

The Provision of Energy Access in Refugee Camps

Introduction to Energy Provision for Refugees

Now we enter the confusing world of who provides energy in refugee camps. In theory responsibility for the provision of energy products and services lies with humanitarian agencies. But as we will see in the coming pages, the reality of energy provision is far from simple. Multiple agencies, NGOs and practitioner groups are involved in the provision of energy. Institutional responsibilities for energy often become blurred in the complicated world of humanitarianism, where many organisations are under-resourced and organisational remits are frequently unclear. As a result of this confusion, the provision of energy for refugees is commonly piecemeal and there is limited formal governance of energy in humanitarian settings (Thomas, Rosenberg-Jansen and Jenks 2021).

Throughout the camps, a vein of anger flowed in discussions on energy during my research: frustrations from humanitarian-sector workers on the limitations of their organisations; exasperated comments from refugee communities that energy provision was not considered in many of their homes, businesses and community facilities; and visceral reactions from energy specialists about the lack of understanding on the importance of energy as an issue. You will hear this anger within the quotes in this chapter, as many of the people interviewed on energy provision commented openly and directly on their frustrations. My interviews conducted on this topic were also some of the longest conversations I had during my research – perhaps because many interviewees were able to speak freely about this under-recognised issue.

Cory Rogers and Louise Bloom highlight that infrastructure and public services in refugee camps ‘are provided through a vast range of delivery mechanisms and actors – both formal and informal’ (2016: 1). This is true not only of the larger-scale infrastructure in the camps – such as latrines, water systems, hospitals, protection centres and community facilities – but also of the smaller-scale energy products and services there. Some agencies and NGOs in both Rwanda and Kenya had run energy programmes – for

example, distributing solar lanterns to households, supplying firewood for cooking and managing projects that made cookstoves within the camps. Provision of energy, however, looks different depending on what type of energy is considered. ‘Basic’ needs such as firewood provision are met in part by institutions such as UNHCR and partners, whereas electricity needs such as power for TVs are not usually fulfilled by humanitarian agencies. Electricity provision for refugee homes and businesses was usually met by refugee enterprises and through local markets.

The absence of energy provision is one of the standout themes that emerged during my research. As outlined in chapter 3 on energy access in public and community facilities, many refugee spaces were not electrified. Gaps in provision took a number of forms: substantial absence where almost no energy was provided, intermittent access where energy was provided in an inconsistent manner by the humanitarian system, and in some cases informal access whereby power connections were made without the knowledge or support of humanitarian actors. The lack of systematic provision, and indeed the lack of systematic consideration of energy as an issue, emerges strongly throughout the evidence presented in this chapter.

This chapter first turns to explore the humanitarian provision of energy, highlighting humanitarian and refugee opinions on how energy products and services are supplied. Then we turn to the thorny issue of independent access – the energy secured by refugees themselves through markets and local solutions – which often occurs independently of the humanitarian system. New initiatives, including the solarisation of energy provision, and issues with a lack of provision of energy services are also considered. In the second half of the chapter we hear value judgements on energy provision and draw out the politics of knowledge on energy systems in refugee camps. Finally the chapter reflects on the nature of systematic power and the challenges facing the humanitarian energy system.

Spaces and Suppliers of Energy Provision

Humanitarian Provision of Energy

Multiple actors and organisations have different roles to play and different motivations in the provision of energy through humanitarian response and donor-supported programming. Traditionally implementation in humanitarian spaces has been top-down, guided by donors or agencies and implemented by NGOs and partners (Harrell-Bond and Chambers 1986). To some extent energy in humanitarian settings is no exception: in theory humanitarian agencies are responsible for supplying energy in refugee camps. For refugee households, agencies do this largely through paying implementing partners such as NGOs or private-sector businesses to give

away lanterns and cooking fuel – for example, by providing firewood from centralised distribution points as pictured in Figure 4.1. As outlined in the earlier chapters, energy for refugee businesses, electrical power for households and the energy needs of refugee community facilities are not systematically provided.

For operational needs, agencies and NGOs are responsible for procuring and maintaining energy: at the camp level this is often achieved by organisations procuring a diesel generator and fuel and installing them in the camp. The generator then provides electricity for the core humanitarian services, often UNHCR and WFP as well as some NGOs within the camps. In many cases in Kenya and at a couple of the camps in Rwanda, health clinics and some educational spaces also procured their own generators independently – either as a back-up source of energy or in order to acquire energy access in the first place. The cost of the technologies and fuels then sits directly with the humanitarian organisations (Grafham and Lahn 2018).

Beyond this description, however, is a complicating factor. While many refugee families are reliant on energy provision and cash assistance from humanitarian organisations, when it comes to energy many refugees



Figure 4.1. Stacks of firewood at the firewood-distribution point in Nyabiheke, Rwanda. © Sarah Rosenberg-Jansen.

access energy independently of humanitarian provision. To understand the impacts of this independence we must consider what market access of energy means in terms of the supply of energy to camps. This chapter will first consider the formal responsibilities within the humanitarian system for energy provision, often led by humanitarian organisations, before turning to consider the issue of independent and market-based access within refugee communities.

As humanitarian agencies such as UNHCR manage refugee camps, responsibility for energy supply often sits within their structures and processes (GPA 2022). However, there were often mixed and varying roles on energy from different agencies and implementing partners; confusion rather than coordination often reigned in discussions and within camps. In Kenya and Rwanda failing to coordinate and deliver energy effectively is a constraint of the humanitarian system, as organisational remits on energy are not clear (Huber and Mach 2019). For example, national government actors often have a role on permissions and access to the camps, while private-sector suppliers provide energy technologies and goods, and NGOs often run their own energy programming. During my research I often came across the view that UNHCR – as the lead agency in both Kenya and Rwanda – was viewed as a coordinator of action but did not necessarily directly deliver energy services. As one interviewee commented:

You could consider UNHCR as a socialist government. They should have long-term presence and power, and plenty of money – but do not invest it sustainably – especially on energy. While the private sector will not do it all. So how can we reach the poorest? Because neither UNHCR nor the private sector are doing it. We are trying to do it differently, in create that transition from a purely humanitarian approach to include the market. But after 20 years it is depressing. We have wasted 20 years in the camp environment. We have to move away from this type of ‘socialism’ and one-off interventions. We need after sales service, optional add-ons, a progressive mind-set to ensure this is an organic market for change. Energy affects the way we do business; I can see all the solutions but we need a conducive environment to make sure it happens. (Humanitarian energy practitioner based in Kigali, Rwanda)

This interviewee questioned the role of UNHCR and agencies in delivering energy in camps, suggesting that aid agencies acting within camp environments might not be the most effective way of providing energy solutions. The way humanitarian organisations intervene was frequently characterised as a problem: delivering individual projects and interventions has not led to a systematic change in the way energy is delivered in camps. By referring to UNHCR as a ‘socialist government’ this interviewee implies that despite having intentions to provide social progress

and welfare support, delivering support directly through governmental and inter-governmental mechanisms is very inefficient. Considerable literature suggests that delivering infrastructure investments or resources that need to be highly decentralised is not best achieved through a centralised, bureaucratic set of institutions (Kessides 1993; Shleifer and Vishny 1994). This is particularly true of energy in refugee settings as the energy needs of end users (households, enterprises, community facilities and humanitarian operations) are highly varied and individualised. Humanitarian institutions often struggle to deliver energy within camp settings (Grafham 2022) and are limited by the structures of humanitarian action as well as individual capacity within operations.

In terms of institutional remit there is a mixed picture within the camps. Humanitarian agencies often had strong narratives on whose responsibility energy was. In national offices or headquarters partners often noted that that energy was a joint responsibility between humanitarian operations and NGOs. Once in the camps this picture altered dramatically, with local field officers and staff members becoming angry or confused when discussing whether their organisations should be providing energy for refugees. This is demonstrated in the quote below, when an interviewee asserted that refugees have to be responsible for electrical appliances such as phones and chargers, and that it was not the 'job' of his NGO to take care of 'electricals'.

Well, there are phones, of course. But refugees have to get that for themselves, we are not providing phones and chargers for free. It would only be the men using those anyway, and the women need these cookstoves. That is why we are making these. I like them, the refugees, but they should not get everything the same as Kenyans. It is easy to get confused, there are so many programmes and so much activities. We are doing everything and not really doing anything. Mostly we are doing the cooking energy, the firewood and the cookstoves. We did distribute some lanterns, but people were not really liking them and it was over two years ago so I don't remember lots of things. Plus, we do electricity not electrical, so when things break, they are not fixed. People can get other services for electricals in the market – other lanterns and batteries and things repaired there. That is not our job to help with these things. (Technical energy manager based in Kakuma, Kenya)

When I delved into the issue of 'whose job' it was to provide energy with this interviewee, he suggested responsibility for household electricity lay with UNHCR as the main coordinating body. The official 'energy' partners in both Kenya and Rwanda were often viewed as being responsible only for cooking solutions and firewood distribution – with many interviewees, such as this one, stating that electricity was outside of their remit. While this was the view held by implementing partner interviewees, when

analysing UNHCR and refugee coordination documents it became clear that household electricity was actually a mixed responsibility. However, it was not clear where different elements of responsibility for energy supply should sit between camp coordinators and implementing partners. A political play-off seemed to be happening between humanitarian organisations and their partners – with each claiming the provision of energy was the responsibility of the other, and that their organisation was politically and economically constrained in what it could do.

This interviewee also became quite defensive about energy provision, and conveyed a strong sense of dissatisfaction with the current situation. These displays of defensiveness from overworked, under-budgeted local NGOs were also present in Rwanda. In both countries there seemed to be mixed responsibilities for delivering energy services in practice, even if on paper remits were theoretically clear – for example, UNHCR coordinates and partners implement. Part of the reason for mixed responsibilities may be because so many institutions play different roles in different camps, and remits for action become blurred.

Of the humanitarian agencies involved in energy in refugee camps UNHCR looms large in the discussion, with many energy specialists turning to it for access, coordination and leadership on energy. Yet despite the launch of a new energy strategy in 2019 (UNHCR 2019a), to date the organisation has had limited capacity to support or deliver energy activities. As one interviewee, a humanitarian-sector specialist in New York, put it: ‘We are still at the stage with UNHCR of having the capacity to understand, not to do [energy]. UNHCR still needs to engage with the language of development. We are just not there yet and are still at the protection, blah, blah, blah [stage]. With nothing really being done except encampment’.

As this interviewee implies, an important element guiding the provision of energy for refugees is the protection mandate of UNHCR. Interviewees mentioned the challenge of having to link energy explicitly to the core remit of humanitarian organisations. As the quotes below highlight, the protection mandate can constrain action within humanitarian agencies and limit choices under a ‘protect and provide’ mentality whereby camps are set up to offer a physically *protective* space for vulnerable refugees and humanitarian agencies *provide* only basic products to meet their basic needs for shelter, food, water and safety. Energy and other more life-enhancing services are not deemed essential and so are not provided, although there is increasing recognition that energy access should be a human right and is essential for improving quality of life (Bradbrook and Gardam 2006; SE4ALL 2017). The following excerpt highlights how protection is discussed within humanitarian communities, providing examples of interviewees who were critical of the protection remit and those who felt it was essential to connect energy and protection.

URGGGH! Protection. You can't even fart without mentioning protection. It goes on and on and on as part of [the] discussion about how the energy agenda needs to align with UNHCR's core mandate on protection. Energy is a new consideration for UNHCR, so it needs to be justified in terms of core principles, and high-level political agendas: SGBV [sexual and gender-based violence], gender, cost reduction, and of course protection. But for god's sake they need to say something more meaningful than just, 'We have to protect these poor people'. Times are a-changing. (Humanitarian energy practitioner in Vienna, Austria)

We should mainstream protection into everything we are doing ... it should be natural. We could increase the protection dividend by approaching energy. There is a very clear protection impact [in undertaking energy activities]; however, there isn't mainstreaming and there is not actually a correlation between protection and why people need energy access at all. A mythical story needs to be told to be able to 'do energy'. There is a link between firewood and violence and people are five times more likely to feel as if they will have a bad experience in unlit areas than in lit areas. In whatever you do, we need you to think about protection impacts. We need to make programmes SAFE from the start ... Mainstreaming would be the way to do it. (Humanitarian staff member in Geneva, Switzerland)

For UNHCR definitely, the protection mandate essentially trumps all others. The biggest barrier we had was that we struggled to ear-mark at all, and that funding was often not allocated for a specific project or set of activities. It was always a given that the assumption was the money would be spent on core protection and other activities. We learnt to be very strategic about the types of partnerships and collaborations we [were] working through in order to make sure that, when we do start to get into the details and [are] actually starting to change something, that the organisations you are changing it with see the benefits at the institutional level. (Humanitarian governance specialist in Oxford, UK)

While to some extent UNHCR has been singled out here by interviewees as one agency that faces a considerable number of systematic constraints driven by their core remit, the same arguments can be made about other agencies and implementing partners depending on their core focus of delivering food, water and humanitarian services. In part as a result of humanitarian organisations only focusing on their core remits (such as protection), investment in technical skills on energy is often underfunded (Thomas, Rosenberg-Jansen and Jenks 2021). Often agencies and implementing partners do not have energy experts or skilled technical staff within their own operations. This is a considerable constraint, and a lack of in-house staff is the result of both limited budgets and organisations not having an organisational remit to act on energy. As the following interviewees highlight, the result is often that while individuals within agencies

want to act on energy, they are limited in their technical and operational capacity to do so. Interviewing global-level practitioners on energy within the humanitarian system enabled my research to understand some of the issues facing institutions.

I see very little overall strategic thinking in UNHCR. I don't think that they really have the time to be very strategic; I think they are struggling constantly with just the enormity of the vast, growing problem they have to deal with, and no fucking money. UNHCR are well intentioned, but poorly skilled. Some of the people who work for the UNHCR are some of the most wonderful, motivated, altruistic people on the planet – I mean there are some fabulous individuals there. They are just working within a completely dysfunctional organisation that is inadequately funded. There are all sorts of horrible practices – they don't even know what they are doing. They can't even identify in Rwanda how much they spend on wood. They have no idea. (Donor based in Oslo, Norway)

We asked UNHCR the simplest question: what do you spend on this and that? But they don't know the answers to these things at all. I can ask my staff, 'What [did] we spend last week, last month, or this, that or the other?', and I get an answer. UNHCR don't know what they do, it's amazing. And their procurement and tending process is just hysterical. When I look at the non-food items stuff they distributed in the past to households, and how much they pay for it. And I'm like: 'Oh my god, I could just go into the market in Kigali and I can buy every one of these things cheaper'. Just as a one off, much less in bulk. It's just, I don't know if it is just incompetence, but everywhere they go they are foreigners, *muzungu* who get taken advantage of by the crap people in every country, who are everywhere. They just get taken to the cleaners. It's just staggering that they spend [so] much money and get so little for it, and they don't even know how much they spend. (Private-sector supplier of UNHCR in Oxford, UK)

These quotes highlight that while individuals working within humanitarian agencies are usually seen to be altruistically motivated, often the constraints of the humanitarian system mean they are unable to develop low-cost and appropriate energy solutions. The nature of this failure is further compounded by a lack of knowledge within agencies on their current investments. Therefore, even operations wanting to understand energy problems and spending further are unable to do so as basic information is unavailable. Technical-capacity limitations within agencies are commonly discussed within the sector (UNITAR 2023). However, the evidence and information gap in humanitarian settings is much larger than this, with many parts of the humanitarian sector facing a blank sheet of paper when asking their institution about energy in general (Grafham and Lahn 2018; Lahn and Grafham 2015). Although humanitarian agencies may not have capacity to deliver they are often perceived as having the authority to act.

In many cases this prevents other communities (refugees, NGOs or development specialists) becoming involved in energy provision as the issue is viewed as UNHCR's responsibility, and the lack of capacity facing humanitarian agencies is an issue that is widely spoken about within the sector.

Specifically there appears to be a lack of energy knowledge within humanitarian agencies at the field level. As the interviewee below notes, there are considerable examples of national and local staff not being trained in energy or aware of the importance of energy access in general. Frequently agency staff members engaged with during fieldwork were unaware of energy technologies in the camps, and would often report that the camps were completely unelectrified. In particular, in the Kenyan and Rwandan operations there were very few technical engineers of any kind. This highlights the issue of capacity in humanitarian organisations to manage energy programmes: without dedicated staff working on energy it was very challenging for field operations to support interventions on this topic. As one interviewee pointed out, this may be due to the fact that energy is often seen as a specialist subject and operations are unable to afford expensive, often western, consultants to provide expertise on energy within camp settings. In an interview a key policy-maker on the issue of participation in decision-making in humanitarian settings was keen to convey that the world of humanitarianism has changed but the policies and practices of humanitarian implementation on energy have not necessarily followed suit:

Sometimes people don't see the link between sustainable energy and human dignity ... What more can we do to bring attention to this issue? Sometimes it feels hopeless and people have humanitarian fatigue ... it's no-longer exciting to be a chain-smoking French-man in the middle of no-where building huts. People have higher expectations now, they all want to change the world, 'give-back' on a global scale, and, and I hesitate to say it but it's not working – it is just more white, middle-class men in a room still talking as if their discussion will change the world. The only difference is that now some women and country representatives have joined, those, still stale discussions. (Humanitarian energy policy-maker in New York, USA).

Humanitarian energy policy is a particularly important topic here. Particularly when it comes to the issue of integration and sustainable energy provision in the long-term, humanitarian agencies have an important role to play (Bellanca 2014). As one interviewee highlighted, responsibility for the provision and self-reliance of communities are inherently interwoven:

Now, because of the New York agreement on refugees, they, the refugees, can start to work as nationals, they can start a job, they can go to get jobs,

have renewable energy, and all types of activities in Rwanda. It is good for them, as their prospects for getting out of the camp are small. They will have less dependency on us and move towards self-reliance as we have been planning. The overall progress and socio-economic process will be good, with more access to energy and more income opportunities. We will integrate refugees, and not exclude them, especially for education and energy needs, it will help them. (Refugee living in Rwanda)

These quotes highlight some of the complexities surrounding the provision of energy to refugee communities by humanitarian actors. To understand these issues further we will turn to consider how refugees also access energy independently of humanitarian supply.

Independent Access and Refugee-Led Market Provision

As described in chapters 1 and 2 of this book, energy products and services in camps in Rwanda and Kenya are secured and paid for by refugees themselves by buying from local markets and refugee-led businesses. Depending on the access level of the household or businesses this includes buying household solar products, paying for mobile phone charging, connecting to local informal mini-grids, spending on motorcycle transport to markets, payment for batteries and torches, making or buying cookstoves, paying for access to 'cinemas' and watching television in informal shops, going to cafés with lighting or radios, buying charcoal or other fuels or spending resources on additional firewood or charcoal to supplement that distributed by humanitarian agencies. The considerable array of energy uses in refugee camps was largely unregulated and unrecorded, and was powered by informal economies and dynamic mechanisms of local exchange. It is only recently that some studies of informal economies within camps (Betts 2021) and the lived experience of refugees with respect to energy have started to emerge (Rosenberg-Jansen, Njoki and Okello 2018). As a result there is limited detailed exploration of how refugee households and communities secure energy independently from humanitarian provision within the existing literature.

My research suggests that there are a number of elements to the independent access of energy resources by refugee communities. Firstly, the humanitarian provision of energy products and resources in the camps meets only a proportion of energy needs. While firewood was distributed on a monthly basis to families this was frequently not enough to meet basic cooking needs, and if households received any support on electricity access it was usually in the form of a free solar torch or lantern. Therefore, there was a large gap between the level of access provided directly by humanitarian organisations and the amount of energy needed in households.

This gap is being filled by refugees themselves, who are choosing, securing and owning energy products and services directly.

Secondly, a critical element of independent access was choice over energy products and services. As part of independent access many refugee families reported choosing which technologies or sources of energy would suit their needs best. For example, some families connected to the local mini-grid, some bought individual solar lanterns or torches and some invested in solar home systems and batteries. In all interviews refugees gave clear and concise reasons why they had chosen particular forms of energy over other options. Some of these choices were positive, in the sense that refugees could choose between buying different energy products in the market, and some were negative, as many families were guided by cost constraints and could only afford certain products. Such choices were highly informed and showcased the level of refugee knowledge. Humanitarian agencies played almost no role in these choices: I never once heard a refugee say that a humanitarian staff member had helped them choose their energy source.

The third element of independent access is payment for energy products and services: every family I spoke to had paid for some form of energy from local markets or trades, from their own income or resources. Whether this involved paying for candles and matches and buying firewood and charcoal, or saving for a solar home system and making repayments over time, a considerable proportion of household income in refugee camps is spent on energy. I also observed some cases of refugees selling the solar lanterns they had been given for free by humanitarian organisations, and then using the cash received to buy alternative energy resources that better suited their needs. Particularly in the case of single women in the camps in Rwanda this seemed to be common practice, as their need for cash to spend on firewood and charcoal was in some cases quite extreme. Examples were reported of families spending considerable amounts for higher levels of access. For example, in the Ethiopian and Somalian sections of Kakuma, many people were spending upwards of \$50 a month for basic TV access and power in their homes (Corbyn and Vianello 2018). This may not seem like a lot of money but, compared with the cash and financial resources available to the families and the tiny amount of power they received, this was often over half their disposable income. The role of humanitarian agencies in the payment for and provision of energy is complicated. On one hand families rely on cash and voucher distributions from UN agencies and support from implementing partner organisations. On the other hand families can be seen to be accessing energy provision independently. The relationship between these two elements is interdependent, but in terms of decision-making the power dynamics are clearer: refugees choose and pay for the energy

technologies that best fit their needs and humanitarian organisations have little to do with that.

Finally, a point on ownership and supply: energy products bought by refugee families themselves were owned by them. But so too were the products freely distributed to households by agencies – for example, the solar lanterns that have been provided to some families in Kakuma and the camps in Rwanda. Once owned by families, people were free to do as they wished with these products. For example, even in cases where energy products were supplied by humanitarian organisations it was common to see these being resold in the camp markets. There were also examples of humanitarian-supplied technologies, such as solar lanterns and street-lights, being taken apart by refugees and the parts (especially batteries) being sold. Ownership is an important part of independent access in this sense, and energy products can provide small examples of capital within households that can be exchanged or sold for access to other resources.

Humanitarians I spoke with criticised these forms of market trading, suggesting that freely distributed products should not be sold or traded but should be used only for the humanitarian purpose for which they were supplied. As one interviewee highlighted:

We give them it [the energy products] and they just sell it or destroy it for parts. You see it everywhere, the refugees don't value energy goods. They just want to trade the parts for money, for cash. It is so frustrating when they don't use the products for what we intended. We spend all this time and money organising firewood and lights for them and then they sell it. They should be using it to light their homes, so their children can study at night and so the women are safe. But they want the cash more. We stopped providing lanterns in some places because they don't use them for good things. (Humanitarian worker in Kakuma, Kenya)

This mismatch between humanitarian and refugee actions has been explored in other humanitarian sectors (Omata 2022). Opinions on trading energy products in particular were sometimes founded in humanitarian disapproval about the ways in which refugees choose to use their resources. Independent access through markets is generally considered a positive element of self-reliance in refugee communities (Easton-Calabria 2022); however, in the case of energy many humanitarians did not recognise this form of access as it was not provided by them.

The independent and market access of energy by refugees does not stand completely without caveats: humanitarian agencies and governance systems clearly have a role to play within the camps. However, in terms of energy access for refugee families and businesses there appears to be a substantial gap in the humanitarian provision of energy. Ilana Feldman suggests that in this way the politics-of-living concept helps us to understand

how humanitarian action can constrain refugees' lives and limit their choices by reducing 'the people it seeks to help to "mere" victims—objects of compassion, but restricted in their capacity to act as full subjects in their own right' (2012: 155). In not engaging with refugee knowledge on energy, or acknowledging the modes of independent access already in place, the humanitarian system is disempowering refugees. While this may not be a set of intentional actions, the results are quite extreme and there is a considerable divide between refugee and humanitarian-system actions on energy.

Within refugee markets and homes independent access to energy is largely self-governing through refugee markets and informal community structures, and is not usually governed by humanitarian actors. In some cases this lack of support from humanitarian organisations was acknowledged by interviewees. As the quote below suggests, impossible conditions and restrictions were often created by institutions within the camps as, in some locations, camps remained closed to external market suppliers while at the same time humanitarian organisations and NGOs refused to provide fuel or electricity. During one interview in Rwanda on the role of various NGOs and humanitarian energy, the topic turned to responsibilities and who should be in charge of energy. On the topic of self-reliance, the interviewee commented:

We wanted them to own the energy more. They have to find it and get energy and firewood for themselves. They have to do it! We start with the children, so they will know for the rest of their lives that they must do it. If they don't find energy they will starve, so I am knowing they will do it. We cannot provide this for them anymore. (Humanitarian practitioner in Gihembe, Rwanda)

In cases like this one interviewees had very challenging opinions, and were effectively suggesting that refugees would have to find their own energy while actively preventing suppliers from accessing the markets, thus essentially limiting the sources of energy available in the camps. Often during my research I came across environments where there was a substantial disconnect in terms of how institutions are perceived to be responsible for energy and the ways in which refugee families and businesses currently access energy. The types of humanitarian provision outlined above can be understood to have created a number of inequalities within the camps, and reinforced the refugees' perception that humanitarian agencies are not able to support them in terms of energy. This suggests that structures and systems in humanitarian agencies have considerable power impact, and raises questions about how agencies develop energy-intervention programming and whose values guide such programming.

Solarising Solutions and Renewable Energy Provision

So far the evidence has suggested a fairly negative view of the humanitarian provision of energy in refugee camps in Kenya and Rwanda. However, some of the camps in both countries have seen some changes in recent years in terms of access to renewable and sustainable technologies. Several international development and humanitarian programmes have funded solar-lighting interventions – for example, the company Little Sun, which supported the distribution of yellow star-shaped lanterns in camps in Rwanda (Little Sun 2018); the Moving Energy Initiative (MEI) that enabled SHS systems and mini-grid interventions in Kakuma camp (Moving Energy Initiative 2019); the Renewable Energy for Refugees (RE4R) programme in Rwanda that supported the provision of solar home systems in Rwanda (Practical Action 2020); and the and IKEA Foundation Brighter Lives campaign, which distributed solar lanterns to many camps in East Africa (IKEA Foundation 2015). Families also used solar lighting and power they had secured themselves – buying technologies at local markets and paying for energy directly. Whether through donor-funded programmes or market access to technologies, many interviewees reported the benefits and uses of solar technologies within their homes. Indeed, one of the biggest solar mini-grids in East Africa is in Kalobeyei settlement in Kenya (Renewvia 2023).

In addition, agencies such as UNHCR and UNITAR have committed to solarising energy solutions for operations and community facilities (GPA 2023). For example, UNHCR have committed to the provision of sustainable energy in their Global Strategy for Sustainable Energy (UNHCR 2019a), as the following sample from the official UNHCR narrative on energy attests:

Improving access to a clean and sustainable source of energy can transform broken lives. It can power health centres and ensure that life-saving medication is refrigerated. Street lighting allows people to move around camps in greater safety at night, particularly women and girls, and solar-powered lamps mean they can work, cook, study, socialize and continue with their lives long after the sun has gone down. Additionally, with a clean, sustainable fuel, or fuel-efficient technologies, refugees can cook meals and avert the malnutrition and ill-health that may occur when using open fires. (UNHCR 2019b)

Despite such commitments to sustainable energy humanitarian agencies spend over \$108 million on diesel fuel per year, emitting more than 194,000 tonnes of CO₂ (Sandwell, Gibson and Fohgrub 2022), and diesel generators were common in the camps in Kenya and Rwanda. Therefore, policy statements such as the one above should be treated with a note of

caution as the majority of humanitarian operations still use fossil fuels as their main source of energy (Gibson 2020). During my interviews with humanitarians working in the camps the presence of diesel generators was often mentioned, and many refugees and humanitarian staff members commented on how solar solutions might be possible. During my trips within the camps I had also seen several examples of solar panels lighting buildings.

Some places in other camps already have some solar power and that would be good for us. As long as the engineers say it is reliable, we can have it. I think in other places they have both diesel and solar together – like a mix – so if anything is going wrong with the solar then the diesel can work. That would be very good for us here, to have a back-up always like now [with the current back-up generator]. And with solar it would be even cheaper I think. We could use solar here, easily, for the water pumping would be best. We are using so much diesel now and it would be better with solar. I don't know how much the diesel is costing, but it will be a lot, someone in UNHCR is paying for that and it must be a lot because we are needing a lot to keep pumping. (Refugee living in Rwanda)

Interviewees in both Kenya and Rwanda talked about how renewables were 'good', specifically linking this to the properties of solar lanterns and panels, which meant they are 'clean' in the sense of not physically dirty or noisy. Interviewees often went beyond this conception of 'goodness' and linked solar energy to being 'better': a source of happiness and pride. Partly this view emerged from the physical and aesthetic features of solar energy: the blue panels, the reflective surfaces and the 'beauty' of solar objects. In fact many interviewees commented on the colour of solar technologies: including red d.light lanterns; blue UNHCR lanterns; silver, reflective, shiny panels; and the yellow of the Little Sun lanterns. However, as the interviewee in the quote below states, valuing these technologies can go beyond pride in the appearance of the technologies – linking them to the concept of development.

They are so good, the renewables. I am liking them. If that was a generator, the man would not pay the boy, because generators are already so dirty, why would you clean them? But the panels, they are beautiful so you want to keep them beautiful. It is pride, but also presentation. Saying, 'Here, I have this, it is something valuable and technology', it is really saying, 'I have a future, something nice and good in my life, I live in a hut in the desert, but I have this and I am connected'. Pride – or something better than pride – happiness, future, dreaming, value in this panel – this brings a very good element to life. Something so much better than without. That is what renewables can bring: something better than without. I am glad the refugees are having this, and we in Kenya are having this. That is why renewables are good. (Energy practitioner living in Kenya)

Descriptions linking the provision of solar energy to hopes for the future were commonly put forward, with many interviewees commenting on how solar technologies would offer them a higher quality of life. Part of this idea is likely to come from the fact that solar panels and systems are newer – in the sense that they are recently arrived, innovative and ‘just off the shelf’ products compared with older diesel generators and other energy products that have been in the camps for some time. As a result these newer products are seen to offer progress and value. From a certain viewpoint these opinions can be seen as expressions of modernity. However, here it is important to note that within the refugee families I spoke to, ideas of having a better life were strongly linked to the *usefulness* of energy. It was simply not enough to have a beautiful new lantern; interviewees also stressed that there was value in the *use* of these products. As the quote above demonstrates, renewables can offer a vision of progress – but one which is directly useful to households and improves life in a concrete, connected way.

Oh they [renewables] are so good. Not everyone [in the camps] has them, but some have the lanterns and the panels. Some even have the thingy ... systems with the panel and the light and the TV [solar home systems]. They are cheap overall and people love them – they are blue and pretty and you can see them and they shine. The coffee shop I go to [in the camp] has a system [SHS] and the boy there cleans the panel every day to make it shine at the entrance ... it is like, if the panel is shining and clean it is the sign the shop is open for coffee. I always go to that place over the others, because the man there is nice and he pays the boy to clean the panel even though it doesn't need it every day. (Energy practitioner living in Rwanda)

In summary, the provision of solar solutions in refugee camps was generally viewed as positive, and many humanitarians and refugees supported the transition to sustainable solutions. It is likely that in the years ahead we will see a rapid expansion of solar provision in refugee camps (Beath et al. 2023; GPA 2022).

Supply Gaps: Absent, Accidental and Intermittent Provision

In considering the provision of energy by humanitarian agencies we must also consider the lack of provision and the impact this has on refugee communities. As earlier chapters have explored, refugees have not been provided with substantial electricity access in their homes or for their businesses. Within public facilities there were also considerable gaps in energy provision, which means that refugees often do not have access to energy in community buildings, religious spaces, playgrounds or WASH facilities. The impact of this lack of access was substantial, with many

interviewees expressing how they were not able to use these spaces fully and feeling distressed that they were not able to access energy. Gaps were often created by institutional inaction on energy, with humanitarian providers taking limited responsibility for the electrification of refugee spaces while many operational spaces – such as the offices and compounds of humanitarians – were powered. The gaps in provision were often political in nature, resulting from perceived institutional remits and organisational decisions about which spaces deserve energy and which do not. This suggests there is a politics of energy provision within humanitarian organisations, and that value judgements are being made in deciding which parts of refugee camps should be electrified. Clearly refugee homes, businesses and community facilities were not valued and therefore often remained without power. In the case of operational spaces energy was often provided but was still not delivered effectively.

Provision was absent (where energy was not provided or informally provided by actors other than humanitarian organisations), accidental (whereby power was accessed without the knowledge or support of humanitarian systems) or intermittent (where energy was provided in an inconsistent manner by the humanitarian system). Examples of all these types of gaps in provision were present in the camps in Kenya and Rwanda – and also in many of the refugee camps I have visited in Ethiopia, Uganda, Bangladesh and Jordan. The informality and limits of humanitarian energy provision are well documented and evidenced by the fact that over 94 per cent of displaced people in camps lack access to electricity (Grafham, 2022).

Refugees viewed the humanitarian provision of energy as inadequate. Interviewees commented that the supply of firewood, for example, was never enough to cook meals. As an example, quantitative research on this topic has suggested that in Rwanda over 60 per cent of refugee households were skipping meals due to fuel shortages and over 42 per cent were selling their food rations in exchange for fuel (Practical Action 2020). Similarly, most households I interviewed had not received any support on household electricity, and those who had had only received a small solar lantern that was not sufficient to meet their power needs. The under-provision of energy services by humanitarian organisations has resulted in the majority of families relying on refugee enterprises and buying their energy products and services in the markets in the camps. In addition, many intervention projects are not working to supply useful energy products or services to refugee households or businesses (Grafham 2020).

During my research the issue of informality, whereby energy was accessed through a number of alternative or informal ways, was frequently raised. The story below on informal connections highlights the variety of informal access methods. During one visit to a camp in Rwanda,

I stumbled across a small hairdressing salon with a solar lantern charging on the roof. While the shop was open the manager was not close by, so one of the young people nearby described how the salon worked and showed me the electricity connections in the shop. In this case the entrepreneur was informally connected to the grid and using power to connect his hairdressing business.

It stays on, the clippers, because it is plugged in. We connect to the panel on the roof. And also through the cable. The cable is working best. Giving energy for the machines. They gave the lamp [the solar lantern] and told [him] to use [it] for the clippers. But it does not power them. So I use the cable and so is the good connection. The cable we found outside the wall [of the camp] and we just added to it. It is not from UNHCR, so we don't tell them too much about it. We just link in and connect. No-one asks about this. Just about hairdressing. So we use it quietly. (Refugee living in Rwanda)

We talked some more about the types of styles of hairdressing offered and the prices the salon charged before returning to the topic of electricity. As a solar lantern of the type charging on the roof could not be used to power the clippers, I was interested in where the power actually came from. After some investigation I discovered that the salon was connected to an electricity cable, which ran across the camp border into a nearby house and pylon – and was in fact connected to the local grid. Talking further with some of the local business owners it became clear that the shop owner had built the salon here in order to get an electricity location, and then later on an energy programme in the camp had distributed free lanterns for electricity. As grid connections within the camp to households and businesses are not strictly allowed by the national energy provider, I did not return to interview the shop manager to avoid drawing attention to his informal connection. The other business owners explained to me that talking about this topic might make him worried that his connection would be cut.

This story demonstrates some of the informal connections made by entrepreneurs in the camps. In this case, a UNHCR-funded programme had distributed solar lanterns for free to business owners – many of whom could not use the lanterns for their business as they only provided basic lighting and did not include charging or powering technologies. Despite this, the salon was characterised as a 'solar salon', which was held up as a successful example of UNHCR providing energy to the community. While it did seem as if the lantern was being used to light the space in the evenings, the shop had also installed light bulbs connected to the grid and so it was unlikely that the lantern was providing much light. There were many examples of such businesses within the camps that were connected to humanitarian projects and systems but were often also securing their own energy access.

The insignificance and inappropriateness of energy projects in the camps were often commented on by refugee interviewees, who when asked directly about the possible benefits of humanitarian-led interventions suggested that they were not always helpful. For example, interviewees would show me disused cookstoves or solar lanterns that had been distributed by UNHCR and highlight how these technologies did not meet their needs. In many cases energy interventions had simply not reached households and so provision from projects had had very little effect on them, as many families had not been included in the beneficiary populations that received distributed electrical products. Particularly for enterprises in the camps, many humanitarian projects were immaterial. When a business had benefited from humanitarian support it was often a secondary link to energy (such as businesses being able to participate in cash schemes and then having more income to spend on energy) rather than as the result of direct assistance on energy from humanitarian actors.

While the story above suggests a negative view of agencies in the camp, there were also positive stories of connections – especially in cases where agencies and NGOs had been able to share energy resources. The story below highlights an example of this, where power sharing can also take the form of informal exchange of ‘left-over’ or surplus energy goods that have been put to use in another context. While many of the business owners in the camps had specifically purchased technologies to use for their business, other entrepreneurs seemed to have informally come by a technology and built a business around it. For example, in the story below about a solar cinema in Kalobeyei, the business owner there ‘found’ a ‘free’ solar panel and this was the start of his idea to make a TV shop. In the case of this solar cinema, electricity was used to power a TV, fan and lighting for a cinema. The business owner then charged customers a small amount to watch a film or show (around £0.50). These types of informal-energy entrepreneurs were common within the camps and were often not formally supported by UN or aid systems.

One of the women I met in Kalobeyei recommended I see the local cinema, so I walked with her across the settlement to a far corner – where there was a solar cinema playing music loudly and screening different shows and films throughout the day. I was able to have a short interview with the man who ran it, but he was very busy with customers and could not spare a lot of time to talk with me. An older man who clearly had a lot of experience running businesses in the camp, I asked him how he got the panels there and why:

We arrived, there was very little, really nothing. We needed some TV, so I am working with the other men to find the materials [knocks on walls of structure] and we build this. The panels come for free. I don’t know how the

energy arrived, a man bought them, gave for free. We thought they were broken but one of the boys was playing [with the panels] and found they were working. So we use them now. They power the screen, the music, the lights. Soon I will buy another fan to keep us cool. I have [a] battery – for charging [taps the phones in the box] and for night. Some men are coming at night, but not ones with wives. Those might stay at home. (Refugee living in Kalobeyei Kenya)

Following this interaction, I asked the UNHCR representatives involved with the development of Kalobeyei whether this was one of the projects they or NGO partners had supported. Surprisingly, most of them had not heard of the cinema but explained that SNV and one of the other large NGOs building the schools had a surplus of solar panels, so the panels on the cinema might have come from there.

This story highlights a positive example of when UN-funded projects have a surplus of resources and share this surplus with the community – as the panels were probably donated to the community by the local NGO, who already had enough for the school's needs, and then the cinema owner was able to make a business out of this. It is unlikely that the panels were stolen as they still had their ID numbers on and were highly visible in the space of the camp. In this case institutional involvement in the provision of energy to refugees can be said to be accidental: the agencies and NGOs involved were not really aware of the provision of solar panels to this business.

Unintentional provision of electricity by humanitarian organisations was common. For example, refugees would informally connect to UNHCR generators and 'borrow' power from operational sources. Refugees also reported spending extra time in operational and NGO spaces so that they could charge their phones while there. This type of provision can be characterised as accidental as the majority of humanitarians were unaware of, or unconcerned with, such connections. Providing energy in this form was not a conscious decision by humanitarian organisations, and many agencies did not know that people in the camps accessed electricity in this way. Occasionally access would be provided as an act of kindness by an individual. In a couple of cases, humanitarian organisations had sold old, broken generators to refugees for parts: they did not realise the value of these technologies, which were repaired and put to work as mini-grid businesses. This type of unintentional provision suggests that humanitarian staff did not necessarily know the value of such connections and technologies, or how they were being put to use in the camps.

Now we turn to consider the issue of intermittent provision of energy. Intermittency in a technical sense often refers to the fact that electrical connections are provided but electricity is not flowing; it also denotes

where demand for energy exceeds the amount of energy supplied (Sorensen 2014). I use intermittency in both these senses, but also consider issues of spatial intermittency (where power is provided in some locations and not others) and institutional intermittency (where organisations only take partial responsibility for the provision of energy). One of the often-cited disadvantages of solar power is that it produces ‘intermittent’ power because it is not always sunny. However, intermittency in refugee camps is often not caused by technological limitations but by institutional failings. Diesel generators and solar systems do of course break down and need repairing or replacing, but this is true of almost all technologies. A lack of electricity in many spaces was caused by humanitarian operations failing to repair or replace technologies – or, in a great number of cases, failing to provide any electricity connections in the first place. In this way problems with energy can be said to face institutional intermittency rather than technical intermittency, as it is often a lack of responsibility or ownership that prevents power from being available for communal services.

Institutional intermittency was both an unintentional act (organisations being too disorganised and resource-constrained to be able to power all community facilities) and an intentional one (power for operations was prioritised over energy for refugee homes, businesses and communities). While this may seem to make sense in a resource-constrained environment where money is not readily available, in situations where some needs might often be seen as more pressing than others there was little evidence of limited budgets to spend on energy. In fact, in one example, several millions of dollars from a donor were made available for solarising playgrounds while health clinics in other camps in Rwanda did not have power (UNHCR 2017a). This raises questions around who is making decisions about energy priorities in the camps and how.

The cases presented above highlight that sometimes humanitarian provision of energy in the camps can be largely irrelevant to refugee lives; sometimes power arrives accidentally or not at all, occasionally the impacts of humanitarian intervention seem to have unexpected effects on communities and the intermittent provision of energy had a number of complicated impacts. These stories paint a negative picture of humanitarian energy interventions, and further research might uncover evidence to outline the impacts of such projects. However, the point I would like to make is about intentionality. In all of the examples above, and the earlier evidence in this chapter, few concerted or considered efforts by agencies or implementing partners on energy could be found. We can therefore question how planned or intentional these programmes are, as much of the evidence seems to point towards limited attention paid to energy. This suggests that energy within refugee camps is not prioritised or provided

comprehensively by agencies, NGOs or humanitarian partners. The motivations and judgements underpinning this lack of prioritisation and the choices being made on energy provision will be considered in the coming pages.

Energy Provision and Its Discontents

The Value of Power and Value Judgements

How and why is energy valuable to us? On a day-to-day basis the importance of energy can often be forgotten, but in its absence we notice how small our lives become without it. Energy sources are often considered secondary to the benefits they bring. For example, we value not necessarily the electricity that powers our kettle but rather the hot cup of tea that comes from having boiling water, and having a mobile phone is a visible benefit whereas the power needed to charge it is ‘invisible’. For this reason practitioners often highlight the fact that energy ‘enables’, and that access to energy technologies and the use of those technologies are thoroughly intertwined (Practical Action 2019). For example, the interviewee cited below suggests how energy becomes a linchpin that links basic human needs with a higher quality of life. In this excerpt, the interviewee suggests that energy is often invisible because we are focused on the benefits it brings – such as a hot shower, a good cup of tea, the ability to cook our dinner and watch TV – rather than the energy source or technology underpinning the uses of energy.

Energy is underneath. It underpins so much of human activity; we need to see it as cross-cutting and embedded within people’s lives ... it has gone ignored for so long by the humanitarian system that it needs to ‘invent a new narrative’ to succeed in the highly competitive world of humanitarianism. We see it everywhere ... energy, electricity, firewood, batteries, sticks for lighting, and the generators. And then I am telling people ‘this is important’ and they are too busy typing on the computer or texting on the phone to listen. I say, ‘That is using the energy too, you know’, and they roll their eyes at me. I shout and say ‘listen’ but no-one is caring: energy for me is not the same as energy for them. They are teeth sucking, and I am thinking of people in the dark.

You see, this is underpinning everything. If you have no battery, you have no torch. If you have no panel, you have no phone charging business. If you have no diesel, you have no lights or fan. If you have no wood, you have no food. We could make all the lists and show them [the camp operators] but do you think they would listen? I am not sure, I think they would say, ‘See, they have some energy already, it should be enough, it is not our responsibility, we do not have the money’. Tsk, I am getting angry again. Come, have tea

with me ... [laughs loudly] WAIT, how will we have tea with no kettle?! You see, it [energy] is in everything we do. Luckily, we have a kettle. (Energy practitioner living in Kenya)

The 'value' of energy in the camps was a complicated construction. As well as the social and economic values of energy there were also multiple views on why energy mattered, focusing on its perceived benefits and worth. Here we can ask ourselves a challenging question: how much energy is needed for 'quality of life'? While many would consider the answer to this to be subjective, UNHCR have outlined the minimum amount of electricity that is needed for refugees 'to satisfy their energy needs in a sustainable manner, without fear or risks to their health, well-being and personal security' (UNHCR 2019a: 4). UNHCR's recent energy strategy outlines a clear minimum level of electricity access for refugees (although these levels are rarely met). The strategy states they are seeking to ensure that 'refugees have access to 200 Wh/ household/ day, allowing for basic lighting and connectivity' (UNHCR 2019a: 19).

To understand these figures, this is considerably less energy than is required for certain appliances – for example, a standard light bulb is 60 watts whereas a kettle is 1,800 watts. Due to increasingly efficient appliances charging a smartphone is a lot less (between 2.5 and 5 watts if charged efficiently) and a standard phone charger 7 watts, while a laptop is between 80 watts and 250 watts depending on the make and type. As these figures highlight, only providing 200 Wh (watt hours) a day requires serious choices about which appliances would receive power and which would not. Other standard western appliances would not be able to be considered with such minimal access to electricity – for example, an electric stove (2,000 W), desktop computer (450 W), fridge (220 W), hairdryer (2,000 W) or washing machine (500 W). Generally, 200 watt hours of electricity equates to being able to power one or two light bulbs for a few hours and being able to charge a phone once a day.

We can question whether this level of energy is an appropriate amount to meet 'refugees' energy needs, prioritizing renewable energy technologies, [and] enhancing livelihood opportunities' (UNHCR 2019a: 19). However, it is important to note that access levels provided by humanitarian organisations in Rwanda and Kenya are currently far from meeting the minimum standard of 200 Wh a day for every household, with many refugees not supported with electricity access at all. The provision of basic solar lanterns to some households in the Rwandan camps and Kakuma has been selective and has not reached all households, and in any case many of the basic lanterns so far provided do not amount to the level stated by UNHCR as the minimum. Even the newest model of the Sun Bell Bright

lantern included in some humanitarian responses as a core relief item is only 5 watts (Sun Bell 2019).

UNHCR's target of 200 Wh is equivalent to tier 2 in the World Bank's Multi-Tier Framework for energy access. According to the Bank's standards, this should include enough power for 'general lighting and phone charging and television and a fan', be equivalent to more than 73 kWh (kilowatt hours) of annual consumption per household and provide a minimum of two hours of power per evening and an additional four hours in the daytime (ESMAP 2015: 6 and 77). While this yearly figure is technically equivalent to the 200 Wh per household per day figure chosen in the UNHCR Energy Strategy, the hours per day or night and the annual consumption are not mentioned within the UNHCR document – perhaps deliberately, in order to avoid questions about how to achieve large-scale electricity supply in refugee camps. As is evidenced throughout this book, the levels of access provided by humanitarian organisations in refugee camps for households in Rwanda and Kenya are very far from these amounts of power.

I have included these figures here to draw attention to two elements: firstly, the energy needed to ensure quality of life for refugees has been politically determined by UNHCR as 200 Wh per day per household. This strategy was produced without consultation with refugees and is widely acknowledged to be currently unachievable using existing humanitarian practices. Indeed, when I asked one of the humanitarian practitioners involved in the production of these guidelines his opinion, he responded:

It isn't 200 Watt hours anyway, just 200 watts. Just enough to switch things on and off, not to have multiple hours of power. They [the refugees] will never get 6 hours of power a day. We can't afford that and won't do it. The governments don't recognise tier 1 as energy access, so we had to choose tier 2. But it will never happen. It is just a number to keep the World Bank and the donors happy. No-one in UNHCR has any intention of making that happen. Most don't even know about the figure. It is buried in some energy strategy no-one has even read. At some point in the future someone will take down that PDF and there won't even be a record that it was a thing. Good luck trying to get anyone to enforce it. UNHCR won't ever be told what to do. We just decide, they put a number in a document, then move on, regardless of the realities. (Humanitarian practitioner in Addis Ababa, Ethiopia)

This statement highlights the political nature of decision-making in UN organisations. In this case as many national governments (such as the Government of Rwanda) do not accept tier 1 as basic energy access, they set a minimum standard for development or humanitarian programmes that offer tier 2-level household power or above. As a result humanitarian

organisations are ‘forced’ to present higher levels of power to aim for in their strategies, but, in reality, may have little intention of implementing such standards. This demonstrates one specific example of how the politics of life is operating in refugee camps, and shows the role both national governments and international organisations like UNHCR have in deciding on the quality of life for refugees.

I also draw attention to these standards because of the political nature of the value judgement on what constitutes a minimum acceptable level of energy access. The World Bank and other organisations often refuse to state what level of access counts as ‘modern’ access: is it tier 2 or higher levels of electricity that can power multiple appliances, such as tiers 4 and 5 – which are generally the levels of power available in the global north. Rather, the Bank’s Multi-Tier Framework offers a relatively neutral way of measuring access without proposing specific targets. The UNHCR strategy, however, does chose tier 2 as its minimum standard. This represents a political value judgement on how much energy is enough. In this way the strategy portrays a vision that UNHCR is providing ‘modern’ energy for refugees, whereas really tier 2 is just a couple of light bulbs and is very far from what most people would consider an acceptable level of power. This is a debate which rages on in the energy-access sector (Pelz, Pachauri and Groh 2018), with many authors agreeing that ‘the middle tiers are misleadingly low’ and that ‘73 kWh/year is barely enough to power lights and a phone charger, while a single family refrigerator needs 300-500 kWh’ (Moss 2017: 1). However, this debate does not seem to have reached the humanitarian sector yet, as many humanitarians I spoke to were of the opinion that tier 2 access was more than enough for refugees.

What is important for energy is the use – not the technical specifications. We have basic stuff or premium kits – we sell functionality not technology. You need 10 hours of power for your home and restaurant a day – here, have three, four lights, torch, radio, and maybe a TV, and the battery and connector. Maybe that is 50-60 w panel, and over 200 watt hours. But it is the use that matters, the functionality. People will pay a lot for that, even if they have to do it over time. (Humanitarian worker living in Rwanda)

I present these arguments to highlight how opinions on energy access in refugee camps matter in terms of the politics of life in humanitarian settings. In the example provided above on UNHCR’s energy strategy, political choices are being made about what counts as access to energy, and these choices are often made without input from refugee communities. While UNHCR provides one example of an institutional decision on energy, many other organisations such as WFP and FAO (the UN’s Food and Agriculture Organization) also have similar targets and strategies for cooking needs in humanitarian settings. We can use such examples

to open up the discussion on whose knowledge matters in the politics of living: who is making which choices and how does this matter for energy access? As will be further evidenced in the sections below, refugees are often securing energy for themselves rather than waiting for the humanitarian provision of services. And, as such, whether or not UNHCR decide that 200 Wh is an appropriate amount may be relatively immaterial to the lived experience of many refugee families. However, this discussion is included here to understand the types of political judgements being made within all parts of the humanitarian energy system.

Value judgements underpin the politics of living in refugee camps. This is evident in both humanitarian inaction on energy and the written strategy documents produced by agencies. In this chapter I have tried to contrast what energy means to refugee families with the minimum standards imposed on communities. In the case of UNHCR's energy strategy, a concrete figure of 200 Wh per day per family is provided to establish this and provide a narrative that energy provision should be for protection needs. Global organisations are trying to change this narrative and ensure that humanitarian commitments on energy are progressive and ambitious (GPA 2022; UNITAR 2019). However, the reality is very different on the ground, where delivery of services is still focused on basic provision. Independent access to energy services by refugee communities is a political issue, and may undermine the current 'protect and provide' mentality of the humanitarian sector. Independent access challenges the self-reliance narrative put forward by UNHCR and other agencies: in terms of energy, refugees are already largely independent and self-reliant – so encouraging them to be more autonomous would be difficult, if not redundant.

There are disparities between the perceptions and values of refugees themselves and of the humanitarian organisations that support them, and in the levels of knowledge and experience on energy between these two communities. Refugees inherently valued energy as a way of improving their quality of life and were spending considerable amounts on providing it for themselves. Yet many humanitarian practitioners did not recognise either the existence or value of energy in these spaces. The politics of perception is important for energy in refugee spaces because without an accurate understanding of energy in refugee camps, humanitarian organisations will not be able to support households in improving their quality of life. Power levels, both for physical electricity and in terms of social power dynamics, were unequal in the camps, with many humanitarian organisations perceived as not having a role in energy provision at all. Choices are being made on how people access energy and how much energy support refugees receive. In many cases these choices are selective and result in inequality in access.

We can question why that is and which value judgements and practical reasons sit behind the lack of energy access in refugee settings. This chapter so far has described some opinions on how energy is provided in camps. We will now turn to examine how this knowledge is reflected in humanitarian response and political choices on energy.

The Politics of Knowledge and Choices on Energy

Political perceptions on energy knowledge within refugee camps was contested. During fieldwork many international workers and NGO staff members within the camps claimed that ‘refugees know nothing about energy’. For example, one staff member – a humanitarian practitioner in Kigali, Rwanda – stated, ‘there are no renewables here [in the camps]’, and became confused and irritated when shown photos or examples of solar home systems and lanterns. Some of the camp authorities took a deliberate line that ‘there is no energy here’ (in the camps) in order to gain more funding and support to improve energy access. Field workers from UNHCR, for example, often stuck closely to the narrative of limited energy access and the importance of creating new forms of self-reliance in the camps, without any acknowledgement that many households were already securing and paying for their own energy.

As the quotes below demonstrate, some specific types of knowledge on energy are valued within the camps. Knowledge on how to secure more funding for energy programmes in the camps, on climate change and the self-reliance of refugees, and on the potential for cost savings for the humanitarian system was particularly highly prized. This knowledge focused on donor-driven priorities and often used phrases such as ‘outcome statements’ and ‘doing sustainability’ instead of talking about people obtaining access to electricity. In many ways this knowledge is not actually about energy or its benefits at all; it is about how to sustain the humanitarian system with increased funding and how to ensure that donor priorities and ways of working are met.

Part of my research involved engaging with global policy-makers and practitioners during workshops and events in European and other western contexts. During these events I was often able to conduct short interviews with global interviewees in the margins of discussions, or ask specific follow-up questions about something mentioned in the workshops. The two sets of quotes below are from just such occasions, where I was able to ask two officials from UNHCR about their perspective on energy in refugee homes. Both interviewees had worked at the field level in camps before moving to more senior global-advocacy and donor-facing jobs. When I asked about local knowledge on energy in the camps, this produced interesting answers:

Site-specific analysis with UNHCR camp managers on energy can be higgledy-piggledy. You go there, you ask about energy, and they say, ‘No, there are no renewables here’. Then you look: forty solar home systems. Later you ask, ‘Well what about all these?’, and they say, ‘Oh, people bought [them] themselves, so they don’t count, we didn’t provide them’. All the time while talking about how refugees need to become self-sufficient and less of a burden on the humanitarian system. Energy and people’s use of energy is just not understood by many people – in the camps, certainly not. The global level can inform the wider system knowledge, so we can test our outcome statements. But when we ask in the field, they roll their eyes and ask if this means another day in the camp, asking people there our questions. When people face a problem in the camps with their new renewable energy, they go back to their old ways of doing things. So, sustainability is difficult. People are capable of buying better alternatives, but when things get difficult with energy they give up. (Energy practitioner in Kigali, Rwanda)

What is wisdom for a refugee? We are taking a very academic approach but we need to also think about what that means on the ground. The first type of energy they need is lighting. I analyse then I decide. You don’t need to scatter energy: just decide a way forward. You decide for them, the people at the bottom of the pyramid. The community [refugees] plays a big role for NGO sustainability: you need to keep them going so they can feed you [humanitarian organisations]. We need to work on how the community understands what we are going to bring them. We should come up with the things and programmes for them: it is essential for the success of the project. (Humanitarian practitioner in Nairobi, Kenya)

These comments were typical of many senior and international actors in the humanitarian energy space, with many suggesting that global knowledge was more important than field-level information. As evidenced in these comments, ‘practical’ knowledge (knowledge directly about energy systems, how much energy costs and where it is available, how it is used and what it means to people within the camps) did not seem to be valued by the camp authorities or staff members within the camps. Only some types of knowledge about particular household energy sources mattered. As seen above, one interviewee suggested that if people in the camps had bought solar home systems themselves this did not ‘count’, because the humanitarian system did not provide them for refugees. This suggests that there is a mind-set that only humanitarian aid provided through a traditional donation model can be used to solve the problem of household energy. It is an attitude that was common among NGO staff and field workers, who propagated a narrative of beneficiaries as powerless people who could not assume responsibility for their own energy needs as they do not know about energy or understand it. A particularly stark example of this is provided in the question ‘What is wisdom for a refugee?’, as

cited in the quote above. This interviewee then went on to explain how he knows much ‘more’ about energy than the refugees, and so he and his institution should be the ones to ‘decide a way forward’. We can critically question what this implies about different forms of knowledge on energy use and whose opinions matter. Clearly in the case of these interviewees, knowledge from humanitarian practitioners was more important than information from refugees themselves.

There was also considerable misinformation and confusion on energy in the camps, particularly among the camp authorities and NGO staff workers. While energy is quite a technical subject, many staff members did not understand the difference between energy (which is an overarching, umbrella term for anything that can be made rapidly hot or cold or switch on or off, and can include sources of fuel and electricity as well as appliances and supporter objects) and electricity (which is focused on power sources and electrical appliances).

At several points during my research I was able to ask field-level humanitarian practitioners about energy and electricity. In one such case I interviewed a male staff member working for an implementing partner of UNHCR in Kakuma. When I asked specifically about electricity sources and uses for refugee homes in the camp, he commented that ‘for electricity, our biggest space is the stove production centre’, so we went to visit it. He stated, ‘We produce a lot of our own electricity – we will show you the site; the women there are making it themselves’. However, the site turned out to be producing cookstoves manually, and had no electricity access at all. The centre was producing cookstoves and some pots, and had a small agricultural plot attached where vegetables were being grown and crickets harvested. It was very interesting but had nothing to do with electricity, and did not even have basic lighting available. When I asked the implementing-partner staff member about it, he replied: ‘This is energy, it is the biggest type of energy we do. Every day we are making the stoves here’. This opened up a discussion about the difference between energy and electricity. We agreed the centre was very interesting but then started discussing why it did not have an electricity connection. The staff member commented on electricity: ‘Oh, like power for the computer: this is not energy for refugees. Energy for refugees means cooking stoves and pots like the ones we make here. They do not have computers or phones so they are not needing this type of power for computers’.

There was a considerable difference in the types of knowledge present on energy in refugee settings in Rwanda and Kenya: while refugees themselves are largely determining their own energy-access needs, staff and international policy-makers demonstrate a considerable lack of knowledge on the direct energy situations in the camps. Staff narratives focused much more on donor programming and humanitarian

aid initiatives. This can lead us to question whether the most informed people on energy (refugees) are therefore being consulted and involved in decision-making. Is their knowledge being embedded within humanitarian responses on energy, and what are the implications of misinformation and lack of relevant knowledge being used in policy-making and intervention designs?

Here the politics of humanitarianism (Fassin 2007) becomes visible, with humanitarians deciding which knowledge matters and only valuing certain opinions. In some cases agency and NGO interviewees would also stick to their own narrative even when presented with alternative information that suggested their knowledge about energy was not correct. This highlights how the politics of life is linked to power relations between communities, and that many refugee voices were not valued in discussions on energy. Humanitarians were repeatedly labelled ‘experts’ even when they had little energy background and, in many cases, contributed to the misinformation and disorganisation of energy provision in the camps. In this chapter I have suggested that in many cases refugees’ knowledge about the levels of energy they require and use is considerably better than that of the humanitarian practitioners interviewed. This leads us to question not just who knows about energy in refugee camps but also who is responsible for providing energy access. Who, after all, has power – literally and figuratively – within the camps? Inequality is one of the core components of the politics of life: some actors will always have more power and control of resources than others (Feldman 2012). As Didier Fassin suggests, ‘the politics of life, then, is not only a question of governmentality and technologies, but also of meaning and values ... [it represents] a production of inequalities’ (Fassin 2009: 44). In the case of energy in refugee camps, access to power is literal as well as political. Access to electricity is inequitable: many field workers and staff had smartphones and high levels of electricity access, while households within the camps had comparatively less than this.

These inequalities were recognised by many refugees and staff interviewees throughout the fieldwork. For example, in the story below one interviewee drew particular attention to the difference between energy ‘for us’ and ‘for them’ – remarking on humanitarian workers within the camps who viewed energy as essential for their own needs (to work using a computer in air-conditioned offices) while questioning the value of energy for refugees (saying it was not an immediate relief item, so ‘why do they need it?’). One of the humanitarian-agency staff members I met was keen to discuss the differences between energy for refugees and energy for humanitarian staff members. He spoke with passion about energy and his upbringing in rural Kenya. In the margins of an international event, we sat discussing who energy is for:

Energy is somehow my job now. My job [description] does not say ‘energy’ in it anywhere, but I am trying to do it and I am known as ‘the energy guy’ – like I can ‘do’ all the energy by myself, I will just plug in it and BOOMMM! [loud gesture and laughing]. So energy means more to me than it does to the [humanitarian] operation, it is more important for me and to me. But I am also meaning that they [the humanitarian operation] do not think energy is as important for refugees as it is for them. They think, ‘My phone is so important, I must have my computer, if the air con is off I cannot do anything’ and if there is no power, they are getting very angry with me and saying, ‘Fix it now, or things will happen’. It is everything for them really. But they also think it is not important for the people in the camps, people in the villages, in the sections – ‘It is not an essential item, why do they need it?’ they say. ‘Why do you?’ I always ask them back [laughs]. I am not a very popular person for asking this question. (Humanitarian energy worker in Nairobi, Kenya)

This interviewee was very well informed about energy needs in the camps and was concerned with the issue of inequality, drawing attention to the question of why some people perceive energy as more important for themselves than for others. He provocatively asked whether staff members think they deserve a higher quality of life than refugees, and reflected on what this says about the structure of the humanitarian system. The inequalities implied within the exchange of ‘I need electricity but refugees don’t’ was common in the camps, and when asked about energy uses many practitioners replied that there were no electricity sources used in the camps and that all the refugees relied on firewood for cooking. This was empirically inaccurate. When challenged interviewees were often dismissive and critical of refugee households, suggesting that if refugees are ‘rich enough’ to afford electricity then they should not be refugees.

The opinions of humanitarians have been selectively cited in this chapter, and it should be noted that many humanitarian energy specialists do not share these views. However, the types of comments included here were common within my interviews and exchanges. Such statements often reveal whose lives are valued in terms of energy: refugees or humanitarians. Fassin suggests we can understand such values by investigating ‘the political disorder of the world: the inequality of lives’ (Fassin 2007: 512). For energy access, lives are assessed in terms of who is valued (which people are deemed relevant, respected, worthwhile and deserving of energy) and who is not (people who are deemed unimportant, unessential, inconsequential and undeserving of energy). Value judgements are being made on who deserves energy and who does not. A clear pattern emerged in this research whereby people deemed ‘beneficiaries’ were relegated to the latter category of those undeserving of modern levels of energy access,

while other communities (local workers and international staff) were classed as needing energy.

One of the refugees in the camp also drew attention to this issue, as described in the quote below, suggesting that institutions within the camps have electricity but they will not extend this to households. Referring to this level of provision as ‘big’ electricity (in this case meaning national-grid or grid-equivalent levels of power) the interviewee was angry about the differences between electricity in her home and in staff homes and nearby villages. She suggested that laziness was the reason: that the staff members would not connect the camp because it would be too much work for them.

There is the big electricity, but it is not for us [gestures overhead at the grid connected wires]. They will not do it [the institutions responsible for energy in the camps]. It would be so convenient to have electricity in our homes. Some could even pay for it. But they will not do it because it will be too much work for them. They go home in the evenings when it is getting dark [most of the camps have an informal curfew of 5–6pm] and they do not stay here in the night when it is dark. What is there to do then? They go to their homes with electricity and they relax, they watch their DVDs and listen to their music. But they do not want to do the work to let us have that too. (Refugee living in Rwanda)

The theme of anger and discontent about energy within the camps was present in many of the interviews I conducted. During a visit to Kalobeyei, I met a South Sudanese woman who invited me into her home to discuss solar lanterns. She mentioned a number of issues she was angry about: limited engagement from UNHCR staff despite their logo being on the walls of her house, the inadequacy of the lantern they had provided her with and how humanitarian staff were not listening to her. Her statement that UNHCR staff do not ‘know what energy women need’ was categorical and well evidenced in the examples she provided. After some initial exchanges she commented:

You are welcome here, because you know about the lights. They are so good for us, and now we have lights in our home. The UNHCR people, they don’t care about this. I am not inviting them into my house, they have the name on the walls and that is enough. We used to have the blue lantern, my neighbour still has. But I am not liking this as it has that name on it and lots of silly things. These little ones [gestures to lights charging on roof] are very good. We leave them there on the top all the time and they are lighting the whole area inside. It is just enough for us. I am very happy we have them, and now you can sit inside with me and talk about anything. The lights came with the house. They were bringing us here and said it would be good to sit under the new sun, in this new settlement. The old place [Kakuma] was too crowded

and the children did not have space to play near the house. I wanted to come and I saw all the space, and the lights, and so I moved here with my little children. I have good English and studied in the schools, all the schools in the other camp [Kakuma], because I know you need to read, always to read everything. To do the forms, and to choose to come here, you must be able to read. And in the night you can read now with the lights. (Refugee living in Kenya)

While this interviewee was clear about the uses of energy and why it was useful for her, in many humanitarian discussions the importance of energy was reduced to one or two key elements – for example, the use of sustainable energy sources to reduce tree cutting and deforestation or the provision of solar streetlights to protect women and girls. While safety of movement at night was mentioned occasionally by refugees during my research, it was almost always in the context of physical safety from accidents rather than because of violence against women and girls (VAWG). While gender-based and sexual violence is a serious issue many current studies now do not support the argument that firewood collection presents one of the main risks for violence, as the majority of gender-based violence is carried out by partners and family members in homes: ‘Most evaluations conclude that the root causes of VAWG are complex and cannot be addressed by the distribution of energy products. Findings suggest that firewood collection provides a convenient context or location for rape, but should not be viewed as its cause’ (Parke and Fraser 2015: 2–3). Similarly, many narratives on humanitarian cooking suggest that clean cookstoves can reduce violence; however, this is likely to be a technological panacea developed by humanitarian agencies (Abdelnour and Saeed 2014). While solar lanterns and household lighting can be useful for enabling women and families to feel safer, many interviewees in the course of this research suggested that one of the main reasons for this is to avoid thieves and physical accidents in the night. When asked openly about energy, instead of targeted questions which pre-supposed a link between firewood collection and violence, many of the women interviewed were vocal about the range of benefits of energy, which were not about protection from gender-based violence.

Overwhelmingly, the value and importance of energy to refugee communities was not understood by humanitarian practitioners. While this is particularly true of non-energy people – such as humanitarians working on WASH, shelter and protection – it was also true of staff directly involved in the provision of energy. All the stories below come from interviewees who had a key role in designing and delivering energy products and services to refugee camps: showcasing a shocking set of narratives that reveal a number of prejudices and value judgements about who deserves energy,

how much energy people should be allowed and that humanitarians can be the only people to provide energy in camps. The humanitarian politics of life (Fassin 2007) comes through strongly in these examples, and I was struck during the interviews how different the views of humanitarians were to those of refugees.

While many interviewees made such comments, there is one standout example that is typical of the division between the views of refugees on energy and the views of some humanitarians. In the story below the interviewee is convinced that people in the camps are ignorant about energy, suggesting that ‘they have no energy knowledge’. This was a particularly challenging interview, especially as the interviewee was not willing to listen to other pieces of evidence or knowledge from the field. The interviewee also questioned whether refugees even ‘know what they need’. In this case his opinion was not borne out in the direct experience of the camps. But who was an established academic who had been in the humanitarian sector for at least twenty years. His opinions were in direct opposition to my own and at several times during the face-to-face discussion I had to pause the interview under the pretence of getting a cup of tea or using the bathroom, in order not to lose my temper with him. When I asked if he thought we should design projects inclusively, he responded:

Oh yes, well you can try to be inclusive, of course. But do they know what they need? These refugees, they are just ignorant and from the poorest bits [of society], they have no energy knowledge. Asking refugees about energy is equivalent to asking people, ‘If you want to fly, what kind of dream liner do you want?’. You would be asking people who have never flown before and who are ignorant [about] it all. You will not get anywhere that way. You would be better asking me or my wife. At least she is cooking properly. If you leave them thirsty, you can be assured they will buy. If they can afford a Samsung S7 mobile, you can create demand for energy selling. You should not give them things for free, they will buy it for it sure. Just go there and say, ‘This is the best thing, the whites are using it, the rich are using it’. They will buy it. Even if it means not feeding their children. Energy at the moment is a vision defined by humanitarian operations. The people in the camp know nothing about energy. We need to start changing people’s behaviour and tailor-making interventions that suit our needs. The business concept works better and seems to fix the divides that are missing – private sector involvement is good. They [the private sector] will come here and bring more money, for us and for the people in the camps. (Senior humanitarian practitioner in Nairobi, Kenya)

This story raises the issue of who has decision-making power knowledge about energy within refugee camps, and how this knowledge is used. In this example the comment came from a very senior member of the humanitarian sector: someone with considerable power and influence

over programmatic and budgeting decisions. His opinions were fed by misinformation and prejudice, and yet have been informing international policy on humanitarian action for decades. This interviewee left me feeling both angry and demoralised about the possibilities for change, which was a common experience when interviewing humanitarian policy-makers on energy: often their opinions did not align with what I and many others had witnessed in the camps, and it was frequent for practitioner-interviewee comments to contain smatterings of racism. Ignorance on energy knowledge in these contexts was hard to challenge, even from my privileged position as a western researcher, and conflicted with the informed and open-minded opinions I heard from refugees.

These quotes are included here to demonstrate the role of inequality currently present within the humanitarian energy sector: energy for refugees is not valued in the same way as energy for humanitarians. This inequality was particularly clear with interviewees who contrasted the use of energy for refugees with the role of energy in staff offices and homes. The tone of the interviewee above was very negative and he acknowledged that 'energy at the moment is a vision defined by humanitarian operations'. Currently this statement would seem to be true of large parts of the sector, even with the introduction of new commitments to follow inclusive modes of engagement (GPA 2022; UNITAR 2019).

The theme of inequality on energy in refugee camps is one that runs through many interviewees' comments. Interviewees within the camps highlighted how unfair they found energy access there, as power for operations and humanitarian staff was considerable and refugees were able to access less power. A double standard of energy for refugees versus operational uses was common with interviewees who were far from the field. Some interviewees demonstrated a conceptual idealism with regard to refugee communities and humanitarian projects, portraying projects as necessary for the social good and displaying a hierarchical way of thinking in which western and global humanitarian organisations should provide energy for refugees.

Interviewees followed the lines of 'we' (often White, male, older engineers from the global north) should decide on the solutions and technologies and 'give' them to refugees. In the provision of energy for refugees, humanitarian practitioners often decide what is needed without really engaging with refugee communities at all. Interviewees questioned why refugees should be involved with the design of programmes, suggesting that solutions could just be given to them as they were located within refugee camps. Imposing aid is not a new concept within refugee studies (Harrell-Bond and Chambers 1986), and some energy-for-development literature focuses on inclusion and working with communities to develop solutions (Campbell, Cloke and Brown 2016). As the interviewee below

highlights, the rationale behind humanitarian action in this space is often guided by the perception that humanitarians are best placed to solve energy problems.

International interviewees mentioned protection and traditional humanitarian narratives during discussions and spoke openly about the need to ensure energy was provided in order that refugees can survive. One event was held in a Radisson Blue hotel in Kigali, with attendees in formal dress-wear as the event was followed by an evening champagne reception. I was able to interview a female, high-level NGO representative who was a senior decision-maker in the field of humanitarian energy. I asked her what she thought about the event and how we should engage with refugees in the camps:

What I am is a humanitarian. Today I heard a lot of energy experts talk like humanitarians. Once you have been to one refugee camp, you have been to them all. We just need to go there and install some renewable energy, it shouldn't be so difficult and I think working together we can do it. Energy is just not there in the camps, no-one uses it, they just survive and don't care about it or look to the future. When I think about the implementation of renewables, I think they, the refugees, need it and we will give it to them. We can walk straight out of this door [at the Radisson Blu] and straight into the camps to give it to them. We are here to help. (Humanitarian leader in Kigali, Rwanda)

As this statement highlights, some humanitarian decision-makers have a specific view of refugee energy: renewables can solve everything and policy-makers 'are here to help'. The narrative presented in this quote is problematic for a number of reasons. Firstly, it centres on the idea of 'our refugees': a phrase used often by UNHCR staff members, which swirls through discussions on energy for refugees, churning the imperative for 'protection' into a desire to control camps and the people in them. This is obviously problematic and, to a large extent in the camps in Kenya and Rwanda, irrelevant as many people have already created their own solutions for their energy needs. Secondly, this narrative links to issues of participation through the clearly expressed commitment to the idea that we 'just need to go there and install some renewable energy', suggesting that renewable technologies (in particular, solar lanterns) can solve energy problems in refugee settings. These statements imply a considerable lack of participation of refugees in programme design or implementation: 'the refugees need it and we will give it to them'. This idea is concretely reflected in the number of free distribution programmes in the Kenyan and Rwandan camps, which use delivery models that have picked a solar lantern or product and ship in thousands of bulk items to be given away for free to households.

The third, highly problematic, element of this narrative was the interviewee's lack of awareness of the positionality. This interview was conducted in the Radisson Blu, an extremely privileged space of wealth in Kigali, and many of the people around were wearing designer suits and expensive watches and drinking imported alcohol. The interviewee suggested that we could just 'walk straight out of this door and straight into the camps to give it [renewable energy] to them [the refugees]', without seeming to be aware of their positionality and biases of our situation. Statements such as 'once you have been to one refugee camp, you have been to them all' were not uncommon in the interviews conducted. Despite this, a considerable number of the international experts interviewed for this research had never actually been to a refugee camp.

This example suggests a number of questionable elements on inclusion and equality in the arena of refugee energy: critically, the majority of decision-makers and programme designers are from the global north or internationally based and have not spent considerable time in the refugee camps or working on energy. This may create a considerable bias towards international narratives and priorities on energy being embedded in projects in the camps. It also highlights that it would be challenging to include many of the refugee perspectives outlined in the earlier sections into policies and programmes on energy in the camps, due to the lack of knowledge and experience relating to refugee household energy of the people involved in designing and running these programmes. There were a great many examples of this type of paternalistic narrative within other interviews, such as one interviewee – a humanitarian practitioner based in Oxford, UK – simply saying: 'My refugees, I am completely immersed in what they need. We decide on that [the types of technologies], of course. There are only a few types of technologies and solutions that refugees need. It's easy to decide'.

The examples provided in these stories and quotes can be seen to relate to the politics of living (Feldman 2012) in that they reveal how some humanitarians view the lives of refugees. In some cases these views were actively negative: interviewees suggested that refugees were ignorant and could not be expected to provide energy for themselves. However, in others humanitarians were making what they thought were neutral assumptions about the types of energy needed for communities or presupposing that only humanitarians could be the ones to provide energy ('we are here to help'). This demonstrates how humanitarian action can restrain refugees' lives and limit their choices, by reducing 'the people it seeks to help to "mere" victims—objects of compassion, but restricted in their capacity to act as full subjects in their own right' (Feldman 2012: 155). In such examples we can see that the opinions of humanitarians help to construct the political systems of aid, which dictates elements of refugee life.

The politicisation of energy was common both in my interviews in the camps and in my work as a practitioner. The political dimension of refugee energy access has many elements. For some family members (for example, refugees who worked for NGOs), their status and role in the refugee system enabled them to access more energy and those jobs allowed them to charge their phones at work or have extra income to spend on energy. For others, political choices on energy were made for them: single-female-headed households and the elderly were often singled out to receive more support to enable them to access energy as they were classed as more vulnerable. The political dimensions of energy were difficult to explore within households during fieldwork as many people became upset when the conversation turned to why they might have less access to energy than their neighbours or others in their community.

A number of themes emerge from these sections, including the way that different types of knowledge are more highly valued than others in the camps and that there are unequal power relations within refugee settings. One of the most striking elements of the interviews within the camps was the frustration that households felt because humanitarian agencies were not doing more to support them on energy. The impacts of power (in both senses) and control on the everyday experiences of households were clear: a lack of knowledge by humanitarian agencies was limiting electricity access for households. Interviewees expressed clearly the fact that they understood the reasons for this (limited budget, time, skills and ability to change the humanitarian system), but it was rare for non-refugee actors to acknowledge the impacts that this was having on daily lives or to propose solutions regarding how to change this. The politics of power is contained within both the actions and knowledge of humanitarian organisations: access to energy was limited, but so too was knowledge on energy by practitioners. The politics of power played out throughout my interactions in the camps, but on returning to Oxford I was also able to reflect on the nature of systematic power underpinning some of the experiences of energy in refugee spaces.

Systematic Power and the Politics of Independence

Within the politicisation of energy for refugees lie the systematic limitations of humanitarianism, which to some extent dictate the role humanitarian agencies and partners can play in providing energy. As many interviewees suggested, many humanitarian systems are not currently institutionally able to provide dedicated resources to consider or deliver energy access in a meaningful way to refugee households and businesses. The challenges facing the humanitarian system in terms of yearly and limited budget cycles, restrictive institutional remits and a lack of technical capacity have been well known in the sector for a number of years (Bellanca 2014).

It has also been suggested that there is systematic neglect of sustainable energy for operations within camps (Gibson 2020). To date very few humanitarian agencies have had institutional incentives to reduce the costs of their energy usage or to switch to cleaner sources. In many countries energy provision for operations was not considered part of the remit of ‘providing clean energy for refugees’ as the energy was used by humanitarian staff and not by the refugees themselves. Similarly, international commitments by the UN to reducing emissions have not been actioned by individual operations. This is despite the fact that ‘46% of the UN’s greenhouse gas impact was from its facilities (headquarter offices, field offices, warehouses)’ in 2018 (UNEP 2019). Global priorities on climate mitigation are yet to filter down into the everyday practice of humanitarian organisations. As an example, when UNHCR was given €30.8 million by the IKEA Foundation to spend on energy in refugee settings, they did not spend those funds on decarbonising energy for their own operations.

It was not considered – energy for operations. All that money, it could have been spent on anything. UNHCR could have decarbonised ten country operations with that money. Think of the impact it would have had on emissions from diesel alone! It would have been so worth it. But it wasn’t even thought about. It was like energy for themselves didn’t count. It was invisible to them, the energy they use all day every day. It [operational energy] was not even thought of in all those discussions. (Humanitarian energy specialist based in London, UK)

Within these quotes we see a challenging picture starting to emerge: humanitarian responses fail to deliver energy for refugee households and for their own operations, while the provision of energy for refugee businesses was also neglected. Indeed, for enterprise use refugees own and operate many energy technologies independently of humanitarian systems. A maze of informal exchanges, trade and payment systems underpin energy services in refugee camps, and these are determined by refugees. Independent choices dominate energy markets, communities pay for access to both products and services, and whole cultures of exchange have developed around the core business of *supplying* energy (Rosenberg-Jansen, Njoki and Okello 2018). Importantly, in this context refugees are not just securing their own access to energy but are also supplying energy services. I spoke to dozens of refugee energy entrepreneurs in camps in both Kenya and Rwanda, all of whom had created their own livelihoods from selling energy. The examples of phone-charging businesses, TV suppliers and mini-grid electricity providers are clear examples of this. Refugee enterprises can be understood to be supplying not just energy access but also improvements in quality of life. Enterprises within the camps in Rwanda

and Kenya are supplying energy products and services to meet refugee needs – and therefore, I argue, are providing energy access.

Here a politics of self-reliance is visible. While we can recognise the entrepreneurial independence of refugee businesses who are providing a set of energy services independently for refugee communities, to a large extent these actions are not recognised by humanitarian organisations in the camps. We can consider the politics of living here (Feldman 2012), as refugees may therefore be seen as supplying energy largely independently of humanitarian organisations. If it is not the role of humanitarians to provide these services then we can question the role of humanitarian organisations, who seem to be acting neither as a socialist government that provides energy services directly nor as a liberal government that enables the private sector to supply energy. For energy for refugee communities, humanitarian organisations currently offer neither a supplier nor a regulator function. Therefore, we can ask whether they have a role on energy at all as many energy enterprises within the camps seem to be fulfilling this role. This question is political in nature as humanitarian organisations claim to be raising money and spending resources on providing the necessary services for refugee communities. If refugees are already largely self-reliant for energy, we can question what energy budgets are being spent on within humanitarian organisations and whether this is of any use to refugee communities.

This section was challenging to write as it openly suggests the failings of humanitarian organisations to meet the energy needs of refugees and acknowledges the impacts of this on communities. Further work would be needed to fully evaluate the impact of humanitarian programmes, considering both positive and negative results. However, within existing programmes and structures the politics of humanitarianism is clearly visible: institutional inaction on energy provision for refugees is the result of choices in which energy resourcing is not valued. Institutional restrictions, limited budgets and a lack of organisational capacity all contribute to this, but these occur after political choices have been made about the importance of energy rather than being neutral causes of poor energy planning and delivery. This should not be taken as an argument that humanitarian organisations should not implement energy programmes. Rather, a more focused analysis of new solutions and modes of working is needed to meet the energy needs of refugees. Humanitarian institutions may need to reflect critically on what is possible within existing organisational structures, and whether working with non-humanitarian partners and refugee communities directly may offer better results.

Chapter Conclusion: Facing the Limits of Humanitarian Action

Throughout this chapter we have explored the difficult issue of energy provision in refugee camps. In many ways no clear picture has emerged, with humanitarian agencies, NGOs, refugee enterprises and individuals all taking different roles in supplying energy. Responsibilities are blurred, refugee markets provide a surprising number of services and humanitarian provision has been characterised as intermittent and sporadic. The value of energy access and its importance to refugee communities is undeniable, but still humanitarian judgements on how and why energy is important show us a negative view of access. Finally, we have questioned the systematic constraints and limitations of the humanitarian system in providing energy – suggesting that humanitarianism today may well be failing to provide energy for refugee communities.

Much of this chapter focuses on the provision of electricity, and the supply of cooking fuels and technologies was often not mentioned during interviews. This could be because some basic cooking needs (such as the provision of firewood) were met by humanitarian agencies. But it could also be that many refugee communities felt electricity access to be a more pressing issue – one that limited their quality of life and restricted their choices – than access to cooking fuel. It should also be noted that this chapter, like the book in general, is contextually specific to Kenya and Rwanda. While many of the findings on energy provision are comparable with those in other East African countries, energy provision by humanitarian agencies is considerably different in the Middle East and South Asia. In Bangladesh, for example, LPG for cooking fuel is provided for refugees living in camps (UNHCR 2021b), while in Jordan large-scale solar mini-grids supply electricity for refugee homes and businesses (Lahn, Grafham and Sparr 2016). The scale of these differences is interesting in and of itself; however, further research is needed to understand why such diverse approaches to energy provision exist for displaced populations.

In conclusion, the evidence considered on energy provision highlights a number of issues. Firstly, the lack of knowledge on energy within many humanitarian organisations was striking. Even for some humanitarians who had energy formally within their job descriptions, detailed knowledge on energy needs and solutions was limited. Secondly, the mismatch between humanitarian expectations and refugee needs was considerable. Humanitarian staff members frequently commented that refugees should be happy with the small amount of energy given out, while refugee actors strongly advocated for additional supplies to be provided. Thirdly, the role of humanitarian agencies – and, in particular, UNHCR – was criticised for under-provision. If we set aside opinions on how energy is provided

and consider the issue of whether enough energy is supplied, the answer from refugee communities is clear: no and additional solutions must be developed. Within this mismatch, we start to see the politicisation of energy access emerge: a politics of choices and the political and practical limitations of humanitarian organisations. In the final chapter, we turn to consider why this matters and how the politics of energy access might be transformed in years to come.