EFFICIENCY FOR ACCESS

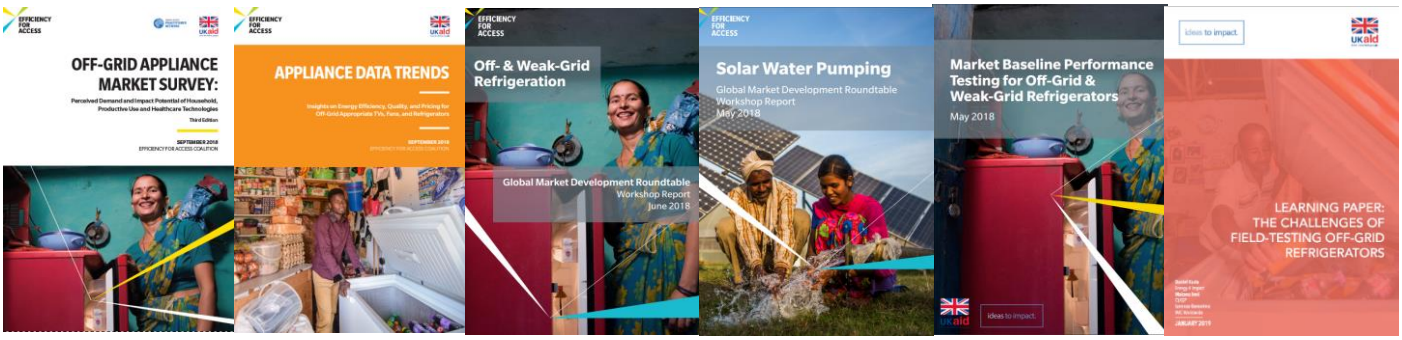
RESEARCH SNAPSHOT

UKaid from the British people

OVERVIEW

Efficiency for Access is a global coalition working to promote high performing appliances that enable access to clean energy for the world's poorest people. It is a catalyst for change, accelerating the growth of off-grid appliance markets to boost incomes, reduce carbon emissions, improve quality of life and support sustainable development.

As a member of the coalition, UK Aid is funding the Low Energy Inclusive Appliances (LEIA) Programme, a research and innovation programme that seeks to double the efficiency and half the cost of a range of electrical appliances suited for off- and weak-grid household, small business, and industrial consumers. A component of the LEIA programme is research and technology roadmapping that serves to address gaps in market intelligence that characterise the off-grid appliance market and customers, and measure the socioeconomic impacts of these appliances.



Market Research

Accumulate and analyse existing and new knowledge on LEIA appliances to characterize and quantify new opportunities, trends, priorities, and threats.

Impact Research

Research that measures and quantifies the effects (e.g. socioeconomic, inclusivity, gender mainstreaming) of appliances on primary users and other downstream beneficiaries.

Consumer Research

Projects that gather data to characterize LEIA appliance users such as purchasing power, willingness to pay, and their perception of various technologies.

Technology Research

Projects and pilots that give LEIA actionable data and information on energy and other performance metrics of near-term and horizon technologies

RECENT AND UPCOMING MARKET INTELLIGENCE & RESEARCH

Recently Published

- **State of the Off-Grid Market (SOGAM):** This report Analyzes major market trends for off- and weak-grid appropriate televisions, fans, and refrigerators across eight representative markets in South Asia and sub-Saharan Africa.
- **Solar Water Pump Outlook 2019: Global Trends and Market Opportunities:** This report sizes the addressable solar water pump market in sub-Saharan Africa and South Asia and identifies solutions to current barriers.
- **Solar Milling: Exploring Market Requirements to Close the Commercial Viability Gap:** This report explores market requirements to understand and close the commercial viability gap between solar milling and conventional milling technologies
- **Use and Impacts of Solar TVs:** This analysis provides valuable insights into the challenges and opportunities for the solar TV market in East Africa, through the eyes of consumers.
- **Global Off-Grid Solar Market Report:** This biannual market intelligence series on sales and impact of off-grid solar lighting products, sold by GOGLA and Lighting Global affiliates.

Upcoming Publications

- **Longitudinal Impact Study:** 3 year-long longitudinal study to track the impact of Global LEAP RBF financed off-grid appliances (fridges, TVs, Solar Water Pumps) on consumer's behavior, social and economic wellbeing.
- **Off- and Weak-grid Appliance Impact Assessment Framework:** Developing an impact assessment framework for off-and weak grid appropriate appliances.
- **Appliance Field Testing:** Conducting appliance field testing to understand how appliances perform in their intended environment and how consumers experience and interact with these products during their day to day use.
- **Energy Efficient Agricultural Machinery in India:** Supporting research, innovation, and deployment of energy-efficient off-grid appropriate agricultural technologies for smallholder farmers in India.
- **Use Cases & Cost Breakdowns of Off-Grid Refrigeration Systems (OGReS):** This report examines factors affecting the economic viability and affordability of refrigeration systems in off-grid settings of low- and middle-income countries.

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TECHNICAL WORKING GROUPS & TECHNOLOGY ROADMAPS

LEIA's research component includes engagement with key industry players through product and technology specific technical working groups. These TWGs provide a platform for industry and other stakeholders to co-develop technology roadmap and provide technology specific steer to our research portfolio.

The road maps identified market and product needs and considered how different technologies, R&D investments, or other activities might improve the product or service to accelerate commercial uptake through performance and quality improvements, and cost reductions.

- **Off-Grid Refrigeration Technology Roadmap:** This technology roadmap identifies a series of technology improvements that would enhance the efficiency and performance of off-grid refrigerators (fridges and freezers).
- **Solar Water Pump Technology Roadmap:** This technology roadmap identified a series of technological improvements for remote monitoring systems and brushless DC motors that, if adopted, could improve the efficiency and performance of solar water pumps.
- **Compatibility and Interoperability Technology Roadmap:** This technology roadmap outlines an important first step in defining the requirements for a mature off-grid industry. It highlights the need for industry working groups, defines the focus, and needs for future research and development.

Recent technology specific workshops & roundtable meetings:

- **Sub-Saharan Africa Modern Electric Cooking Services Roundtable Workshop:** The Modern Energy Cooking Services Technical Roundtable convened a range of industry and clean cooking stakeholders in Nairobi, Kenya to explore the potential market for clean cooking in sub-Saharan Africa.
- **Off- and Weak-Grid Appliance Market Intelligence and Research Roundtable:** This roundtable convened a range of industry and ecosystem stakeholders to discuss the challenges and opportunities facing the off-grid appliance market, and to help guide the LEIA program's research agenda and programmatic priorities.

Collaborate with us to change the way the world accesses energy-dependent technologies

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