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# Blended Finance Toolkit for Clean Energy Solutions in Humanitarian and Displacement Settings



# Introduction

**In the absence of any specific guidance, this document is the foundation of a toolbox highlighting, and supporting the development of, favourable blended finance solutions for clean energy projects in humanitarian and displacement settings. The toolbox is aimed at supporting energy specialists to develop market-based clean energy solutions in contexts that required blended finance solutions to support commercially sustainable interventions.**

The toolbox builds off a preceding report entitled 'Blended Finance Solutions for Clean Energy in Humanitarian and Displacement Settings: An Initial Overview and Lessons Learnt.' The report should be preliminary reading to this toolbox, as it provides an overview of blended finance mechanisms, their role in delivering sustainable energy solutions as part of the humanitarian response, highlighting key lessons learnt from their use in displacement settings and makes recommendations for their continued development.

This toolbox consists of three parts:

1. The first part of the toolkit provides a summary of relevant guidance documents, includes a high-level summary of developing a blended finance solution in humanitarian and displacement settings, and identifies relevant stakeholders and their input to developing such solutions.
2. Part two contains a summary matrix that identifies the most favourable blended finance mechanisms for a particular clean energy project e.g., modern cooking solutions, household electricity access,

livelihood opportunities, community space and buildings and/or decarbonising energy infrastructure. It also highlights the role of specific finance mechanisms in mitigating potential investment risks associated to market-based energy solutions in displacement settings.

3. Part three provides an overview of the three most promising financial mechanisms, as evaluated by the NORCAP Blended Finance Working Group, based on available information, their ease of development and potential impact to the humanitarian sector. Each overview provides a summary of the mechanism, its compatibility to different clean energy projects, high-level guidance on its use and directs the reader to existing resources that can support its development.

The three mechanisms explored in the first iteration of the Toolkit are:

- Direct funding for the removal of commercial barriers;
- Guarantee funds to alleviate commercial underperformance; and
- Results based financing.

This toolbox is expected to be updated periodically with summaries for additional blended finance mechanisms and relevant concept notes that can support the creation of relevant project proposals.

# Part 1: Guidance on developing blended finance solutions

## 1.1. Guidance documents

There is no published guidance on developing blended finance solutions for energy interventions in humanitarian and displacement settings. In addition, what blended finance guidance exists for energy projects tends to be focused on large national sized projects, which does not translate well to the humanitarian or displacement contexts that this toolbox relates to.

The Organisation for Economic Co-operation and Development (OECD) has, however developed a landing page and guidance for designing and implementing effective and transparent blended finance programmes. The guidance document is based on [five principles](#), all of which are supported with their own guidance documentation. The principles are as follows:

- **Principle 1:** Anchoring blended finance use to a development rationale;
- **Principle 2:** Designing blended finance to increase the mobilisation of commercial finance;
- **Principle 3:** Tailor Blended finance to local context;
- **Principle 4:** Focus on effective partnering for blended finance; and
- **Principle 5:** Monitoring blended finance for transparency and results.

In addition to the above the World Economic Foundation (WEF) have a [Blended Finance Toolkit](#), which includes a [How to Guide for Blended Finance](#) that was produced in partnership with OECD. As a global network for blended finance [Convergence](#) is also a useful resource. It is an online platform that connects potential partners, provides training, produces case studies and reports, and provides grants for the design of financial vehicles that could attract private capital.

Blended finance mechanisms are just one part of a market systems approach. As such the [Building Effective and Accessible Markets \(BEAM\) Exchange](#), which provides a knowledge exchange and learning platform for using

market systems approaches to reducing poverty, can provide additional support and context to developing successful and sustainable clean energy solutions.

In developing market-based clean energy solutions, it is important to understand the local context, the energy needs of the target population, barriers to traditional market development and the supporting ecosystem, which in turn will help to identify the most appropriate blended finance solution to address the identified market challenges. It is also noted that, with the possible exception of 'direct funding for the removal of commercial barriers,' additional internal or external support from a finance specialist may be required to develop the planned energy intervention.

It should be noted that this Blended Finance Toolkit is focused on supply side financing, i.e., supporting the delivery of clean energy solutions. It is therefore recommended that a supplementary toolkit is developed to financially (directly and indirectly) support the demand side of energy projects, i.e., the end-users of the proposed energy solution. This additional toolkit should focus on the role of developing a supporting enabling environment or ecosystem. It would, therefore, look at the role of livelihood programmes; cash-based interventions; access to finance and banking facilities; government policies on the right to work, freedom of movement, registration to support bank accounts, energy contracts, mobile phone contracts; and infrastructure (mobile phone masts) on market-based energy solutions.

## 1.2. High-level guidance on developing a blended finance mechanism

The following summary provides a high-level overview of guidance when developing a blended finance mechanism:

- A systematic and in-depth market and context analysis should be completed before the start of the project to identify the main barriers that prevent

the private sector from delivering products and services to the population of concern. This should include a stakeholder mapping and analysis of existing support programs for the purpose of determining if such programs would be competing or complementary to a blended finance solution, and to identify the right mechanism for the given context. Such an analysis should be repeated regularly to remain informed of evolving market dynamics.

- Some market barriers may require complementary measures. For example, without the right enabling environment (policies, the right to work, access to microfinance, market regulations, product standards, etc.) blended finance solutions could still face significant challenges and technical assistance may be needed to advise key government stakeholders.
- While blended finance mechanisms may address the supply side for energy products and services in underserved markets, they do not necessarily increase their affordability to the end user. In some cases, blended finance mechanisms may need to be combined with other financial mechanisms or enabling actions that can support the lowest-income customers. This may include price subsidies, loan guarantees, flexible payment terms, microfinancing, cash-based interventions, pay as you go payment models, and guarantee funds for defaulting accounts.
- In situations where there are multiple incentive schemes available, there is a risk of double-dipping or over-incentivising the market, leading to adverse consequences such as manipulation, program gamification and the submission of fraudulent claims or “results.”
- When designing blended finance mechanism, the following key questions need to be answered: 1) Which actors should receive the incentive, 2) What is the intended result, and 3) What amount of incentive is required to deliver the intended results?
- Monitoring and verification are a critical (although sometimes costly) component of blended finance programs and used to ensure that the desired results or outcomes have been achieved. The verification system should be both reliable and cost efficient, and the resulting data could also be used to identify the need for program adjustments.
- The selection of suitable partners is an important determinant of project success or failure, so conducting thorough due diligence and aligning

of shared capacities and interests is crucial. This applies to private sector service providers, financial institutions playing the role of fund managers, independent verification agents and other key stakeholders.

- The project design should factor in the eventual phasing out of the blended finance incentives and the transition to a self-sustaining marketplace.
- Finally, blended finance programs require nimble and responsive management oversight to succeed. Frequent adjustments are needed to adapt to shifting market dynamics, new external factors (i.e., natural disasters, geopolitical risks), constantly changing context, and evolution of the enabling environment.

### 1.3. Stakeholder participation

It is essential to incorporate the involvement of all relevant stakeholders during the development of a blended finance mechanism to increase its likelihood of success. The level of participation of, or input from, individual stakeholders may fluctuate throughout the project cycle, however, it is important to ensure their continued engagement throughout the process.

Effective stakeholder engagement is key to:

- Obtaining accurate and relevant data on energy needs, demand and market dynamics;
- Creating a clear economic model to help support the transition of an existing energy customer to a cleaner energy solution;
- Developing strong government support;
- Assessing the project’s commercial viability and the sustainability of the energy intervention;
- Assessing available skills and training needs to support the proposed project;
- Identifying donors and private financiers willing to develop innovative solutions for humanitarian and displacement settings; and
- Identifying champions who can support blended finance solutions.

Stakeholders can be technical, financial, political, or social. Table 1 provides a list of potential stakeholders and their key inputs into the development process.

**Table 1: Summary of key inputs from stakeholders**

Stakeholder	Key input	Stakeholder	Key input
<b>Displaced community</b>	<ul style="list-style-type: none"> <li>• Energy needs</li> <li>• Cultural considerations that need to be incorporated into the preferred energy solution</li> <li>• Ability to pay and micro-financing needs</li> <li>• Potential role in delivering preferred energy solution</li> <li>• Training requirements</li> </ul>	<b>Donor and/or private financier</b>	<ul style="list-style-type: none"> <li>• Communication opportunities and constraints to funding / financing blended finance mechanisms</li> <li>• Reviewing preferred energy solution (technical and financial)</li> <li>• Development of monitoring and verification process</li> </ul>
		<b>Financing institutions, guarantee holder, commercial funder</b>	<ul style="list-style-type: none"> <li>• Communication opportunities and constraints to funding / financing blended finance mechanisms</li> <li>• Reviewing preferred energy solution (technical and financial)</li> <li>• Supporting the development of the blended financial mechanism</li> <li>• Management of funds</li> <li>• Development of monitoring and verification process</li> </ul>
<b>Host community</b>	<ul style="list-style-type: none"> <li>• Energy needs</li> <li>• Cultural considerations that need to be incorporated into the preferred energy solution</li> <li>• Ability to pay and micro-financing needs</li> <li>• Potential role in delivering preferred energy solution</li> <li>• Training requirements</li> </ul>	<b>Energy solution providers</b>	<ul style="list-style-type: none"> <li>• Inputs to the assessment (availability, practicability and costs) of preferred energy solution</li> <li>• Inputs to the development of initial blended financial model</li> <li>• Inputs to the development of initial delivery model</li> <li>• Development of monitoring and verification process</li> </ul>
<b>Local government</b>	<ul style="list-style-type: none"> <li>• Local policy and regulatory requirements (energy and displaced communities)</li> <li>• Potential to extend preferred energy solution to local host community</li> </ul>		<b>Preferred energy solution provider</b>
<b>National government</b>	<ul style="list-style-type: none"> <li>• National policy and regulatory requirements (energy and displaced communities)</li> </ul>	<b>Development actors</b>	
<b>Humanitarian organization</b>	<ul style="list-style-type: none"> <li>• Advocacy for blended finance solution</li> <li>• Project management</li> <li>• Access to end-users</li> <li>• Assessment of supporting ecosystem</li> <li>• Assessment of protection risks associated to preferred solution</li> </ul>		
<b>Energy and finance expert</b>	<ul style="list-style-type: none"> <li>• Assessment (availability, practicability and costs) of preferred energy and blended finance solution</li> <li>• Development of initial delivery model</li> <li>• Development to initial blended financial mechanism</li> <li>• Technical and financial review of preferred energy solution</li> <li>• Development of monitoring and verification process</li> </ul>		

# Part 2: Blended Finance Matrix

## 2.1. Introduction

The use of blended finance mechanisms can be an effective tool for financing energy projects in displacement settings. Not every mechanism is, however, suitable for financing each type of project. The goal of this matrix, see Table 2, is to depict the level of compatibility of each blended finance mechanism towards various end uses, including modern cooking solutions, household electricity access, livelihood opportunities and productive uses, community spaces and buildings, and decarbonisation of energy infrastructure.

The evaluation of compatibility is based on evidence and conclusions from previous examples of blended finance mechanisms being applied in the field, as discussed in the preceding report. They are further complemented by an analysis of compatibility based on the characteristics of typical energy projects in each end use category, as well as the requirements for each blended finance mechanism to be successfully deployed. Notes are also provided to give additional guidance on each end use category and mechanism, including potential risks, drawbacks and pitfalls.

The most promising opportunities to use blended finance mechanism are identified by cells that are populated by 'xxx.' Where insufficient information exists to be able to draw conclusions a '?' appears in the cell.

It should be noted that the matrix is based on the best available knowledge to date. In addition, it is a generalisation of the financial instruments' compatibility to a potential energy end-use. The reader is therefore asked to maintain a critical perspective when evaluating new project opportunities, as: the blended financing landscape for energy projects in humanitarian and displacement settings is constantly evolving; and the selected blended finance mechanism should be the most appropriate to counteract the identified market barrier or commercial risk, as highlighted in Annex 1.

### Notes / Observations / Conclusions

<b>Modern Cooking Solutions</b>
One of the key issues preventing broader market adoption is the affordability of modern cooking stoves and associated fuel. Consideration should therefore be given to short term concessional financing and long term livelihood development to supplement a results based financing solution.
<b>Household Electricity Access</b>
One of the key issues preventing broader market adoption is the affordability of SHSs and other energy solutions, such as micro-grids and mini-grids. Consideration should therefore be given to short term concessional financing and long term livelihood development to supplement a results based financing solution.
<b>Livelihood Opportunities and Productive Uses</b>
When combined with PAYGo consumer financing models, guarantee funds can help to compensate equipment suppliers/ businesses for potentially higher risk of default amongst productive uses customers. This market is typically more difficult to serve due to higher value products and therefore higher commercial risks.
<b>Community Space and Buildings</b> (health centers, schools, etc.)
If possible, community spaces should be integrated into broader energy access projects in order benefit from blended financing strategies and economies of scale. On a stand-alone basis, community spaces should engage technical assistance during the design and implementation phases of an energy transition project and consider their impact with regards to potential blended finance solutions.
Where there is an existing diesel based energy system in place to power community buildings, there may be a business case to transition to cleaner fuels. This becomes more challenging where there is no existing power supply as additional funding would need to be found. Where possible, all new community buildings should be designed, funded and built with an integrated clean energy solution.
<b>Decarbonisation of Energy Infrastructure</b>
While institutional decarbonization projects can benefit from blended finance, they usually require equity funding (internal or grant funding) to undertake the initial energy assessment and to develop the business case. There is however potential for bundling projects into larger portfolios to benefit from economies of scale and supplemental financing through voluntary carbon markets, such as P-RECs.
Additionally, decarbonization projects with energy access for adjacent displaced communities could allow them to take advantage of certain impact incentives. The key concern with decarbonizing projects delivered through power purchase or leasing agreements is the termination clause associated with long term contractual agreements, which would need to be de-risked through a contractual guarantee.

Table 2: Blended Finance Compatibility Matrix

		End Use Category				
		Modern Cooking Solutions	Household Electricity Access	Livelihood Opportunities and Productive Uses	Community Space and Buildings (health centers, schools, etc.)	Decarbonisation of Energy Infrastructure
<b>Direct Funding (for the removal of commercial barriers)</b>		XXX	XXX	XXX	XXX	XXX
		Direct Funding can be very effective for addressing the affordability of the upfront capital investments needed by consumers to gain access to modern cooking solutions or household electricity. Direct funding can also support energy programmes associated to livelihoods, community spaces, buildings and decarbonising activities.				
<b>Technical Assistance</b>		XXX	XXX	XXX	XXX	XXX
		Technical assistance is universally needed to implement new projects and programs related to energy access due to the lack of inherent expertise on this domain within the humanitarian sector.				
<b>Risk Transfer</b>	<b>Insurance Policies</b>	?	?	?	?	X
		If used strategically, insurance policies can serve to remove specific risks from a project, and clear the way for private sector partners to enter. However, these policies are difficult to underwrite in displacement settings especially given the lack of information on actual risks and levels of uncertainty, and therefore are often expensive.				
	<b>Contractual Guarantee (termination clause for long-term agreements)</b>	?	?	?	XX	XXX
		Contractual guarantees and termination clauses could transfer the risk of early termination in displacement settings from the solutions provider to a third party (donor or hosted guarantee mechanism). In doing so, they could help attract private sector providers and greenlight projects that otherwise would be deemed too risky.				
<b>Market Incentives</b>	<b>Guarantee Funds (project under-performance)</b>	XX	XX	XXX	?	?
		Guarantee funds are challenging to structure, especially so that any adverse incentives are minimized. They also come with a high cost of monitoring and verification. That said, guarantee funds can be an effective tool in order to transfer risks (of default, of reduced revenues, etc.) of doing business in displacement setting. Due to the high costs of productive uses equipment, this could be a viable option to address this segment.				
	<b>Results Based Financing</b>	XXX	XXX	X	?	?
	In areas where few market incentives exist, RBF can attract new market participants relatively quickly; the challenge becomes the monitoring and verification efforts associated with tracking that results and impacts are being achieved.					
	<b>Impact Bonds</b>	X	X	XX	XXX	XX
	For impact bonds to justify their relatively high restructuring costs and make financial sense, the scale of the project would need to be relatively large. This could be applicable either to large-scale energy access projects or to a portfolio of community and/or decarbonization projects, although these may still need to be supported by a contractual guarantee.					
	<b>Enterprise Challenge Funds</b>	XX	XX	X	?	?
	Enterprise Challenge Funds can bring "crowdsourced" attention and resources to solve specific problems, and strong engagement from entrepreneurs. While this approach can be useful for generating new ideas and approaches, it is not recommended for wider rollout and scale-up of existing solutions.					

Key: XXX - Higher degree of compatibility    XX - Medium degree of compatibility    X - Lower degree of compatibility    ? - Insufficient information  
  Most promising application      Notes / Observations / Conclusions

# Part 3: Blended Finance Overviews

The following section provides a summary of favourable blended finance mechanisms, their assessed compatibility to different clean energy projects, high-level guidance on their development and directs the reader to existing resources that can support the development of the financial mechanism. The mechanisms outlined in this section were identified by the NORCAP Blended Finance Working Group as the three most promising financial mechanisms, based on available information, their ease of development and their potential positive impact to developing clean energy solutions in displacement settings.

Address knowledge gaps, which results in the attraction of private finance to energy projects in displacement settings, through Technical Assistance is likely to be a necessary and key component of any successful blended financing mechanism. In addition, Technical Assistance can be directly incorporated into any of the three finance solutions noted below. Although Technical Assistance can be a blended finance mechanism in its own right and

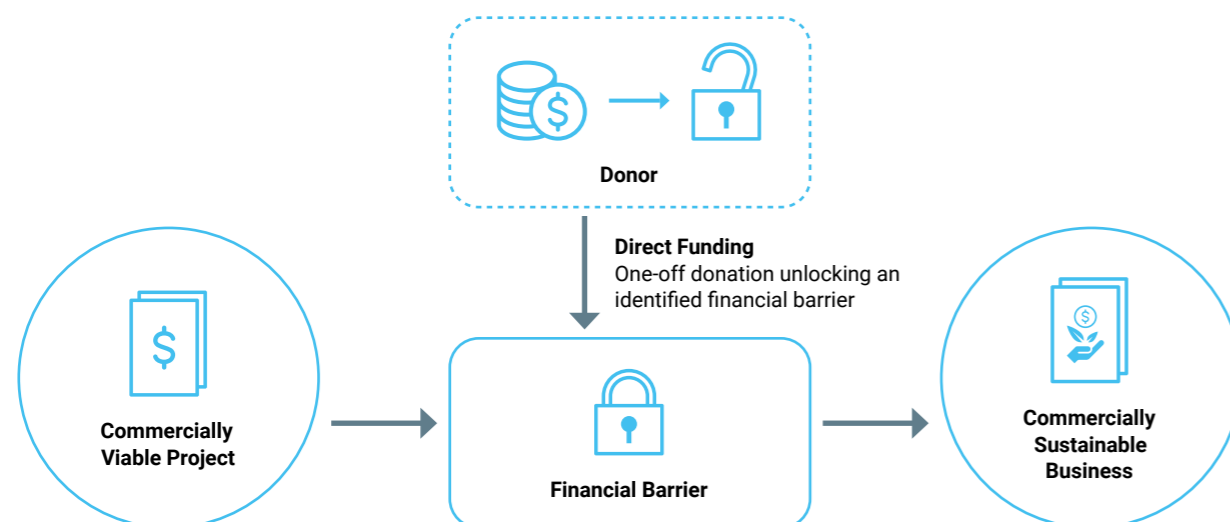
could be instrumental in the development of sustainable market-based energy projects, it is not explored in this toolkit as colleagues developing blended finance solutions will draw down on technical expertise or technical support grants offered by third parties and as such will not be developing technical assistance solutions.

## 3.1. Direct funding for removal of commercial barriers

### Mechanism overview

Direct funding from a donor is provided to unlock a barrier that is preventing an otherwise commercially viable project from commencing. Direct funding is in effect a grant but unlike traditional grants the aim of the one-off donation is to create a commercially sustainable business by removing an identified market barrier, as depicted in Figure 1.

**Figure 1: Overview of Direct Funding Mechanism**



**Table 3: Degree of compatibility of direct funding for different end user categories** as taken from Table 2: Blended Finance Compatibility Matrix

Direct Funding (for the removal of commercial barriers)				
Modern Cooking Solutions	Household Electricity Access	Livelihood Opportunities and Productive Uses	Community Space and Buildings (health centers, schools, etc.)	Decarbonisation of Energy Infrastructure
XXX	XXX	XXX	XXX	XXX

Key: XXX - Higher degree of compatibility ■ Most promising application

### Compatibility

Direct funding can be an effective financing mechanism to unlocking sustainable business models for addressing all listed end user categories, including modern cooking solutions, household electricity access, livelihood opportunities and productive uses, community spaces and buildings, and decarbonisation of energy infrastructure, as noted in Table 3.

### High-level guidance on developing a direct funding mechanism

Direct funding should only be used if: there is a clearly identifiable barrier that prevents the private sector from investing in a sustainable energy solution in a displacement setting; and the direct funding releases a proportionate investment from the private sector. It is anticipated that the market barrier would have been identified during the development of an energy intervention and acknowledged by all parties as the main barrier to delivering a commercially sustainable energy programme.

Financial barriers that may be relevant to displacement settings could include costs associated with construction, logistics, technology, appliances and import taxes for project infrastructure. Accordingly, project attributes that could be unlocked by direct funding could include but are not limited to the following:

- Modern energy cooking solutions:

- Cost of a vehicle for distributing fuel;

- Constructing a safe storage compound or refilling station for a cooking fuel that meets all regulatory safety standards;
- The initial cost of an appropriate cook stove in situations where the fuel is affordable but the stove is not; or
- Training technicians and users.
- Electricity access and energy infrastructure projects:
  - Upgrading existing electrical cabling within buildings and the extension to the new solar plant;
  - Strengthening roofing or foundations to support the solar solution;
  - Moving existing infrastructure to make space for the solar solution;
  - Replacing existing equipment with more energy efficient solutions;
  - Moving and transporting high-value goods in dangerous or volatile locations;
  - Providing technological solutions, such as battery storage in areas where alternative emergency back-up solutions are essential but not readily available;
  - Providing productive use or household

appliances, which once distributed, allow the private sector to sell services, including electricity, to the end-user;

- Training technicians and users; or
- Paying taxes associated with importing project infrastructure into a country.

When seeking direct funding from a potential donor, the project proponent should provide:

- An overview of the planned intervention;
- The environmental, social and environmental benefits associated to the project based on the existing situation;
- An explanation of why the identified barrier is preventing the development of a sustainable market-based solution;
- The cost associated to unlocking the identified financial barrier, i.e., the value of the grant being requested from the donor;
- The anticipated size of the investment being made by the energy solution provider once the identified barrier has been removed by direct financing;
- The expected annual value of the market once the barrier has been removed; and
- An assessment of the payback period, i.e., how long it will take the planned intervention to generate revenue or savings that equals the financial sum being requested from of the donor.

### Further reading

For more detail on Direct funding for the removal of commercial barriers, please refer to Section 4.1, of the Blended Finance Solutions for Clean Energy in Humanitarian and Displacement Settings: An Initial Overview and Lessons Learnt report, noted in the introduction to this toolkit.

Given that direct funding is similar to a grant, there is little published guidance on this topic. There are, however, several project examples that can be consulted to provide inspiration and the foundation for other solutions, including:

- Cohen, Y., & Patel, L. (2019). [Innovative Financing for Humanitarian Energy Interventions](#).

- OECD and WEF (2015). [Blended Finance Vol. 1: A Primer for Development Finance and Philanthropic Funders – Section 5.2](#).

- Patel, L., & Gross, K. (2019). [Cooking in Displacement Settings Engaging the Private Sector in Non-wood-based Fuel Supply](#).

- UNHCR (2017). [Niger Access to Gas Project](#).

## 3.2. Guarantee funds to alleviate commercial underperformance

### Mechanism Overview

A guarantee fund is money that has been set aside and earmarked to underwrite a project and acts as a formal assurance to the guaranteed party, in this case the energy solution provider, see Figure 2. As such, a guarantee fund mechanism provides direct compensation to, or assumes losses for, a specified negative event and in doing so offsets a financial risk associated to an energy intervention, which in turn facilitates private capital investment.

Such mechanisms can be tailored to address specific risks for a given project and ensure that funds are channelled to where they are most needed, thereby unlocking an identified barrier that is preventing private sector engagement. A local, regional, national, or global guarantee fund can be developed to enable more than one project and are therefore scalable in their nature.

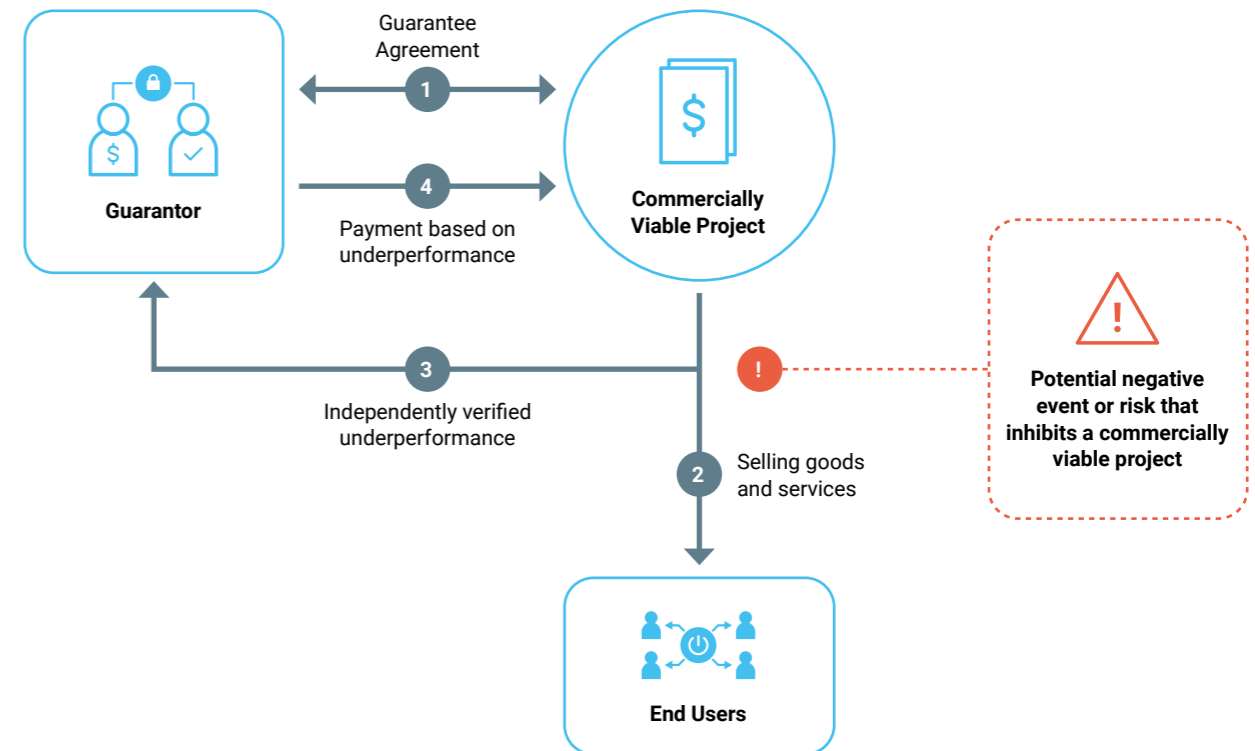
In general, guarantee mechanisms are complex and require significant time and investment to develop, with engagement from multiple stakeholders to ensure a context-appropriate design and prudent implementation strategy. If, however, structured and administered well, they do have the opportunity to remove specific barriers or risks from the market and attract new market participants to otherwise underserved areas.

Guarantee funds are challenging to structure, especially when trying to minimise any adverse incentives. They also come with a high monitoring and verification costs.

### Compatibility

Guarantee funds could support the development of livelihood opportunities and productive uses of energy due to the associated higher value of the solar products and to a lesser extent modern cooking solutions and household electricity access by de-risking project underperformance, as noted in Table 4. When

Figure 2: Overview of Guarantee Fund



combined with PAYGo consumer financing models, guarantee funds can help to compensate equipment suppliers/businesses for potentially higher risk of default amongst productive uses customers. This market is typically more difficult to serve due to higher value products and therefore higher commercial risks.

### High-level guidance on developing a guarantee fund

Guarantee funds can, amongst other things, underwrite risks associated to productive use and household energy access programmes in displacement settings by offsetting:

- Individual defaults: Is a guarantee that can be drawn upon if a customer permanently stops paying for a PAYG product. The customer would be deemed to be in default, and the system would be repossessed, at which point the company could claim compensation for a share of the loss that it has occurred.

- Portfolio underperformance: Is a guarantee that promises to compensate a company experiencing a higher default rate of default in a displacement setting than that experienced in the country in general.

- Limited access to working capital: Is a loan guarantee to a lending institution, which permits the energy company to access low-cost financing for commercial activities in high-risk markets, such as displacement settings.

- Low commercial income: A minimum income guarantee essential tops up the income levels of a commercial entity should it dip below an agreed commercial threshold.

Guidance for developing a new guarantee fund:

- A systematic and in-depth market and context analysis should be completed before the project start to identify the main barriers that prevent the private sector from delivering products and

**Table 4: Degree of compatibility of guarantee funds for different end user categories** as taken from Table 2: Blended Finance Compatibility Matrix

Guarantee Funds (project underperformance)				
Modern Cooking Solutions	Household Electricity Access	Livelihood Opportunities and Productive Uses	Community Space and Buildings (health centers, schools, etc.)	Decarbonisation of Energy Infrastructure
XX	XX	XXX	?	?

Key: XXX - Higher degree of compatibility XX - Medium degree of compatibility ? - Insufficient information   Most promising application

services to the population of concern. This should include a stakeholder mapping and analysis of existing support programs for the purpose of determining if such programs would be competing or complementary to guarantee fund, and if a guarantee is the right tool in the given context. Such an analysis should be repeated regularly in order to remain informed of evolving market dynamics.

- If a guarantee fund is deemed to be the most appropriate solution, consideration needs to be given to:

- The role of the guarantee fund in developing a sustainable market-based solution and its expected impact to the:
  - Proposed energy intervention; and
  - Energy providers business model;
- The conditions or events that trigger a potential financial claim against the guarantee funds;
- How the claim is checked and processed;
- The creation of adverse incentives, for example the energy company is incentivised to do nothing and claim against the guarantee fund;
- The size of the fund based on size and number of anticipated claims;

- The likelihood of fund depletion and contingency planning for:
  - Topping up the fund if more claims are made than expected; and
  - Using residual funds if less claims are made than expected.
- The role of other finance mechanisms to support the creation of a sustainable market.

#### Further reading

For more detail on guarantee funds, please refer to Section 4.3, of the Blended Finance Solutions for Clean Energy in Humanitarian and Displacement Settings: An Initial Overview and Lessons Learnt report, noted in the introduction to this toolkit. Other useful resources include:

- KfW Development Bank (2020). [Innovative development finance toolbox – pages 66 to 72.](#)
- OECD (2021). [The role of guarantees in blended finance.](#)
- UNDP (2018). [Derisking Renewable Energy Investment.](#)

### 3.3. Results Based Financing (RBF)

#### Mechanism Overview

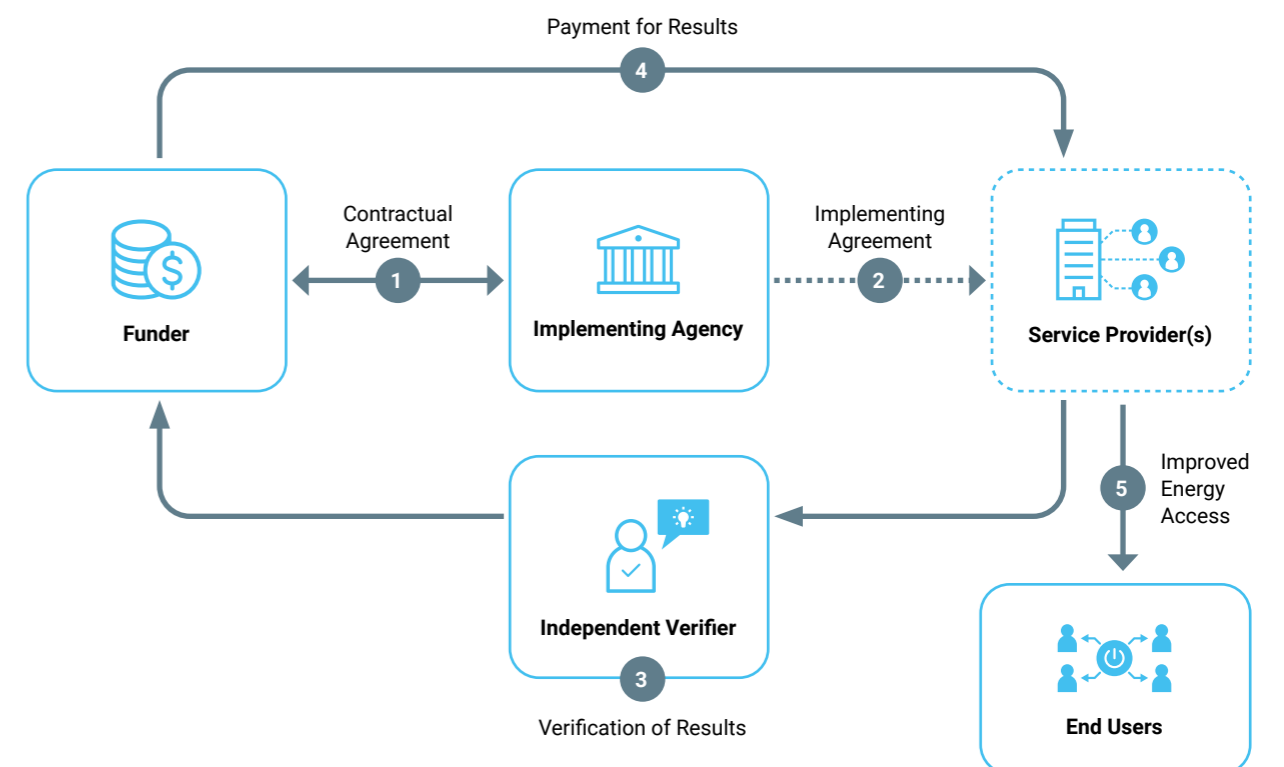
Results Based Financing (RBF) is a financing mechanism that provides pre-agreed financial rewards or incentives to an organisation after agreed-upon results have been achieved and independently verified. RBF schemes begin with a contractual agreement between a funder (donor) and an implementing organisation who both agree on the outputs, outcomes and impacts that are desired. The implementing party either launches the program or intervention themselves or invites third party service providers to participate in the delivery of the solutions. Once the results are verified by an independent body, the payment or incentive is released by the funder to

the service provider(s) as noted in the contractual agreement. A pictorial overview of RBF is presented in Figure 3.

RBF gives the recipients of the funds, i.e., the service provider(s), flexibility and autonomy to choose how to achieve the desired results without any pre-determined approaches. This in turn increases accountability, often leads to improved program effectiveness and shifts the financial risk associated with the non-delivery of results from the donor to the recipient of the funding.

In areas where few market incentives exist, RBF can attract new market participants relatively quickly; the challenge becomes the monitoring and verification efforts associated with tracking the results and ensuring impacts are being achieved.

**Figure 3: Overview of Results Based Financing**



**Table 5: Degree of compatibility of results based financing for different end user categories** as taken from Table 2: Blended Finance Compatibility Matrix

Results Based Financing				
Modern Cooking Solutions	Household Electricity Access	Livelihood Opportunities and Productive Uses	Community Space and Buildings (health centers, schools, etc.)	Decarbonisation of Energy Infrastructure
XXX	XXX	X	?	?

Key: XXX - Higher degree of compatibility X - Lower degree of compatibility ? - Insufficient information   Most promising application

## Compatibility

RBF mechanisms have been successfully implemented to support household access to modern energy products and solutions (cooking and electricity) in displacement settings and in isolated off-grid communities where there are significant risks (default, transiency, etc.) preventing service providers from entering those markets, as noted in Table 5.

## High-level guidance on developing a RBF mechanism

Project profiles or contexts that could be supported by RBF support mechanisms include:

- Incentivising the targeted sales of solar home systems, mini-grids or improved cooking solutions in displacement settings, especially where there is a clear lack of existing suppliers in the market. Here RBF incentives can serve to offset potential losses from increased customer default rates and attract new service providers to the market.
- Incentivising sales of similar products in difficult to reach off-grid markets, which may also be affected by increased conflict or instability. An RBF program could be specifically structured to increase the supply of products and services in these underserved and vulnerable areas.
- Incentivising the sale of products and services providing a higher level of energy access (as defined by the World Bank's ESMAP Multi-Tier Framework).

- Incentivising the sale of energy products to specific customers with certain socio-economic characteristics (e.g., poverty, vulnerability or marginalization classification).
- Incentivising the sale of products intended to be used for productive uses (i.e., income generation).

Guidance for developing a new RBF program:

- Similarly to the approach for developing other blended finance mechanisms, a systematic and in-depth market and context analysis should be completed before the project start to identify the main barriers that prevent the private sector from delivering products and services to the population of concern and the market from reaching scale. This should include a stakeholder mapping and analysis of existing support programs for the purpose of determining if such programs would be competing or complementary to an RBF program, and if RBF is the right tool in the given context. Such an analysis should be repeated regularly in order to remain informed of rapidly evolving market dynamics. For example, if existing programs provide up-front grants for the same products or services, an RBF program approach will be less attractive for private energy providers and will likely not be effective.
- Market barriers which can typically be addressed with RBF include:
  - Supply-side barriers preventing the import or provision of sufficient energy access products to achieve best pricing and the economies of scale needed to make a new market more attractive;

- Demand-side barriers making it difficult to reach last-mile and low-income Bottom-of-the-Pyramid customers due to lower ability or willingness to pay; and
- Supply and/or demand market barriers causing a mismatch between the quality, standards, or technical specifications of products currently offered and those actually demanded.
- Market barriers which typically cannot be addressed by RBF alone include:
  - Access to supply-side upfront financing of inventories and interventions; and
  - Improving the enabling environment (governmental policies, market regulations, product standards).
- If RBF is deemed to be the most appropriate solution, consideration should be given to:
  - The role of the RBF program in developing a sustainable market-based solution and its expected impact to the:
    - Proposed energy intervention; and
    - Energy providers business model.
  - The precise way in which the intended results are defined, which then trigger incentive payments to the energy provider;
  - Who receives the incentive – this can include product manufacturers, importers and wholesalers, distributors and retailers, and microfinance institutions who provide loans for energy access products;
  - The amount of the incentive and how to define it. Two potential strategies include: calculating the viability gap required to deliver a product or service; or using an auction or reverse auction amongst potential market participants to “find” the correct price;
  - The creation of adverse incentives, for example inadvertently supporting economically better-off households instead of targeting those most in need;
- Choosing a suitable fund manager with adequate capacity and aligned interests (ideally a local finance institution);
- Selecting the right private sector partners to participate in the program through a well-designed application process, avoiding unnecessary hurdles to participation, and performing due diligence before contracting;
- Ensuring that a robust Monitoring and Verification process is designed to prevent manipulation and gamification, using the following key elements: checking of the paper trail of claims, phone calls to a sample of customers, and field checks; and
- The role of other complementary finance mechanisms and tools to support the creation of a sustainable market.

## Further Reading

For more detail on Results Based Financing, please refer to Section 4.4, of the Blended Finance Solutions for Clean Energy in Humanitarian and Displacement Settings: An Initial Overview and Lessons Learnt report, noted in the introduction to this toolkit. Other useful resources include:

- EnDev (2021). [Transforming energy access markets with Results-based Financing: Lessons from 7 years of implementation under EnDev's RBF Facility financed by UK Aid.](#)
- Energies (2021). [Results-based financing for modern energy cooking solutions: an effective driver for innovation and scale?](#)
- Instiglio, GPRBA and World Bank (2018). [A guide for effective results-based financing strategies.](#)
- KfW Development Bank (2020). [Innovative development finance toolbox – pages 46 to 52.](#)
- MECS (2021). [Clean cooking: results-based financing as a potential scale-up tool for the sector.](#)
- SIDA (2015). RBF approaches (RBFA) – what are they?



# Annex 1

## Risks, financial implications and mitigation measures associated with energy solutions in displacement settings

Risk theme	Examples	Examples of financial consequences	Investment instrument	Example of mitigating financing solution
<b>Logistics</b>	Increased cost to deliver solar home systems in remote displacement areas compared to other, better-located market segments.	Customers are expensive to serve; assets and resources are expensive to secure; local operating and maintenance capacity takes time and money to establish.	Grants/ RBF	Subsidy paid to cover transport costs on an RBF model, with subsidy provided per connection delivered
<b>Insecurity</b>	Keeping stocks of liquefied petroleum gas (LPG) secure in an area of conflict and insecurity	Replacing lost assets and/or stock	Insurance	Theft and political risk insurance
<b>Longevity</b>	Risk of early camp closure or significant reduction in operations (and therefore demand), exposing private-sector players that provide power as a service to humanitarian organizations.	For any non-cash sales of products or services (e.g. products on credit or as a pay-per-use service), the business providing them may not recoup its investment before the camp is closed down.	Insurance/ guarantee	Partial guarantee in favour of infrastructure project financiers, graduating to insurance where possible
<b>Demand instability</b>	Capital is tied up in inventory that a household lighting / cooking company cannot sell due to insufficient demand; defaults by customers sold to on credit. A power plant is sized above expected average demand levels. Therefore, the customer does not pay for all the power produced, and the power producer does not generate the cashflows expected.	Challenges in terms of maintaining appropriate power production / inventory to match in-camp levels of demand from institutions and displaced people (both may fluctuate substantially over short time frames). May lead to missed sales or excessive supply, and therefore economic losses.	Guarantees	Donor-funded guarantee that lenders can cash into in the event the borrower does not maintain debt service repayments.
<b>Lack of data on energy demand</b>	Energy solutions are designed that are not evidence-based and therefore not fitting the needs of the end user or local context, i.e., they are poorly designed and not addressing the relevant issue(s).	Lack of understanding of demand leads to poorly sized projects and stock-outs / inventory excess, resulting in economic losses. Lack of data on energy economics leads to inappropriate pricing / credit terms for products. Economic losses result both from limited uptake and challenges with repayment.	Grants	Pilot schemes subject to rigorous data analysis and scale-up feasibility studies (allowing relevant data to be gathered)
<b>Liquidity</b>	Consumer products and services are not affordable at upfront cost to the target market, and incomes are too unstable to service sales on contracted credit terms.	High-levels of non-performing loans / portfolio at risk (NPLs/ PAR).	Guarantees, direct transfers, RBF	Donor-funded direct transfers to beneficiaries and/or guarantees that lenders can cash into in the event that customer does not maintain debt service repayments.



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