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#4 Inclusion in market access



Piloting a Roadmap for Disability-Inclusive Last Mile Clean Energy Distribution

A case study prepared under the Disability Support Service (DSS) for the Transforming Energy Access (TEA) platform.

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Case Study Summary

‘Piloting a Roadmap for Disability-Inclusive Last Mile Clean Energy Distribution’ presents a series of interventions aimed at developing a scalable pathway for Ajat Agro-Allied Limited, Nigeria (hereafter referred to as ‘Ajat Solar Systems’) — a for-profit last mile distributor of solar solutions — to improve access to solar energy for people with disabilities. Ajat Solar Systems is a member of the Global Distributors Collective (GDC), a TEA-funded network of over 300 last mile distributors promoting products such as solar lights, clean cookstoves, and water filters across 60+ countries. Guided by an action plan co-developed with the DSS, during this project Ajat Solar Solutions tested a range of ideas, including installing solar solutions at the premises of a disability organisation, partnering with DOT Glasses, an assistive technology enterprise, and creating an easy-to-understand product user manual. Through this work, GDI Hub has also prepared two adaptable tools for last mile clean energy distributors: 1) a guidance note, ‘Collaborating with Organisations of Persons with Disabilities (OPDs)’, and 2) a ‘Disability-Responsive Post-Installation Impact Assessment (IA) Tool for Clean Energy Systems’. This collaboration has enabled Ajat Solar Systems to explore new avenues for business growth and social impact.

Featuring:



Disability Support Service (DSS)

Transforming Energy Access (TEA) platform, supported through UK aid from the UK government and led by the Carbon Trust, developed the Disability Support Service (DSS) in partnership with the Global Disability Innovation Hub (GDI Hub) to co-design and deliver disability-inclusive, accessible, and affordable clean energy solutions for equal socio-economic participation of persons with disabilities. DSS is a cross-platform delivery service that offers training, innovation support, and technical assistance (TA), and produces practical knowledge outputs for the TEA network by blending expertise in disability inclusion, innovation, assistive and accessible technology (AAT), and inclusive design. The DSS seeks to maximise access and impact for persons with disabilities by sharing knowledge and alignment between the TEA platform and GDI Hub’s flagship AT2030 programme, also funded by UK aid.

Key Lessons Learned

1. **A targeted disability inclusion approach** could be both a social impact strategy and a market opportunity for last mile clean energy distributors.
2. **Engaging organisations of persons with disabilities (OPDs) early** in project design improves understanding of their real energy access needs and the accessibility barriers to adopting clean energy systems and products at the last mile.
3. **Building proactive partnerships with disability innovators** could help bundle clean energy products with assistive devices and reach underserved communities directly and more efficiently.
4. Inclusive last mile distribution requires **iteratively testing a combination of tools**, including an accessible marketing and information kit, an inclusive impact measurement framework, and community-based business models.

Challenge

Ajat Solar Systems aims to expand clean energy access, promote environmental sustainability, and support long-term economic development across Nigeria. As part of this mission, they are committed to working to advance energy equity for people with disabilities by offering accessible, affordable, and sustainable solar products.

Organisations and households of people with disabilities in the region commonly rely on charity-based financial models for energy access due to systemic social barriers to economic participation. It is **difficult** for Ajat Solar Systems or any profit-driven last mile distributor **to reach people with disabilities, who are more likely to experience poverty and have limited capacity to afford energy solutions at market rates.**

Ajat Solar Systems, being a micro-enterprise, faces multiple internal challenges: **limited team capacity and technical expertise** related to disability inclusion; **limited funding** to develop specialised accessibility features in products and services; and difficulty in identifying and recruiting qualified people with disabilities for technical roles within the solar value chain.

“

One of the biggest challenges in reaching people with disabilities is limited awareness of clean energy solutions within disability communities combined with affordability constraints.”

Azeez Jelili, Ajat Solar Systems

“

We have begun with 100 glasses, with strong potential to scale further. Through this partnership [with Ajat Solar Systems], integrating the delivery of eyecare and energy, we aim not only to create a meaningful impact in the lives of people with disabilities but also to drive sustainable growth across our businesses.”

Michael Omondi, Head of Finance and Operations, DOT Glasses

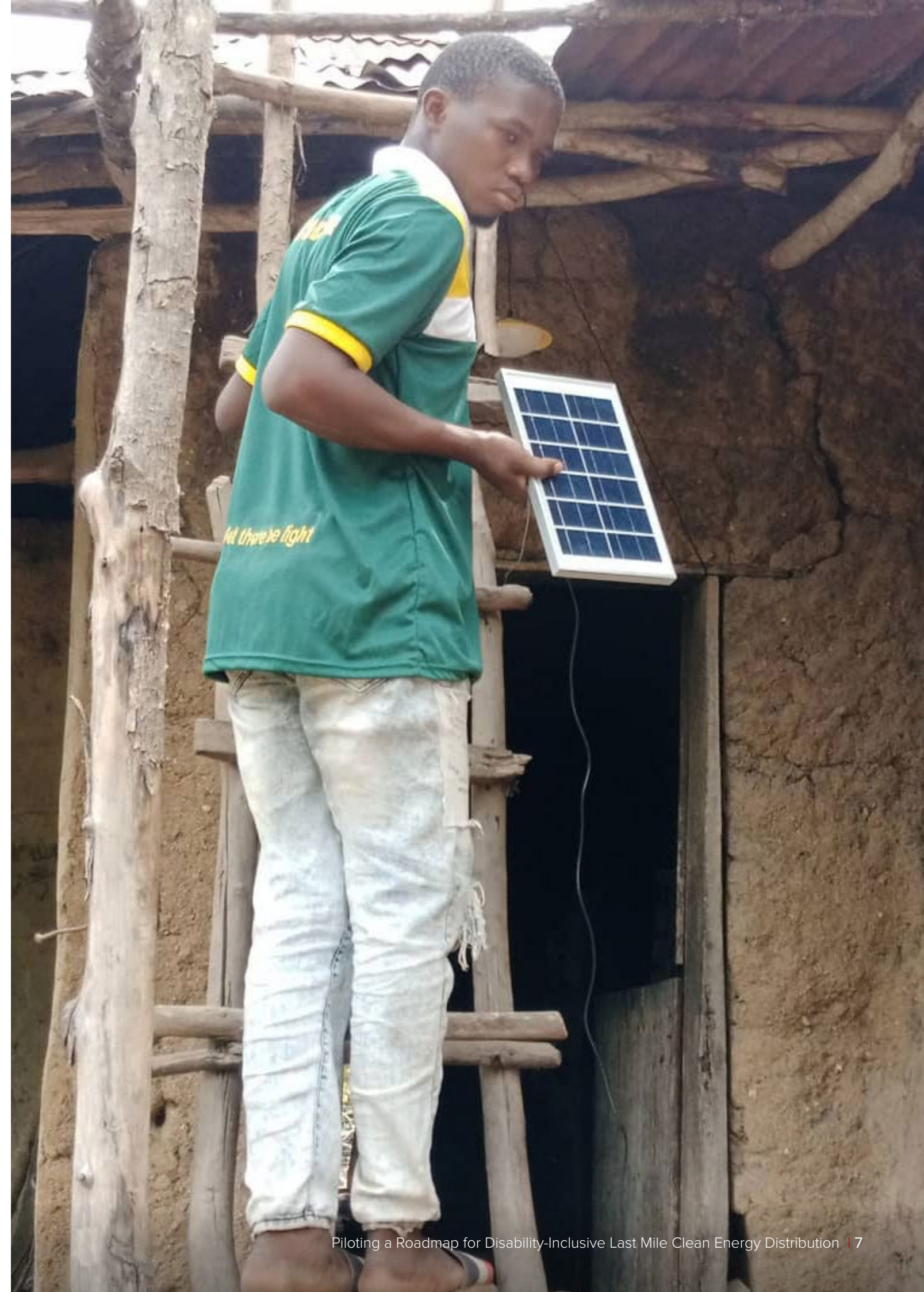
Approach

Noting the external and internal barriers Ajat Solar Systems faces, DSS Technical Assistance (TA) set out three key ambitions for the collaboration:

- **Maximise reach to and impact for people with disabilities**
- **Diversify funding and financing models**
- **Increase demand for solar energy solutions among people with disabilities**

Led by these goals, GDI Hub and Ajat Solar Systems co-developed **a long-term action plan with priority interventions** identified for the pilot phase. The learnings from these early measures were intended to inform Ajat Solar Systems' future strategy for disability inclusion and provide practical guidance to other last mile distributors in the Global Distributors Collective (GDC). This will enable them to reach people with disabilities and their representative organisations as equal customers.

Source: Ajat Solar Systems.



Intervention

Here is an overview of DSS activities jointly led by GDI Hub and Ajat Solar Systems:

01

Maximising reach to and impact for people with disabilities

GDI Hub provided a **guidance note, 'Collaborating with Organisations of Persons with Disabilities (OPDs)'** for Ajat Solar Systems to locate and engage with local disability organisations.

Ajat Solar Systems **identified** 'Network for Inclusion of People with Special Needs (NIPSN)', a **local disability organisation**, as having potential to benefit from solar energy products; ran multiple in-person consultations; mapped their energy needs, barriers and opportunities for provisioning; and prepared a project brief.

Following a thorough needs assessment, Ajat Solar Systems secured interest from NIPSN and **installed solar solutions** to support their education and shelter facilities, with a 1000W locally fabricated solar generator and lighting kits.

GDI Hub developed a '**Disability-Responsive Post-Installation Impact Assessment (IA) Tool for Clean Energy Systems**', covering parameters on everyday lives and livelihoods of consumers with disabilities. Ajat Solar Systems piloted this at the NIPSN project.

02

Diversifying funding and financing models

Ajat Solar Systems **self-funded** the solar solutions installed at the Network for Inclusion of People with Special Needs (NIPSN). However, they are engaging with NIPSN's management team to explore the feasibility of operationalising an '**energy-as-a-service model**'. Under such a scenario, NIPSN would function as a community solar hub for households living around the facility to charge essential devices and share amenities at a cost. This would allow NIPSN to generate income and pay back the costs incurred by Ajat Solar Systems for procuring and installing solar solutions.

Through the Disability-Inclusive Energy Access Innovation Network led by GDI Hub for the TEA platform, Ajat Solar Systems has also established a partnership with DOT Glasses, a social enterprise for eye care. This partnership is **bundling affordable solar solutions and eyeglasses as an integrated, cost-efficient last mile distribution pathway for access to clean energy and assistive technology**. Such a unique offering could expand the reach of both essential products.

Drawing from these experiences, Ajat Solar Systems has **prepared a pitch proposal to secure dedicated funding** for disability-inclusive clean energy distribution programming in the future. The targets set out include:

- **Scale pilot projects:** Expand installations from 1 to 25 organisations of persons with disabilities (OPDs) and disability organisations.
- **Assistive technology integration:** Co-develop solar-powered devices for people with disabilities. For example, a solar-powered charging module for electric wheelchair users.

03

Increasing demand for clean energy solutions among people with disabilities

GDI Hub ran a training and supported Ajat Solar Systems in **developing an easy-to-understand user manual**, in English, specifically aimed at people with disabilities, for the solar lighting kits and generator. This will help build awareness among future customers.

Impact

Ajat Solar Systems is leading the way by testing and learning ‘what works’ for disability-inclusive last mile delivery of clean energy. The engagement through DSS has enabled considerable progress:

- Ajat Solar Systems now has **enhanced capacity and confidence** to conceptualise relevant disability inclusion actions within the scope of their work and secure targeted funding, guided by three tools: a guidance note for collaborating with OPDs, an impact assessment framework, and a user manual.
- Ajat Solar Systems’ pilot intervention at the Network for Inclusion of People with Special Needs (NIPSN) serves as **a live demonstration to understand the feasibility of the ‘energy-as-a-service’ financing model.**
- An innovative partnership with DOT Glasses, an assistive technology enterprise, has created **a new avenue for Ajat Solar Systems to grow their business and maximise impact.**

At this early stage the piloted ideas and activities have established Ajat Solar Systems’ commitment to disability inclusion and have prepared them for expanding the reach and scope of engagement.



Source: Ajat Solar Systems.

Way forward

Ajat Solar Systems has recognised organisations and households of persons with disabilities as a significant unreached market for clean energy products in Nigeria. Further, they have realised the need for direct and targeted collaboration with OPDs, as people with disabilities are often the hardest-to-reach, owing to systemic social barriers and stigma. To strengthen distributors’ ability to serve this market under commercial conditions and accelerate action, a nation- or region-wide market landscaping review, inclusive business models testing at scale, and embedding comprehensive product accessibility are crucial. While such actions may require targeted funding and capacity deployment, here are some specific measures to consider through the Global Distributors Collective (GDC) in the short-term:

1. **A knowledge-sharing session** on disability-inclusive clean energy delivery for the members of the Global Distributors Collective.
2. **Monitoring the impact** of solar products installed at the Network for Inclusion of People with Special Needs (NIPSN) both from the lens of financial model feasibility and community usability for scaling.
3. **Accessible outreach and communication training** for last mile clean energy distributors to engage with people with disabilities and their representative organisations.
4. **Scoping synergies for efficient and inclusive last mile delivery** in partnership with disability innovators and assistive technology enterprises.
5. **Exploring means to offer accessibility adaptations** to clean energy products and services through last mile distributors.

Accessible clean energy products are only a starting point; in order to enable inclusive impact, targeted measures are required to reach people with disabilities through last mile distributors, as households of people with disabilities are more likely to experience poverty and are unlikely to be early adopters of clean energy solutions.

Note

GDI Hub extends sincere gratitude to Azeez Jelili, Chief Executive Officer, Ajat Agro-Allied Limited, Nigeria, and his team for their commitment and initiative to reach organisations of persons with disabilities (OPDs). We acknowledge the contribution of Jessica Utichi, Global Distributors Collective, in shaping the engagement with Ajat Solar Systems through DSS – TA. We also appreciate the collaboration of the DOT Glasses team in testing a bundled last mile distribution pathway.

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