

# Energising Development Portfolio Review 2022



### **Partnership between**

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# Executive Summary



The end of 2022 will be marked by the kick-off of another strategic programming cycle building upon EnDev's third comprehensive portfolio review. In line with EnDev's strategy 2019-2025, the review was conducted in the second half of 2022. All EnDev country projects have been assessed by an external evaluator according to their performance and potential to generate impact in contributing to SDG7 progress.

The outcome of the portfolio review is presented in this report, proposing to continue with a portfolio of 20 countries including one additional new country for implementation as well as two countries phasing out. According to their respective categorisation and thus their (indicative) planning horizon, EnDev country projects will be requested to develop and submit a proposal in the upcoming portfolio-wide strategic programming cycle. Programmatic priority areas are leaving no-one behind (LNOB) and higher-tier cooking (HTC).

Proposals will be presented as part of the *Multi-Annual Indicative Programming 2023-2025* which will be submitted prior to the 28th Consultative Group Meeting tentatively scheduled for May 2023.

In this *Portfolio Review 2022*, proposed changes are as follows:

- For the country portfolio, a respective categorization of countries for new, continued and ending involvement is proposed as a result of the review.
- Two EnDev multi-country projects currently operating in three respectively two countries are proposed to be unbundled (i.e. Sierra Leone, Liberia, and Guinea as well as Cambodia and Laos), resulting in five stand-alone EnDev country projects.
- Two countries are recommended to be phased out (i.e. Guinea and Bolivia).
- One additional new country is suggested for starting implementation (i.e. Niger).

## Putting bread on the table, around-the-clock

In Rwanda, millers and other entrepreneurs with access to solar energy are cutting costs and branching out.

Rutenderi, in the east of Rwanda, about 150 km from the capital Kigali, is home to 4,000 people. The area is relatively flat and fertile, with bananas, maize, beans, and rice grown there. However, until recently, the people of Rutenderi could only rarely use electric equipment to process their crops, as the village was not connected to the national grid. Meanwhile, stand-alone systems with the capacity to power agricultural machinery were too expensive for rural populations. This was a challenge for millers such as Joseph Singirankabo. To power his mill in Rutenderi, Joseph used a diesel generator, but fuel was expensive, and the generator would often break down, leaving Joseph's clients without flour.

This changed in 2019, when a solar mini-grid was installed in Rutenderi. The mini-grid serves over 500 households, 40 businesses, including Joseph's mill, and 10 social institutions. Supported by EnDev, the mini-grid was developed on the context of the *National Electrification Plan*, which allows companies to easily identify villages where the construction of mini-grids is permitted. It was set up by one of the private Rwandan companies that were supported by EnDev between 2014 and 2020 under the *Village Grid Results-based Financing Component*.

Joseph's business has been transformed: the new electricity source is clean and makes power available around the clock, and Joseph's earnings have increased by about 20 percent. At the same time, he does not have to buy diesel and now spends only a third on electricity costs of what he spent on fuel before. And it's not only Joseph who is feeling the benefits: a few months after the installation of the mini-grid, Joseph opened a bakery next to his mill, hiring new assistants and thus creating jobs.

# 1. Portfolio development

The end of 2022 will be marked by the kick-off of another strategic programming cycle building upon EnDev's third comprehensive portfolio review. In line with EnDev's strategy 2019-2025, the review was conducted in the second half of 2022. The portfolio review proposes to continue with a portfolio of 20 countries including one new country for implementation as well as two countries phasing out.

## 1.1 Portfolio review

In line with previous portfolio review cycles in 2018 and 2020, this year's comprehensive portfolio review applied the same systematic approach to describe, assess and categorise EnDev country projects using so-called *Project Analysis Sheets* (PAS) and provide information on the following aspects:

- **Relevance:** providing country and project key facts at a glance – considering aspects such as economic situation, energy access situation, and co-financing
- **Strategic Alignment:** reflecting how country interventions are aligned with EnDev's strategy – considering relevance, potential to contribute to paradigm shift, important collaboration towards scale, and gender
- **Performance:** describing projects' performance over time – considering the effectiveness of providing access to energy for households, social institutions and productive use, as well as the cost-efficiency of interventions
- **Market-based approach and potential:** outlining projects' approach to address market barriers and future potential to contribute to sector transition and impact areas – considering the general potential to maintain or even improve past access performance in the context of market

conditions and trends, as well as reflecting on project's alignment with national policy

The PASs were prepared by EnDev country projects teams, who were also asked to undertake and update their *Energy Access Market Development* (EAMD) scorecards. Results were used to back market and sector assessments conducted by EnDev country projects. Quantitative information on country background and projects' performance, relevance, effectiveness, efficiency displayed in graphs are based on official global sources and EnDev's monitoring data.

After this, the complete set of PASs were reviewed by an external evaluator and complemented by expert interviews to obtain an independent assessment.

EnDev management further consolidated the evaluator's input with a strategic view to propose a balanced portfolio of geographies, technologies, and target groups.

Based on these different assessment levels, EnDev country projects were divided into the following categories:

- Countries with a **continued EnDev involvement** allowing for delivering on SDG7

- Countries with a **new EnDev involvement** for which the set of activities will be identified in the upcoming programming.
- Countries with an **ending EnDev involvement** allowing structured phasing out (up to one year)

The following table shows the proposed country categorisation as result of the portfolio review.

Table 1-1  
Portfolio review 2022 and proposed country categorization

Sub-Sahara Africa	Asia	Latin America
<b>Continued involvement</b>		
<ul style="list-style-type: none"> <li>• Benin</li> <li>• Burundi</li> <li>• Democratic Republic of the Congo</li> <li>• Ethiopia</li> <li>• Kenya</li> <li>• Liberia</li> <li>• Madagascar</li> <li>• Malawi</li> <li>• Mali</li> <li>• Mozambique</li> <li>• Rwanda</li> <li>• Senegal</li> <li>• Sierra Leone</li> <li>• Tanzania</li> <li>• Uganda</li> </ul>	<ul style="list-style-type: none"> <li>• Bangladesh</li> <li>• Cambodia</li> <li>• Laos</li> <li>• Nepal</li> </ul>	
<b>New Involvement</b>		
<ul style="list-style-type: none"> <li>• Niger</li> </ul>		
<b>Ending involvement</b>		
<ul style="list-style-type: none"> <li>• Guinea</li> </ul>		<ul style="list-style-type: none"> <li>• Bolivia</li> </ul>

Unlike in previous portfolio review cycles, countries were not divided into medium- and long-term EnDev involvement but instead into new, continued and ending involvement. Bolivia and Guinea are proposed to be phased out, Niger is suggested as a new country for implementation. The resulting portfolio would show small changes with regard to the following aspects:

- **Geographical coverage:** With 16 African countries in the portfolio, EnDev

will maintain its focus on sub-Saharan Africa of which three are located in the Sahel zone. EnDev’s presence in Asia will be focusing on four countries while interventions in Latin America will come to an end. As a result, EnDev will remain a global programme operating on two continents.

- **LDC focus:** EnDev will maintain its focus on economically weak countries with 19 countries being defined as least developed countries.

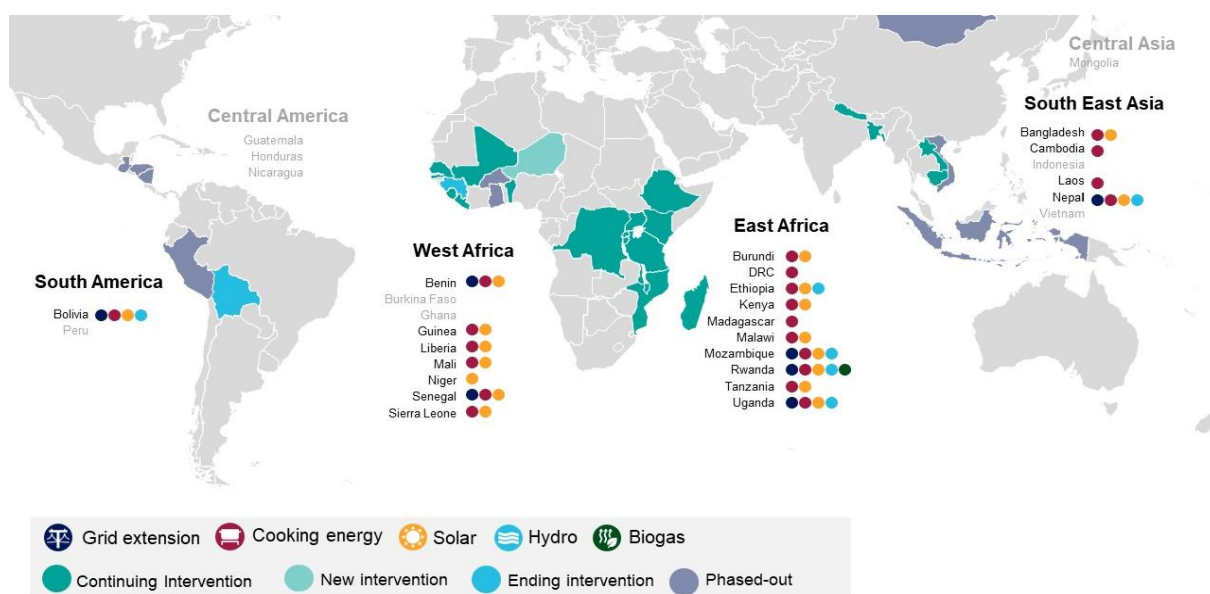


- **Technology:** The scope of technologies supported by EnDev will be maintained and the programme will seek to achieve more impact by facilitating higher quality access. Raising its ambition, EnDev will particularly steer towards Higher Tier Cooking (tier 3 and beyond). In addition, country projects will be

explicitly requested to propose approaches with a particular focus on Leave No One Behind (LNOB).

- **Implementers:** EnDev maintains its current implementers mix and continue its cooperation with SNV, Practical Action, CLASP, ADES, AVSI, MAEVE and NIS.

Figure 1-1  
Geographic distribution of the proposed country categorization



## 1.2 Indications for future programming

As part of the portfolio review, the Independent Technical Advisory Committee (ITAC) has assessed all EnDev country projects according to four main dimensions:

- **Country context:** assessing projects' additionality of energy access solutions promoted
- **Strategic alignment:** assessing the extent to which projects contribute to EnDev's Strategy 2019-2025
- **Performance:** assessing projects' quantitative performance and contributions to overall results achievement

- **Market-based approach:** assessing projects' approaches and progress on contributing to market development and overcoming market barriers

The assessment is based on desk studies of the projects' theories of change, project descriptions, market analysis, results data, and financial information. The desk-based review has been supplemented by input from EnDev country projects and coordinated by EnDev HQ. The table below provides a brief summary of the main findings per country.

Table 1-2  
**Proposed categorization of country projects and further info**

Country	Summary of findings
<b>Continued operations</b>	
<b>Bangladesh</b>	<p>EnDev Bangladesh has contributed to successful development of robust local market structures for production / distribution of ICS and distribution of stand-alone solar technologies. In reaction to rapid grid expansion, an electrification rate of nearly 100 percent and a strong push towards LPG, the project has shifted its focus towards higher-tier, climate-friendly cooking technologies and e-mobility, as well as the piloting of innovative models for nano-grid development in the few remaining unelectrified areas. Through this shift, EnDev’s <u>additionality</u> in Bangladesh remains high, with the potential of gathering valuable lessons for EnDev’s global strategic portfolio development.</p> <p>EnDev Bangladesh’s <u>strategic alignment</u> is assessed to be well balanced and appropriate. Room for improvement might lie in the area of gender inclusion, particularly with a view towards increasing the project’s gender ambition by strategically supporting female entrepreneurship.</p> <p>Bangladesh’s <u>performance</u> is assessed to be exceptionally high compared to the modest budget, especially with regards to its recent contributions to MSME target achievement and household energy access in previous years.</p> <p>EnDev’s <u>market-based approach</u> is very well established. By venturing into new areas, the market-based approach might benefit from a more granular assessment of demand-side barriers for higher-tier cooking technologies and consumers’ ability- and willingness-to-pay once more implementation experience is available for data analysis.</p>
<b>Benin</b>	<p>EnDev Benin has been instrumental in establishing conducive framework conditions for the ICS sector, including professionalisation of companies and scalable RBF solutions. Against this background and in cooperation with governmental stakeholders and further donors such as the EU, the project is currently balancing the ICS focus with a stronger emphasis on electricity access. In combination with the very low energy access rates, both for clean cooking and electricity, these interventions make the project <u>highly additional</u>.</p> <p>The project is well embedded in both sectors and has a clear and well-developed approach that is <u>strategically well aligned</u> with EnDev’s global ambitions. High carbon credit prices in the voluntary market have paved the way for free distribution of stoves financed solely by carbon credits including Benin. Here, the project is encouraged to advise on transparent and sustainable use of carbon credits and relevant business models, leveraging the strong governmental relations it has.</p>

	<p>The project has potential for further increase in the <u>performance</u> both in the electricity and clean cooking sectors.</p> <p>The <u>market approach</u> is very well developed, and the project is assessed to be in a good position to achieve higher access rates in the coming years. Generally, the market environment for ICS has more traction, whereas the market for electricity access still needs more support.</p>
Burundi	<p>EnDev Burundi focuses on market development for clean cooking solutions. The country's extremely low clean cooking access rate means that the <u>additionality</u> of EnDev's work in this sector remains very high.</p> <p>On the other hand, the primary focus of EnDev Burundi has been on lower-tier stove technologies to date, resulting in a relatively weak <u>strategic alignment</u> with EnDev's higher-tier ambitions. However in the very vulnerable economic environment of the country, the focus on lower tiers appears to be justified for now.</p> <p>EnDev Burundi's <u>performance</u> was assessed as average compared to the budget available.</p> <p>Nevertheless, the project has a well-regarded <u>market-based approach</u> and has successfully established first market structures for improved cookstoves in the country. While these stoves have had a transformative effect on the market (especially where it has been accompanied by behaviour change activities), EnDev Burundi is encouraged to promote a wider product range (including stoves for PUE) that would appeal to a broader customer base.</p>
Cambodia	<p>Cambodia has a relatively high electrification rate in rural areas, but only 25 percent of the population has access to clean cooking. EnDev's support has contributed to the establishment of a local industry for higher-tier biomass stoves, which has been complemented by an awareness-raising and behavioural change approach for clean cooking solutions including e-cooking. By focussing on rural areas, EnDev's <u>additionality</u> in Cambodia remains high, and the project plays a pivotal role as a market accelerator.</p> <p>The emphasis on higher-tier cooking solutions, combined with a strong gender focus, makes EnDev Cambodia <u>strategically well aligned</u> with EnDev globally.</p> <p>The project has potential to further improve its <u>performance</u>. As EnDev Cambodia's <u>market-based approach</u> is very well established, the project is assessed to be in a good position to scale up in the coming years by venturing into new geographic areas.</p> <p>Activities in Cambodia were thus far part of a <u>multi-country approach</u> with Laos. However, the assessment neither shows the potential for a regional approach with conceptual links / synergies nor efficiency gains among the country components. It is therefore suggested to unbundle the multi-</p>

	country project covering Cambodia and Laos, resulting in two stand-alone EnDev country projects.
DRC	<p>DRC has very low clean cooking access and low access to electricity access rates. With a regional approach in Eastern Congo, EnDev is focusing on market development for ICS and productive use of off-grid solar and is assessed as highly <u>additional</u>.</p> <p>EnDev's <u>strategic alignment</u> is assessed as well balanced and appropriate. Room for improvement might lie in the area of gender inclusion, particularly by strategically supporting female entrepreneurship.</p> <p>EnDev has started its support for the ICS market in 2021 and its PUE activities only in 2022. Despite COVID-19 restrictions and a volcanic eruption in one of EnDev's intervention areas, the project is on track and has potential to further increase its <u>performance</u>.</p> <p>The <u>market-based approach</u> of the project is well developed. EnDev's approach targets a transformation of the clean cooking market in Eastern DRC through awareness-raising amongst consumers and business development support for local stove producers. Supply-side activities could be a stronger focus of future engagements, expanding the distribution network in order to accelerate the uptake of ICS.</p>
Ethiopia	<p>The Government of Ethiopia aims to provide 60 million people with electricity access and 80 million with improved cooking energy in the coming years. Electricity demand grows by approximately 30 % annually. Energy access markets are still in an early stage and need long-term engagement. EnDev Ethiopia plays an important role in developing sustainable ecosystems and viable companies capable to efficiently serve these markets. Given the low energy access in Ethiopia, the project is assessed to be highly <u>additional</u> to the country context.</p> <p>The project is <u>strategically well aligned</u> with EnDev global, including a special focus on enabling environment activities and the LNOB agenda. The latter is of high strategic relevance in the upcoming programming, since the current refugee-targeted activities are already very relevant in the context of Ethiopia's political situation.</p> <p>The project's <u>performance</u> is slightly above average. EnDev Ethiopia has undergone considerable change processes over the past years, focussing on a more efficient and targeted structure that is still able to deliver also in very fragile contexts and at high absorption capacity rates, which seems to pay off.</p> <p>The <u>market-based approach</u> is well developed especially with regards to enabling environment. Demand-side activities could be a stronger focus of future engagements, moving beyond awareness raising activities.</p>
Kenya	EnDev Kenya supports market development for improved cookstoves in refugee and displacement settings, e-cooking and off-grid solar solutions.

	<p>The <u>additionality</u> of EnDev’s interventions in these sectors is evident, but slowly decreasing thanks to EnDev’s successful work and effective national policies on energy access.</p> <p>EnDev Kenya’s <u>strategic alignment</u> is assessed to be very high, driven by well-defined linkages with national policies and strategies, strong scaling potential and knowledge management competencies, and a clear focus on gender and youth groups (including those in underserved areas). Furthermore, EnDev Kenya is undergoing a strategic shift to promote e-cooking which seems relevant given the high electrification rates in the country.</p> <p>EnDev’s <u>performance</u> is assessed to be average compared to the budget available, with a very high cost efficiency in the cooking sector and a moderate cost efficiency in the electricity sector.</p> <p>The <u>market-based approach</u> applied by the project is well developed. EnDev Kenya is uniquely positioned to capitalise on a high degree of standardisation in the energy sector compared to neighbouring countries. Furthermore, the proposed shift towards more e-cooking technologies represents a high level of maturity in the cooking sector in particular.</p>
Laos	<p>EnDev Laos addresses clean cooking by setting up sustainable supply chains for affordable, improved cookstoves. With very low access rates for clean cooking (around 5% in rural areas), EnDev’s work remains highly <u>additional</u>.</p> <p>EnDev Laos is <u>strategically well-aligned</u> with EnDev’s global ambitions. With exceptionally high electrification rates, the country has great potential for e-cooking, which is expected to be explored in the next programming period.</p> <p>EnDev Laos’s <u>performance</u> is assessed to be high, with a growing target achievement based on a well-functioning ICS supply chain.</p> <p>The <u>market-based approach</u> is well developed, following a three-pronged approach: 1) increasing the production capacities of local stove companies, 2) consolidating supply chains and dissemination and 3) enhancing consumer awareness. The market potential is still very large and the up-scaling potential will be further explored in the next programming period.</p> <p>Activities in Laos were thus far part of a <u>multi-country approach</u> with Cambodia. However, the assessment neither shows the potential for a regional approach with conceptual links / synergies nor efficiency gains among the country components. It is therefore suggested to unbundle the multi-country project covering Cambodia and Laos, resulting in two stand-alone EnDev country projects.</p>
Liberia	<p>Liberia has a very low access rate to clean cooking and a medium access rate to electricity. In Liberia, EnDev supports markets for stand-alone solar</p>

	<p>technologies, as well as access for social infrastructure, particularly electrification of rural health centres and clinics. EnDev's <u>additionality</u> is assessed to be high.</p> <p>EnDev Liberia's <u>strategic alignment</u> is assessed to be fair, with limited traction on EnDev's global strategic priorities. EnDev Liberia has successfully advocated for a governmental customs exemption on solar imports which was recently issued.</p> <p><u>Performance</u> is assessed to be medium, with EnDev Liberia being an important contributor to global social infrastructure target achievement.</p> <p>EnDev Liberia's <u>market-based approach</u> is not yet sufficiently embedded in local structures and therefore needs to be improved, partially due to the project's focus on electricity access for social infrastructure; this intervention targets a governmentally supported, non-commercial market segment.</p> <p>Activities in Liberia were thus far part of a <u>multi-country approach</u> with Sierra Leone and Guinea. However, the assessment neither shows the potential for a regional approach with conceptual links / synergies nor efficiency gains among the country components. It is therefore suggested to unbundle the multi-country project covering Liberia and Sierra Leone, resulting in two stand-alone EnDev country projects, while for Guinea an end of interventions is proposed.</p>
Madagascar	<p>In Madagascar, less than 5% of the population have access to efficient cooking. Coupled with the high population growth, there is stark pressure on the ecosystem (deforestation, increased vulnerability to climate change, etc.) due to strong demand for thermal energy. EnDev Madagascar therefore focuses on producing, professionalising and supporting market development of efficient ICS and is considered to be highly <u>additional</u> to the country context given the above.</p> <p>The project includes elements that align on all aspects of EnDev's global <u>strategy</u>, even though it is only focusing on the ICS sector. This is due to the fact that there are external programmes, e.g. from the World Bank, with are already active on the off-grid solar sector on a larger scale. EnDev's implementing organisation in Madagascar (ADES) is encouraged to clarify its own role in the private ICS sector, as it currently a direct producer of ICS as well.</p> <p>EnDev Madagascar's <u>performance</u> is average, but the <u>market-based approach</u> is well developed and is leveraging carbon credits to further bring down production costs of ICS, without disrupting the market via free distributed ICS.</p>
Malawi	<p>EnDev Malawi has made significant progress on market development for cookstoves, especially involving Malawi's government in this sector. These transformative interventions, coupled with an extremely low energy access</p>

	<p>rate (both for cooking and electricity), result in this project having the highest overall <u>additionality</u> in the EnDev portfolio.</p> <p>In addition to ongoing activities, EnDev Malawi is now exploring higher-tier clean cooking options and new models for off-grid electricity access via mini-grids (including PUEs). In so doing, EnDev Malawi is building on existing strengths in developing the market approaches for electrification. The <u>strategic alignment</u> is therefore assessed to be strong.</p> <p>EnDev Malawi's <u>performance</u> is above average due to the high number of beneficiaries reached with the ICS market development activities.</p> <p>EnDev Malawi's <u>market-based approach</u> is well developed, with clear linkages to the Malawian government's own agenda and an increasing degree of professionalism among local energy companies (especially in the cooking sector).</p>
Mali	<p>While access to electricity in urban areas is relatively high, access to electricity and clean cooking in rural areas is very low in Mali. The electrification of rural off-grid social institutions and the integrated approach towards mini-grid and stand-alone solar electrification have proven to be successful. In addition, EnDev Mali has started interventions to foster PUE enterprises and ICS support activities. EnDev Mali's <u>additionality</u> is assessed as high.</p> <p>EnDev's <u>strategic alignment</u> is assessed as high. The project has strengthened its interventions by specifically targeting internally displaced peoples and the poorest of the poor in more vulnerable regions of the country, thus clearly contributing to EnDev's LNOB agenda.</p> <p>EnDev's <u>performance</u> is assessed as good, with Mali being an important contributor to global social infrastructure target achievement.</p> <p>Given the difficult political and security situation in Mali, the <u>market-based approach</u> of EnDev is well developed. The solar and cookstove market are still mostly at a pioneering stage. While the project especially focuses on demand-side activities and the needs of consumers to have sustainable energy access, private sector companies require particular business development support, especially in terms of financial planning and market extension strategies.</p>
Mozambique	<p>Mozambique has very low overall access rates for access to clean cooking and electricity, particularly in rural areas. EnDev Mozambique's support has laid the groundwork for dynamic market development for stand-alone solar technologies, as well as solid local market structures for the production and distribution of ICS. Both sectors apply a special focus on poor households in rural and peri-urban areas, functioning as a model for other programs to collaborate and scale up. Given EnDev's track record in Mozambique, as well as the catalytic role for scaling up, <u>additionality</u> is assessed as high.</p>

	<p>EnDev Mozambique's <u>strategic alignment</u> is assessed as good, including strong traction to strengthen the country's energy transition by supporting energy access policy development. A new electricity law, for instance, lifts private sector mini-grid project development and operations to a new level with (likely) positive implications for higher-tier electricity access in remote rural areas. By supporting least-served segments of the population in displacement settings, including Mozambique's large number of internally displaced people, the work of EnDev Mozambique is strategically highly relevant.</p> <p><u>Performance</u> is assessed to be high, with EnDev Mozambique being an important contributor to overall global results development. As part of the recent post-COVID-19 economic recovery, target achievement in household energy access, both for clean cooking and electrification, has shown a promising dynamic growth path.</p> <p>EnDev Mozambique's <u>market-based approach</u> is very well developed, with the project being perfectly positioned to continue engaging with international and local private sector players to further support off-grid rural electrification and promoting e-cooking.</p>
Nepal	<p>With already high electrification rates (more than 90 %) and planned further grid extension, scaling in the off-grid electricity sector is mostly limited to very isolated areas. After years of successful interventions, especially in delivering electricity access in remote off-grid regions via micro-hydropower, EnDev is now at a turning point with a focus on e-cooking. This shift underlines the project's continued <u>additionality</u>.</p> <p>The <u>strategic alignment</u> of EnDev Nepal is strong, since the project is actively working on higher-tier electricity access, especially e-cooking. The planned future integration of existing mini-grids into the expanding national grid will also contribute to high tier energy access.</p> <p>The project is assessed to be doing very well on <u>performance</u>, especially related to electricity access. This is a solid foundation upon which the planned activities around e-cooking can grow and deliver.</p> <p>The <u>market approach</u> for e-cooking is very well developed, while the market approach for mini-grids and on-grid electrification could be strengthened. Given that universal electrification is very close in Nepal, a focus on new market segments such as e-cooking is advisable.</p>
Rwanda	<p>Rwanda has low access to clean cooking and electrification rates especially in rural areas. EnDev Rwanda's support has contributed to the development of a vital market for pico-PV systems and has laid the groundwork for privately operated mini-grids. The Government of Rwanda has set ambitious electrification targets and launched an SDG7 energy compact which raises the ambitions towards higher-tier cooking. As such, EnDev's <u>additionality</u> remains high.</p>



EnDev Rwanda's strategic alignment is assessed as very high. The project has become a pioneer in the implementation of pro-poor RBF approaches for pico-PV systems. As this approach has been scaled-up by the Rwandan Development Bank to a nation-wide subsidy programme, EnDev has begun to shift its focus towards PUE to increase the financial sustainability of mini-grids and will continue its support for the cooking energy sector.

The project has potential to further increase its performance. A realignment of the standard regulations for solar products as well as strict COVID-19 policies caused a decrease in the project's performance, which it is now slowly recovering from.

EnDev's market-based approach was very well developed in recent years, especially with regard to the enabling environment. Private sector companies in the cooking and electrification sectors still need further support to catalyse the uptake of modern energy solutions. This will be further explored in the next programming.

## Senegal

Senegal has moderate electricity access rates but low rates for access to clean cooking, particularly in rural areas. EnDev Senegal has adapted its previous approach to focus more strongly on the still challenging mini-grid sector, the promotion of PAYGo for stand-alone solar solutions, and higher-tier PUE activities in the fishing sector. EnDev's support has laid the groundwork for dynamic local market development for the production and distribution of ICS, now being further scaled up with dedicated funding by the Green Climate Fund. By functioning as a catalytic model for scaling up, the additionality of EnDev Senegal is assessed as high.

EnDev Senegal's strategic alignment is assessed as very high, including a strong link to complementary activities which contribute to achieve Senegal's ambitious Just Transition goals and the country's NDCs. The potential of gathering valuable lessons for EnDev's global strategic portfolio development, e.g. on scaling up successful approaches with climate finance and supporting female entrepreneurship, add to EnDev's strategic relevance.

Performance is assessed to be good, with EnDev Senegal being a major contributor to overall global results development. With the recent transfer of ICS-related activities and its results achievement to the EnDev associated GCF project, performance for EnDev at project level might look slightly lower while achievements at country level are showing a dynamic growth.

EnDev Senegal's market-based approach is very well developed, proven by the broad uptake of previous market-oriented interventions via climate finance. The project is well positioned to continue venturing into innovative and previously untapped areas for improving energy access.

Sierra Leone	<p>In Sierra Leone, EnDev develops markets for ICS, small-scale PV and is planning to include support for PV mini-grids in its activities. The engagement of EnDev Sierra Leone is assessed as highly <u>additional</u>.</p> <p>EnDev Sierra Leone is <u>strategically well aligned</u> with the overall EnDev strategy, for example when it comes to close collaboration and cooperation with other donor-funded programs and the government. EnDev Sierra Leone is attentive to other global strategy elements, such as gender and higher-tier energy access, but without a consolidated approach in these areas.</p> <p>The project's <u>performance</u> is assessed to be slightly lower than average compared to the budget.</p> <p>The <u>market approach</u> is assessed as needing further development and a clearer understanding of how EnDev is placed within a wider context of market dynamics. The government of Sierra Leone has recently passed a duty-free waver on PV, which EnDev has been advocating for. This success can hopefully create momentum for other energy access policies.</p> <p>Activities in Sierra Leone were thus far part of a <u>multi-country approach</u> with Liberia and Guinea. However, the assessment neither shows the potential for a regional approach with conceptual links / synergies nor efficiency gains among the country components. It is therefore suggested to unbundle the multi-country project covering Liberia and Sierra Leone, resulting in two stand-alone EnDev country projects, while for Guinea an end of interventions is proposed.</p>
Tanzania	<p>EnDev Tanzania supports the development of a supportive enabling environment for the cooking sector and has reached large off-grid areas through solar companies and last-mile distribution and services. The very limited access rates for clean cooking and electricity in rural areas means that the <u>additionality</u> of EnDev Tanzania's work remains high.</p> <p>The project's <u>strategic alignment</u> with EnDev's overall strategy is deemed reasonable and appropriate, with room for improvement on the alignment with overarching policy agendas. Lower-tier energy access is contributing greatly to climate change mitigation and adaptation and this narrative should be communicated for instance by communicating the projects contribution to the NDCs and the SDGs.</p> <p>Project <u>performance</u> is assessed to be average compared to the budget.</p> <p>EnDev Tanzania's <u>market-based approach</u> is assessed to be very well developed and the project demonstrates a detailed understanding of the lower-tier energy access markets it works within.</p>
Uganda	<p>EnDev Uganda has supported market development for lower-tier cooking and off-grid solar solutions for households, making extensive use of RBF mechanisms in the PAYGo sector to reach last-mile costumers. With very low access rates for clean cooking (&lt; 5 %) and relatively low access rates</p>

for electricity in rural areas (38 %), EnDev's additionality in Uganda remains high.

EnDev Uganda's strategic alignment is assessed to be very good. The project plays a crucial role in contributing to the achievement of national energy access targets, defined by the recently published Ugandan Energy Policy, while also scaling up energy access markets in refugee and host communities by mainstreaming refugees' energy needs in national policies and strategies.

EnDev's performance is assessed as well balanced and appropriate compared to the project's budget.

EnDev Uganda's market-based approach was very well developed in recent years. Limitations for households, social institutions and MSMEs to access modern energy solutions, especially in rural and remote areas, still exist. In order to serve last-mile costumers, the market still requires further business development support for solar and stove companies, as well as financing options for end-users. EnDev has a long track record in developing ICS markets in Uganda and the current engagement in promoting ICS in refugee settings is very relevant. This area should remain a priority, as EnDev seems to be one of the best-positioned actors in the country to support this important objective.

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## New Involvement

### Niger

EnDev's new project in Niger will pilot innovative demand-side subsidy (DSS) mechanisms for small-scale solar products. As a least-developed country with one of the lowest energy access rates in the world, the additionality of EnDev's work is expected to be very high.

The strategic alignment of EnDev Niger has not yet been assessed, as the programme is still under development. However, a focus on LNOB is inherent in the inaugural DSS intervention and the project is therefore expected to be well aligned. EnDev's performance in Niger cannot be assessed at this time.

In terms of the market-based approach, EnDev plans to work with the government, international partners (i.e. World Bank) and the solar companies in Niger (of which there are roughly 20 currently) to further advance the market from its current pioneering phase-state. Currently, low-quality products dominate the market due to the low ability and willingness to pay for quality solar products is significantly lower than in neighbouring countries. The project will have to overcome this challenge in the scope of the DSS component and broader market development activities to build trust in the market.

## Ending Involvement

### Bolivia

EnDev's support in Bolivia focuses on access to electricity for households and PUEs, mainly through innovative technologies for agro-processing. Bolivia is a lower middle income country with an electrification rate of nearly 100 percent and a comparably high access rate for clean cooking. This raises critical questions about the additionality of EnDev, particularly with regards to electricity access for households via grid densification measures.

EnDev Bolivia's strategic alignment is assessed to be fair. Promoting innovative solutions for PUE in specific value chains is assessed to be strategically relevant to the global portfolio development. Lessons from implementation have been successfully transferred to other country contexts within the EnDev portfolio, e.g. a funding mechanism for promoting decentralized renewable energies in Mozambique.

EnDev Bolivia's performance is assessed to be high, especially with regard to its outstanding contributions to MSME target achievement as well as higher-tier electricity access for households.

EnDev Bolivia's market-based approach was not mainstreamed, mainly because a large share of previous activities was geared towards working at utility level on grid densification. By recently focusing more on innovative solutions in the field of productive use of energy, EnDev strengthened its market-based approach, but rather at the intervention level than at the project level.

### Guinea

EnDev Guinea is part of a regional project that also includes Liberia and Sierra Leone. Guinea sets itself apart from the other two countries by being francophone and having a wider range of activities than in the two other countries. At the same time, progress has been rather limited in Guinea in the past likely due to rather fragmented activities, which also has had an impact on the additionality of the interventions in the country.

On the subject of strategic alignment, there are strong connections to other regional donors and projects, it is noted that long-term sustainability and impact highly depend on the strength of partnerships created with national actors besides the government, including local authorities, civil society actors, knowledge institutions, supply sector actors and financial sector stakeholders. These connections are rather limited.

Performance is assessed as lower than the average compared to the budget. Here again, a fragmented approach with unclear focus and/or strategy have hindered better performance on key indicators.

The market-based approach is considered to not be sufficiently developed, and without a reasonably clear understanding of the barriers that limit the energy access markets in the country.

Overall, the activities in the country do not seem to materialize in sufficient progress over time, both with regard to quantity as well as quality. Apart from unbundling Liberia and Sierra Leone from the country cluster, it is therefore suggested to cease operations in Guinea as of 12/2023, using the remaining time to prepare for a sustainable hand-over of activities to local partners.

## 2. Abbreviations

ADES	Association pour le Développement de l'Energie Solaire, Switzerland
AVSI	Association of Volunteers in International Services
BMZ	German Federal Ministry of Economic Cooperation and Development
CLASP	Collaborative Labelling and Appliance Standard Program
DFAT / AUSAid	Australian Department of Foreign Affairs and Trade
DGIS	Netherlands Ministry of Foreign Affairs and Tra
EAMD	Energy Access Market Development
EnDev	Energising Development programme
FCDO	UK Foreign, Commonwealth & Development Office
GCF	Green Climate Fund
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
HH	households
HIVOS	Humanistisch Instituut voor Ontwikkelingssamenwerking
HTC	Higher-Tier Cooking
ICS	Improved Cookstoves
ITAC	Independent Technical Advisory Committee
KOFIH	Korea Foundation for International Healthcare
LDC	least developed countries
LNOB	Leave no one behind
NDC	Nationally Determined Contributions
NIS	Nordic International Support Foundation
RBF	results-based financing
RE	renewable energy
RVO	Rijksdienst voor Ondernemend Nederland
SDC / DEZA	Swiss Agency for Development and Cooperation
SHS	solar home systems
SI	social institutions
SME	small and medium enterprise
SNV	Stichting Nederlandse Vrijwilligers / Netherlands Development Organisation
USAID	United States Agency for International Development

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