring to electricity as a public good and resourcing it accordingly.

Proponents of Leave No School or Clinic Behind are developing a concept note that sets out proposed activities in more detail. Short-term efforts center on government engagement to identify one country to act as a 'green light' champion for the concept, taking the lead on recruitment of private sector investors and donor engagement to support project development and implementation. SEforALL will support the consortium by supporting government engagement and fundraising efforts as necessary, and through sharing its existing, considerable body of work on Powering Health Care and its related network.

By 2020, proponents of the Mini-Grid Finance Platform Association aim to have in place a funded association with global reach. Their ambition is that data shared between association members, and the new networks created under the association's auspices, will demonstrably facilitate and streamline mini-grid transactions. The Mini-Grids Partnership, for which SEforALL co-hosts the Secretariat, can act as a key resource for the consortium developing the association, including by connecting consortium members with funders of mini-grids via a working group.

CONCLUSION

This report reflects the initial iterations of the proposed solutions developed over the two days of the 2019 SEforALL Charrettes. This event was simply the starting point. These disruptive solutions are already evolving and will continue to evolve further in the coming weeks and months. To move forward to implementation, they will require a larger network of support, additional resources and unwavering focus and persistence.

SEforALL is committed to supporting the development of these solutions and working to ensure the individuals and organizations taking them forward have the knowledge and networks they require. We invite the broader sustainable energy for all movement to consider how you can contribute and support this work.

To learn more about the solutions and how to get involved, please contact:

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