



Powering Innovation

Joe Attwood | March 2019



About the Moving Energy Initiative

The Moving Energy Initiative (MEI) is working to achieve access to clean, affordable and reliable energy among displaced populations by:

- **Working with humanitarian agencies and donors** to change policies and practices based on evidence from practical projects;
- **Working with the private sector** to design and implement innovative market-based solutions;
- **Improving the evidence base** through original research and the demonstration of new approaches tried and tested in camps and host communities; and
- **Cooperating with host governments and national NGOs** to improve energy security among both local and refugee communities.

The MEI is a collaboration between Energy 4 Impact, Chatham House, Practical Action, the Norwegian Refugee Council (NRC), the Office of the United Nations High Commissioner for Refugees (UNHCR) and the UK Department for International Development (DFID).



Preface

Findings from Phase I of the MEI in 2015, published in the Chatham House research paper *Heat, Light and Power for Refugees: Saving Lives, Reducing Costs*,¹ highlight the negative impacts of limited sustainable energy provision on the security of displaced populations. The paper also identified some of the challenges for energy programmes in this sector, such as the lack of robust data on energy access and the priorities of refugee populations.

In Phase II of the MEI, Practical Action led detailed research into the energy needs of refugees in Burkina Faso and Kenya. Chatham House analysed data on global refugee energy use in displacement contexts and produced an interactive map. Energy 4 Impact explored sustainable funding options, private-sector contract models and non-wood cooking concessions. The market development and low-carbon energy initiatives in Burkina Faso, Jordan and Kenya were managed by Practical Action and Energy 4 Impact, with the support of local partners. Partners represented the MEI at multiple conferences and events to share findings and advocate for the inclusion of displaced people in the sustainable energy agenda.

This 'learning brief' explains the need for innovation, it defines the different types of innovation in the humanitarian sector and presents the lessons from innovative approaches tested by the MEI using case study examples from Phase II projects.

Summary

- Innovation is needed in displacement settings to improve systems of funding, procurement, installation, operation and maintenance.
- The MEI and other stakeholders have observed that conventional humanitarian funding cycles can limit innovation.
- The MEI focused on finding innovative alternatives to replace short-term, costly, polluting energy provision with cheaper, equitable and low-carbon systems. This includes the application of established technologies and development approaches in displacement settings, as well as the identification of new technologies.
- Inflexibility is hindering genuine innovation in conventional project planning, procurement processes and even in the mindset of stakeholders. An element of reactivity in plans is vital for the development of innovation.
- The humanitarian community lacks standardized mechanisms to monitor innovation. The work of the MEI along with others, such as the Humanitarian Innovation Fund (HIF), may provide a solid basis for advancing the conversation around innovation in order to develop benchmarks for the sector.
- Successful innovation has the potential to boost consolidated learning and evidence; improve solutions for humanitarian action and operational efficiency; broaden adoption; and empower those directly affected by the initiatives through active engagement and collective problem-solving.

Introduction

Phase I of the MEI established that innovation is required to find new and better ways to tackle persistent problems in energy delivery in displacement settings, the findings were described in the publication *Heat, Light and Power for Refugees: Saving Lives, Reducing Costs*.¹ Specifically, innovation is crucial in finding new approaches to speed up delivery, improve financing, and broaden the reach of aid to the most vulnerable displaced people and those affected by displacement. Phase I identified the potential for innovative applications of low-carbon technologies to provide energy services for refugees and host communities, and new opportunities for procurement and partnerships with the private sector to achieve this.

The MEI has drawn on definitions of innovation from the Department for International Development (DFID) and its Humanitarian Innovation and Evidence Programme (HIEP), which can be summarized as:

New products, processes and modes of engagement to improve the reach of aid to displaced people and those affected by displacement.

The MEI programme is breaking new ground in the humanitarian sphere. At present, energy does not fall into the delivery models managed by the humanitarian sector. This may be because energy is not viewed as an urgent concern, or it may be due to the perception that energy is the responsibility of the development sector. A significant re-focusing is required to re-dress this imbalance. This means changing the status quo, brought about by innovation across the 4 Ps – product, process, position and paradigm (see Box 1).²

Despite the complexity of the MEI approach, its delivered solutions and programme components can usefully be categorized into the 4 Ps. The technological solutions described in this paper are not new, but their modes of application in displacement settings are innovative. This reflects the need, in displacement settings, for innovation in systems of funding, procurement, installation, operation and maintenance rather than in technological capacity. Innovation is needed to replace short-term, costly, polluting energy provision with inexpensive, equitable and low-carbon systems. Thus, for the MEI, innovation also encompasses the first or novel application of established technologies and development approaches in displacement settings.

¹ Lahn, G. and Grafham, O. (2015), *Heat, Light and Power for Refugees: Saving Lives, Reducing Costs*, Chatham House Report, London, Royal Institute of International Affairs, <https://mei.chathamhouse.org/heat-light-and-power-refugees-saving-lives-reducing-costs-summary-page>

² Obrecht, A. and Warner, A.T. (2016), *More than just luck: Innovation in humanitarian action*, HIF/ALNAP Study, London: ALNAP/ODI, <https://www.elrha.org/wp-content/uploads/2017/03/hif-alnap-more-than-just-luck-2016.pdf> (accessed 19 Mar. 2019).

Box 1: The 4 Ps of innovation

Product innovation – changes in the products or services an organization offers.

Process innovation – changes in the ways products and services are created or delivered.

Position innovation – changes in the context in which the products or services are framed and communicated.

Paradigm innovation – changes in the underlying mental models that shape what an organization does.

The MEI is an evidence-based research project designed to test solutions against a specified problem: how to increase access to energy for displaced populations and those that accommodate them? The MEI approach did not focus on identifying innovation as an output but aimed to leverage it as an activity to drive process, application and delivery solutions. Looking at the three perspectives of the humanitarian system and the organizations and individuals within it, the MEI has sought to test solutions to improve energy access that include the private sector and challenge the conventional aid-delivery model.

This new approach lays the foundations for innovation to be embedded in MEI engagement, testing and reporting in Jordan, Kenya and Burkina Faso. Innovation is a central part of the MEI logical framework. The aim is to ensure that at the development stage programmes adopt innovative approaches in identifying solutions rather than traditional or conventional humanitarian strategies.

The MEI allowed the development of a more objective analytical narrative by consistently applying terminology developed by researchers and practitioners in the field of innovation. As such, in its approach the MEI utilized a specific Humanitarian Innovation Fund (HIF) study,³ which is an assessment of those funded by the HIF under its innovation programme.

This paper draws on the experiences of the MEI team in formulating, developing and delivering an innovative approach, which is supported with evidence and case studies, to show how innovation has strengthened and has become embedded in the MEI project.

While the definitions of process and success offered by the HIF have limited relevance to the MEI, they are a useful benchmark against which to track MEI progress. Given that the humanitarian community lacks standardized mechanisms to monitor innovation, the work of the MEI and the HIF may provide a solid basis for advancing this debate in order to develop innovation benchmarks for the sector.

The HIF has developed an innovation process, based on its experience and research (see Box 2). It details five logical steps of programme management that reflect the enhanced scope that is expected from innovation, which is the diffusion or uptake of the approach by the greater humanitarian community.

³ Obrecht and Warner (2016), *More than just luck: Innovation in humanitarian action*.

Box 2: Five stages of the HIF innovation process

1. Recognition – what is the problem or opportunity for humanitarian activities?
2. Ideation – what is the potential improvement for humanitarian action?
3. Development – how can the approach work?
4. Implementation – does the approach work?
5. Diffusion – how can wider ownership for this improvement be achieved?

Source: Obrecht and Warner (2016), *More than just luck: Innovation in humanitarian action*.

Successful Innovation

The HIF study suggested three main criteria for successful innovation:

- An increase in consolidated learning and evidence;
- Improved and effective solutions for humanitarian action; and
- The potential for wider application of the approach.

In addition, other relevant suggested criteria include efficiency and a unique impact. The HIF has also defined a series of factors that can help innovative approaches to energy challenges achieve one or more of the success criteria detailed above:

- Collaborating with others;
- The discipline to work within the constraints of a time-bound project/programme;
- The integration of evidence of successful innovation activities to support the other parts of the process;
- Engagement with end users and gatekeepers;
- Financial resources;
- Risk management and accountability; and
- A culture of innovation.

The MEI and Innovation

Paradigm innovation

Energy access for displaced people is not currently a priority within the humanitarian system, but there is increased interest and commitment to this issue from humanitarian organizations, such as the WHO through its Global Plan of Action. However, the use of renewable energy by those supporting displaced populations is limited and ineffective. Humanitarian agencies are heavily dependent on decentralized diesel systems for electricity, cooling and heating. The benefits of changing the energy systems are clear and the solutions easily accessible – there is a thriving local private sector providing sustainable energy solutions – and yet the desire for change is muted.

The MEI was created to understand and then address the challenges of improving energy access faced by those working within the humanitarian system and those receiving support from it, including refugees themselves. The following eight MEI workstreams were implemented from 2016 to 2018:

1. **Research and dissemination** to raise the profile of energy access and management for displaced people and build the case for change within the humanitarian sector.
2. **Energy management and development** through the creation of tools to equip policymakers and managers with the frameworks and information necessary to manage energy effectively.
3. **Fund development and technical assistance** to explore funding options to increase appropriate and sustainable investment in energy interventions in humanitarian settings through a dedicated financing facility or otherwise.
4. **Site-specific integrated plans** analysed available energy resources and baseline data of energy use across the three sites in Burkina Faso, Jordan and Kenya to create models for achieving access, efficiency and carbon targets at focus sites.
5. **Infrastructure-management contract** identified the best options for energy provision in camp settings and explored management contract models.
6. **Low-carbon energy projects** in the camps were implemented to demonstrate and provide evidence of possible low-carbon options.
7. **Energy market development** activities to test and stimulate local energy markets for low-carbon solutions.
8. **Large-scale non-wood fuel prize** worked with the private sector to create a viable market opportunity for deployment at scale of a non-wood-based cooking solution.

Box 3: Creating a sustainable funding facility

New ways of delivering finance are needed to increase energy access in displacement contexts. The traditional provision of humanitarian aid – with one or two-year funding cycles and output-focused delivery models – is not fit for the purposes of delivering long-term sustainable change. Sourcing finance from outside of the traditional donor/humanitarian landscape is key to boosting funding and creating new financial instruments that can leverage private sector expertise to deliver solutions more effectively.

Under workstream 3, the MEI objective was to design, test and scale-up new financing mechanisms that could be tailored to the needs of different projects. One of the primary goals of the MEI fund was to facilitate private-sector engagement by offering grants to ‘de-risk’ their entry to the market. Such a fund would help remove barriers, mitigate risks and ensure technical and financial feasibility and long-term sustainability of clean energy solutions.

The MEI learning brief *Private-sector Energy Provision in Displacement Settings* outlines the MEI’s feasibility work on the sustainable fund in more detail.

Position innovation

Position innovation involves changing the context in which the products or services are framed and communicated (see Box 1). For example, this could include developing methodologies for reaching a broader population, or repackaging existing aid in new forms.

Creating new markets

Workstream 7 focused on identifying areas that would benefit from additional support within the energy market structures in displacement settings. While the concepts of supporting and working alongside markets in humanitarian settings is recognized as an option for providing a strong platform for delivering aid and assistance more effectively, market development has been lacklustre. The MEI approach demonstrates one of the first attempts to develop the energy market in displacement settings. The MEI looked at understanding and supporting the development of a market system in Burkina Faso while in Kenya the focus was on strengthening existing market players. Both approaches have been successful and will help to strengthen the argument that humanitarian responses to crises in the form of direct delivery of aid and the distribution of cash (and vouchers) can have negative impacts on local markets and make them unsustainable.

Bringing about change

One of the founding principles of the MEI is to initiate a global conversation that focuses solely on energy in displacement settings. For the first time, this pioneering approach has engendered a discussion based around facts and experiences to bring about practical change in the provision of energy and its delivery.

Process innovation

Sustainability has proven to be challenging for the delivery of past renewable energy projects, which indicates that earlier delivery models were flawed. There is little evidence of long-term focus or planning in previous projects carried out by humanitarian organizations, and no after-sales care and support for products purchased by displaced populations. The renewable energy landscape is littered with mistakes that have been perpetuated by the traditional framework for the provision of energy, which remains firmly focused on short-term output.

Energy provision is about ensuring that systems for production and delivery are robust, scalable and sustainable, these aspects are the norm in private-sector business models. Issues such as maintenance, aftercare, quality and accountability are all relevant in the energy sector, including humanitarian projects.

The MEI has focused on creating an enabling environment for the private sector to engage with the humanitarian sphere. Businesses are interested and willing to engage in any context given the right balance of risks and incentives. Identifying those risks and taking them into account in the development of business cases provides the private sector and investors with valuable knowledge and a degree of certainty, which can be the basis for their engagement in markets in displacement contexts. Furthermore, the inclusion of conditions in agreements, which focus on long-term sustainability and depend on viable business plans, presents a degree of certainty to those involved in a project.

The MEI adopted private-sector approaches in the commissioning of activities related to workstreams 5 and 6 – infrastructure management contracts and low-carbon energy projects. The introduction of an infrastructure management contract is entirely without precedent in the humanitarian space, which is largely informed by power purchase agreements adapted from the private sector to suit humanitarian activities. However, unfamiliarity with these types of contracts has made purchasing authorities, such as UNHCR, reticent to fully embrace this approach. This highlights the technical capacity issues in agencies attempting to adopt new ways of working.

Product innovation

The MEI did not set out to innovate new renewable energy products. The over-arching aim of the programme was to test approaches that could then be scaled up to deliver improved energy services, most likely through tried and tested products that already existed in the market place but that were not accessible to consumers in refugee settings.

There was one small exception. In Jordan, the small-scale production of window shades was one unintentional and spontaneous innovation that resulted from the Green Affordable Housing Project. The Jordan Green Building Council (JGBC) wanted to reuse old metal window frames when they were replaced with double-glazed windows. The frames were repurposed into window shades using the straw weaving skills of women Syrian refugees. When fixed above windows of the retrofitted homes, they made a tangible difference to indoor room temperature during summer. Following the dissemination of a short film about the initiative on YouTube, the JGBC received a lot of interest from people in Amman who wanted to buy them. This is not possible at present but suggests potential for a future cottage industry.

Procurement for solutions

The MEI published tenders for energy services that framed the problems and required outcomes, while allowing the private sector to propose creative solutions. Many of the MEI projects were developed in this way. This enabled a good range of creative responses and challenged the idea that energy provision was about procuring specific equipment (as has been the case in the humanitarian sector).

A concession was also issued for a non-wood fuel stove in the town of Kakuma, which was open to a range of fuels (including alcohol or liquefied petroleum gas) and solutions, allowing space for innovation. Just as conventional funding cycles can limit innovation, the flexibility and freedom required for genuine innovation is a challenge to conventional project planning, procurement processes and even the mindset of stakeholders. However, an element of reactivity in plans is vital for the development of innovation.

Some workstreams – such as those looking to develop markets for energy goods in Burkina Faso – took an action research approach; responding to needs as they were revealed through consultation, research and practice during the course of MEI Phase II. Innovation in establishing peer-to-peer and supplier to customer networks in Burkina Faso has had significant impacts. MEI projects in Jordan also took this approach by targeting under-funded areas with high refugee populations where energy interventions were most needed.

Creating Conditions to Enable Innovations

MEI Phase II lasted two years in duration, which limited the possibilities for developing, implementing and monitoring 'blue-sky' innovation in energy provision within displacement settings. Innovative approaches were designed and tested but further valuable data is required to better understand the impacts and sustainability of the projects in order to provide recommendations for future scale-up or replication.

About the Author

Joe Attwood began working with the MEI at its inception in 2015 while in his previous position at the Norwegian Refugee Council, before later taking on a programme management function as part of the core team. His current work focuses on developing initiatives and projects that put sustainability at the heart of achieving change.

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Cover image: A solar lantern providing light in a home in Kakuma Refugee Camp, Kenya

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