



Ministry of Foreign Affairs

# *Reflective study on RVO's SDG 7 Results Facility and options for a possible future funding vehicle*

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# Reflective study on RVO’s SDG 7 Results Facility and options for a possible future funding vehicle

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## Summary of findings

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For publication

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# 1 Introduction

## The SDG7 Results facility

In 2018, the Inclusive Green Growth Department (IGG) of the Ministry of Foreign Affairs invited RVO (Netherlands Enterprise Agency) to propose a subsidy facility promoting sustainable access to decentralised renewable energy services for a minimum of two million lower-income people in developing countries through results-based financing (RBF). The facility should directly contribute to the Dutch energy access targets (Sustainable Development Goal (SDG) 7) as well as to climate action (SDG 13). Consequently, the [SDG 7 Results facility](#) was set up and is implemented by RVO. It runs from 2019 to 2026 with a budget of around € 31 million. Its objectives are to provide two million lower-income households (<3.20 USD/day) with sustainable access to renewable energy and to help establish autonomous markets for decentralised energy access. Concerning technologies, SDG 7 Results was open to all types of renewable-energy-based electricity and cooking technologies, while not covering grid and grid-based e-cooking and productive use of energy (PUE). With two separate technology windows for electricity and cooking, the facility focusses on the supply chain of energy services and does not offer demand side subsidies. For each application the minimum grant amount was € 250,000 and the maximum was € 2.5 million. Companies and NGOs could apply for funding from the facility.

## Dutch commitment to energy access

The Dutch government has a policy ambition to **reach 100 million people in developing countries with access to renewable energy by 2030** ([BHOS nota 2022](#)). A results-based financing (RBF) initiative, building on the lessons and experiences of the on-going SDG 7 Results facility, is expected to be part of the mix of programmes contributing to that objective. At the same time, the NL Energy Compact of 2021 with its energy access commitments of the Dutch private sector, as well as the global rise of RBF initiatives, present opportunities for cooperation and requires alignment.

## Objective of the reflective study

After 4 years of operation, it is time to reflect on the achievements of the SDG7 Results facility so far, and to derive lessons that can inform the design of a possible new funding vehicle. This reflective exercise comprises two steps: 1) looking backward to analyse the results, rationale, and distinctive design elements of the ongoing SDG 7 Results Facility and 2) looking forward to sketch the features of a possible new funding vehicle, building on latest sector developments and RBF learning.

RVO contracted SiNERGi to support in this task by compiling an internal study intended for RVO and the Directorate General for International Cooperation of the Dutch Ministry of Foreign Affairs (DGIS). The study used a mixed-method approach consisting of desk-reviews of SDG 7 Results documents, latest sector reports and studies, and of semi-structured interviews taking place in autumn 2023 with 19 experts from DGIS, RVO, energy access facilities and industry associations, and four companies which received funding from the SDG 7 Results facility. This public summary of the reflective study is to inform interested parties on its main findings and recommendations. **Please note that all opinions and recommendations given in the report and this public summary are the ones of SiNERGi and do not necessarily reflect RVO's perspective.**

## 2 Lessons from the Dutch SDG7 Results Facility

### Targeted portfolio

SDG 7 Results is achieving **impressive energy access figures**: mid-way through its implementation period, by September 2023, it has already surpassed the initial target of 2 million people, by reaching 2.7 million people, and aims to reach 6.1 million people based on the contracts closed. With an average RBF subsidy (without programme management budget) of €3.32 per person provided with access, the programme does also exceptionally **well in terms of cost-efficiency**. There are three main reasons behind this success:

1. Several high-performing companies (current projections are that 5 of the 26 companies will provide 74 % of the 6.1 million people with access);
2. Certain advanced markets such as Kenya host a large cluster of projects (representing 36% of the allocated budget and 46 % of the access target); and
3. Clean cooking projects make up 84 % of the access target and tend to be highly cost-effective.

SDG 7 Results invited project proposals from 17 countries. Despite the offer of an expert pool that assisted (also in French) applicants with their proposals, the programme received and approved very few proposals from countries with more challenging framework conditions in terms of governance, conflict but also energy access market development like Burkina Faso, Chad, Niger, South-Sudan and Sudan. Mali is a notable exception.

### Type of RBF used

SDG 7 Results has been built on the classical market development rationale. **It offered an untargeted RBF** that was available to most companies, technologies, and a widespread country portfolio. The RBF offer was limited to 100 % sales-based disbursements with no complimentary technical assistance (TA) or access to finance. The programme was **straightforward in its RBF design** (based on the perception of the Energising Development (EnDev) programme, at the time, that RBF facilities should be as lean as possible). **RVO steered its portfolio by a comprehensive set of bid appraisal criteria** and safeguards.

### Review of RBF design elements

The procedures of the SDG 7 Results facility for funding applications, monitoring and verification were positively assessed (Blauw Research (2022): *RVO SDG7 Results programma; own interviews*). The procedures included distinctive elements such as:

- Use of a business development services (BDS) **expert pool** to support applicants with developing their concept note and proposal. The expert pool was highly appreciated and created a level playing field for companies with limited or no experience with RBF programmes.
- SDG7 Results allowed **aggregators** to submit proposals for multiple smaller companies. However, there are no aggregators in the portfolio as there has been no additional funding to cover the additional costs and risks incurred.
- A comprehensive **set of safeguards** (covering product quality, manager enumeration, gender equality, etc) which balanced ambition and feasibility in a pragmatic way.
- The eligibility requirement to **demonstrate availability of pre-financing**. While helpful in ensuring performance, this requirement might have deterred early- and mid-stage companies. Certain interviewees found it too rigorous as applicants were required to have funding available for the full 4-year implementation period.

- To introduce some cost competition in energy access provision, the SDG 7 facility asked companies to bid on the amount of subsidy per connection requested (thus using a **reverse auction approach**, a common pricing mechanism also in RBF projects). The **additionality requirement** that asked companies to propose interventions that were additional to their business-as-usual activities and to the market. Additionality was difficult to understand for applicants. For example, some companies serve the Base-of-the-Pyramid (BoP) market and consider their business-as-usual additional to the “profitable baseline” of serving more affluent customers.
- Use of **energy access market development (EAMD) score cards** to assess and monitor market development ex-ante and ex-post implementation. While a good tool for impact assessment, the companies themselves were asked to complete the exercise and did not always find it useful as it was time-consuming and not all market information was at hand.
- RVO contracted an independent verification agent, who developed a **standardized verification procedure** and applied it to each company, using a mix of phone, on site and technology-based verification that matched the risk profile of the companies’ business approaches. Although the methodology is robust, swift verification of claims remains a challenge.
- Option to **re-allocate budgets** between performing and non-performing companies. This is an essential element of the SDG 7 Results RBF methodology in the case of longer contract durations to implement the performance-based character of the support.

### 3 Lessons learned from international RBF experience

#### Supply side RBF approach was blueprint to SDG 7 Results in 2018

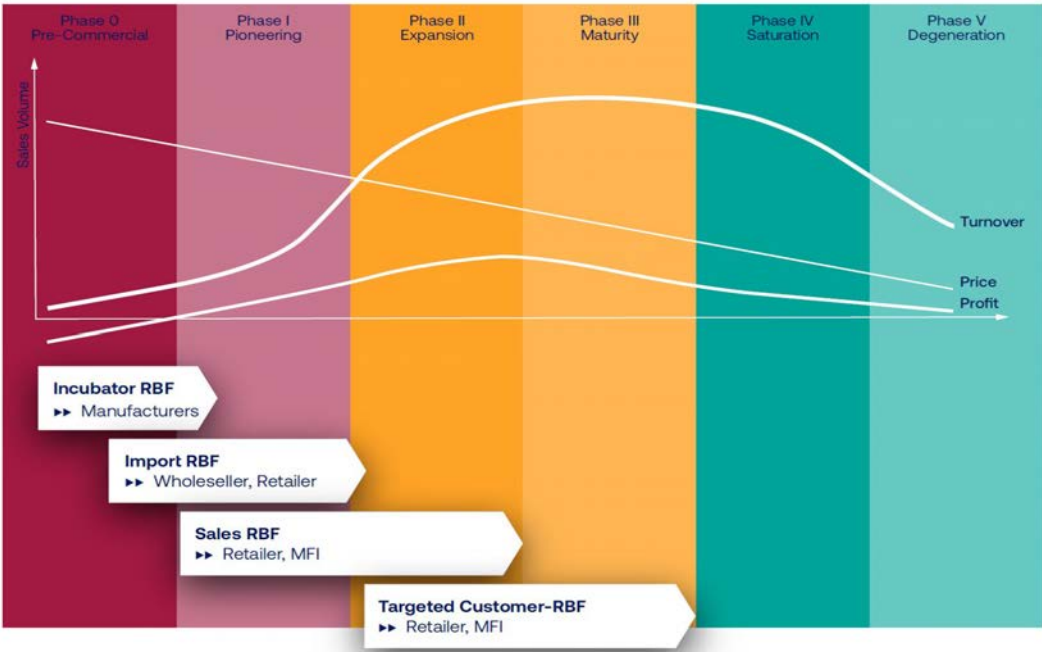
RBF as a financial instrument was introduced in the energy access sector around 2010 by programmes such as the Energy Sector Management Assistance Program, the Global Partnership for Results-Based Approaches, and EnDev. The by now “classical” supply side RBF is built on the intervention rationale that RBF incentivises companies to expand to new customers and areas, thereby being able to employ economies of scale, attract commercial capital, become less dependent on development assistance, and altogether contribute to market development. This rationale was also used for the conceptualisation of the SDG 7 Results Facility.

#### 5 years later: an abundance of diverse RBF approaches offers many lessons learned

As of May 2023, the SEforAll energy access RBF tracker lists a total of **91 RBF country components** and the list is not complete. Based on the literature review and the 19 interviews with DGIS, RVO, energy access facilities, industry associations, and four companies which received funding from the SDG 7 Results facility, we have identified key lessons on designing and implementing results-based financing instruments:

- 1. RBF needs to be tailor-made to the addressed market phase.** The classical sales-based RBF approach is especially suited to in market phases of expansion; “incubator RBFs” can spur product innovations in the pre-commercial phase, “import RBFs” help to scale product imports in pioneering market, and “targeted customer RBF” urges companies in mature markets to reach out to customers otherwise deemed “non-commercial” such as remote and/or lower-income customers (compare figure below).

*Different types of RBF as used per market phase transition (EnDev, 2021)*



2. **RBF design, requirements, and support offer needs to reflect the development stage of targeted companies.** Typical RBF requirements favour the strongest and most advanced companies that have good access to working capital and the highest capacity to quickly deliver results on scale. To offer a level playing field, especially in nascent and emerging markets, additional support for early-stage companies should be considered. RBFs can be made more inclusive by tying RBF payouts to results prior to time of sale. These may be milestone-based payouts or even advance payments, although these come with more non-performance risks for the subsidy provider. The RBF programme may also include non-RBF related sources of finance such as catalytic grants or concessional loans.
3. **Demand side subsidies can help to bridge the prevailing affordability gap** and reach universal access. Providing subsidies directly to low-income customers to enable them to pay for energy services is one way of extending the reach of commercial energy access provision. There is now an emerging debate on the best use of demand side subsidies (e.g., in [GOGLA's end-user subsidy lab](#)) and the Netherlands is spearheading practical experience by financing EnDev's demand-side subsidy component.
4. **Outcome-based RBFs re-focus attention towards impacts by awarding achievements further down the results chain.** While first RBF projects in the energy sector were output-focused, rewarding sales only, there are now RBF pilots that pay for achieved outcomes (e.g. good maintenance services; adequate consumer financing offers) or even impacts (e.g. gender equality, productivity gains). While there are still methodological challenges for implementers and cash-flow issues for companies, rewarding socio-economic outcomes and impacts directly may help to ensure additionality of public support especially in mature markets.

#### **Recommendations to RVO: Use fund windows with different, more targeted RBF approaches each**

Forward-looking, we advise any possible SDG 7 Results programme successor to use a more targeted RBF approach to increase subsidy efficiency. The future facility should offer **different funding windows with specific RBF approaches** tailored to the type of market transition envisaged (from either nascent to emerging or from emerging to mature), and adapted to types of technologies, companies, and customers. In addition to the RBF instrument, technical assistance should be offered for some of the intervention strategies. For cooking markets, additionality, and complementarity with carbon finance should be considered. In the following sections, we discuss possible intervention windows for the decentralised renewable electricity and the clean cooking sector.

## 4 Possible intervention rationale and support windows for the decentralised renewable electricity sector

### Technology choice in the decentralised renewable electricity sector: Focus on off-grid solar

Based on our in-depth review of the off-grid electricity sector (see full report) we advise to focus on off-grid solar (OGS), because solar home systems (SHS) are the most mature and scalable, and also affordable technology, which can be easily supported by RBF schemes that work well with standardised over-the-counter products. On the contrary, we argue that RBF for mini-grids is challenging because any promotion of private sector investment in mini-grids needs to provide or facilitate high and long-term upfront investment, accompanied by strong regulatory support, tight integration in grid planning, and an often TA-intensive assessment of each specific business case.

Productive use of energy (PUE) is rising on the agenda of many energy access donors as partner governments prioritise rural economic development. As a nexus topic, promoting PUE requires an integrated ecosystem approach. Combined with a strong package of on-the-ground TA RBF can become a component thereof, but is not advisable as a stand-alone instrument.

### Selected OGS sector trends and entry points for a future funding vehicle

#### Trend 1: Private and public investments are concentrated in mature markets

##### → Focus public support on nascent markets

Only a fraction of private investment is directed toward nascent and emerging markets, where 89% of the 464 million unconnected households are located (Lighting Global *et al.*, 2022a, 2022b). Due to this imbalance between funding flows and greatest energy access needs, we recommend a **focus on nascent OGS markets** for a public subsidy programme like SDG 7 Results. Choosing 1-2 countries for a localised support package can help building the grounds for later scaling by partners with more financial means. However, nascent OGS markets face conflict and fragility and tend to have weak policy and regulatory frameworks, making them a challenging environment for commercial ventures. Therefore, RBF interventions need to be integrated into wider, TA-based interventions to strengthen the regulatory framework and companies' capacities. This RBF+TA- approach takes time to build the enabling environment for companies to eventually deliver energy access results. See **Window A** "Integrated support for nascent market development".

#### Trend 2: New OGS markets are emerging with high growth trajectories

##### → Help to further accelerate market growth, but avoid free-rider effects.

Emerging markets represented a relevant share (30 %) of global OGS sales in 2021, while their host countries constitute a large part of the remaining electricity access gap. Some OGS companies, typically with significant public assistance, have managed to start a growth trajectory. Supporting emerging OGS markets is an opportunity to reach significant energy access figures by 2030. **Sales-based RBFs** are a good fit in emerging markets, but support should be differentiated according to company type. See **Window B** "Sales-based RBFs for emerging markets".

#### Trend 3: International high-performing companies dominate the scene

##### → Ensure a level playing field for local champions and newcomers.

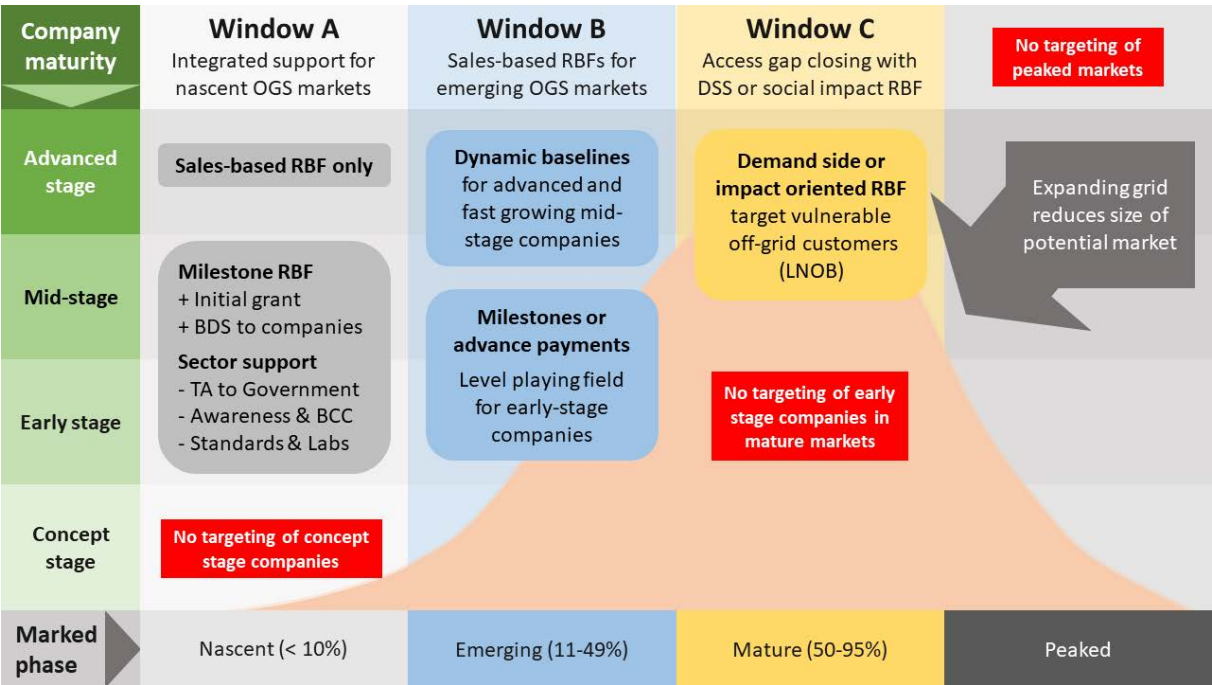
The gap between the market leaders on the one hand, and mid-stage and early-stage companies on the other hand, is growing: in 2022, 80 % of the total investment, was attracted by only 5 of the 210

OGS companies (GOGLA, 2023). Many early-stage companies struggle to get any access to finance. For the sake of market diversification, we recommend setting up public subsidy programmes in a manner that **aim for a level playing field to all companies** and that help early- and mid-stage companies to access finance to accelerate growth. For both **Windows A** and **B**, this objective suggests **facilitating access to finance**, but from an RBF point of view it also implies **easing RBF requirements** for prefinancing, and **offering milestone-based incentives, catalytic grants**, or even advance payments. On the other hand, additionality requirements for fast growing companies should become stricter to avoid windfall profits e.g., by employing dynamic baselines which calculate the number of additional sales due to public support versus sales that would have happened anyway based on companies' existing growth trajectories.

**Trend 4: Affordability impedes universal access**  
**→ Offer high subsidies for vulnerable groups and incentivise socio-economic impacts**

The **lack of affordability of OGS products** is still the main barrier to uptake and was further exacerbated by increasing product prices and declining income levels due to the pandemic and the subsequent economic crisis (Lighting Global *et al.*, 2022b). An estimated 177 to 277 million people are unable to afford a tier 1 OGS system. Offering customers pay-as-you-go schemes is one way of mitigating the affordability gap, but at some point, financing costs become prohibitively high. Demand-side subsidies have become acceptable to provide low-income groups with access to energy. Social impact RBFs have emerged as another instrument to incentivise companies to ensure socio-economic benefits. As DGIS is already supporting EnDev's demand-side subsidy component, we suggest considering **social impact RBFs as an additional or alternative means to target off-grid customers with low purchasing powers in mature markets**. See **Window C** "Access gap closing with DSS or social impact RBF".

*Suggested RBF windows for OGS energy access*



The table on the subsequent page summarises main rationales, intervention strategies, and alignment and partnership options of the three suggested windows.

## Summary of suggested RBF windows for the OGS sector

	Window A Integrated support for nascent markets	Window B Sales and milestones RBF for emerging markets	Window C Access gap closing with DSS or social impact RBF
Relevance & objective	High need, but challenging conditions; offer integrated support package for systemic change; help local companies to graduate to mid-stage	High growth potential; Support growth trajectories of advanced-stage companies while with sales-based RBF and level levelling the playing field for early-stage local companies	Inclusion of vulnerable groups & social impact orientation  Target geographical and/or vulnerable customer segments otherwise not served in mature markets
RBF offer	Milestone RBF with incentives for early steps in the delivery chain; small ticket sizes; relaxed additionality requirements; annual contracts  Offer complementary technical assistance (BDS + facilitation of local credit) and policy advisory to partner governments	For fast-growing/ advanced stage companies: sales-based RBF with strict additionality criteria and dynamic baselines  For early- to mid-stage companies: milestone RBF with e.g. a relation of 40 % on milestones prior to sale; 60% on sales	Use either demand side subsidies or social impact RBF. In the latter case, incentives are paid for results at the outcome and impact-level only, e.g., “10 EUR paid for energy savings due to product usage”
Example countries	Burundi, Niger, Madagascar, Central African Republic, DRC	Benin, Nigeria, Mozambique, Ethiopia	Kenya, Uganda, Ghana, Senegal
Pros	High market development and energy access impacts achievable; aligned with many host governments’ priorities for local economic development; milestone-RBF works well in combination with TA package of business development services	Good for gaining high energy access numbers; can either be managed centrally or locally or in combination	Strong impact-orientation; contributes to universal access in mature markets; helps social-impact orientated enterprises to strengthen their business cases and attract impact investors
Cons	Risk of non-performance at outcome-level; challenging framework conditions may prevail and hinder market development	Two different support approaches for early/mid-stage companies and advanced-stage companies means higher management costs	Social impact RBF approach not yet proven; access to long-term finance is critical; best verification approach still needs to be worked out
Alignment & partnership options	Cooperation with national or regional business incubator or SME development funds and risk guaranty mechanisms; cooperation with GOGLA’s <a href="#">ELEVATE</a> programme which supports locally owned and managed companies;	All partners that facilitate access to finance. Alignment could be pursued <i>at entry stage</i> , at which e.g. the RBF contract can help companies to access capital to pre-finance their activities. It could also come in <i>at exit stage</i> to match companies with commercial off-takers.	Social impact investors or intermediaries.
Next steps	Select 1-2 small countries or regions where impact becomes visible.  Call for implementing agencies to develop TA+RBF package based on their market and country expertise.	Preliminary selection of partner countries, technology focus.  Regional/national market analysis and stakeholder consultations, development of intervention design.	Pilot this option on a small scale to gain experience. Might be either done in 1-2 mature markets in order to close “last pockets”, but might be also applied in emerging markets.

## 5 Possible intervention rationale and support windows for the clean cooking sector

### Technology choice: Consider policy priorities, technical feasibility and market maturity

The Dutch policy objective focusses on renewable energy and as such, **LPG** and on-grid **electric cooking** (if the grid is not powered by renewable energy) are not promoted and are therefore not further considered in this study. For **biogas**, we see dedicated programmes such as RVO's African Biodigester Component (ABC) in a better position to promote the integrated use and co-benefits of biogas, which could be further ramped up by expanding the ABC's RBF activity. **Forced draft gasifier stoves** based on industrial biomass pellets could be supported, but a viable business case including fuel chain still needs to be demonstrated at scale and result expectations should be modest. **Ethanol** might represent for DGIS a quickly scalable Modern Energy Cooking Service (MECS). However, the business case for ethanol is strongest for urban areas and usually includes carbon finance, so that additionality of further public support is questionable. Also, possible adverse effects on food prices should be carefully studied. **Improved Biomass Cookstoves (ICS)** are representing the largest market segment to be supported, even though most natural draft designs do not reach tier 3 and therefore are not considered to contribute directly to SDG 7.

### Selected clean cooking sector trends and entry points for a future funding vehicle

#### Trend 1: Persisting clean cooking access gap

→ Continue supporting both MECS and biomass ICS

Latest SDG 7 tracking confirms the persisting **gap to reaching universal access** to clean cooking: unless rapid and decisive action is taken, around 1.9 billion people will lack access to clean cooking by 2030. If trajectories are not changed fundamentally, more than 60% of the population of Sub-Saharan Africa will still use traditional biomass and charcoal for cooking by 2030.

Current SDG tracking only covers clean cooking fuels (also known as MECS, which are mainly LPG, electricity, biogas and ethanol). Improved biomass cookstoves (ICS), which mostly provide tier 2-3 access, are not tracked globally, are not counted for SDG 7, and are thus part of the projected 60% of traditional biomass cooking. The imminent reality of missing the SDG 7.1 target for clean cooking (universal access to affordable, reliable and modern energy services) is addressed by two different approaches: 1) the call for unprecedented effort to close the gap until 2030, e.g. as called for by the IEA's recent *Vision for Clean Cooking Access for All* with the main focus on quickly scaling access to LPG; and 2) expanding the definition of universal access to clean cooking by including access to tier 3 biomass ICS, while shifting the access to MECS target to 2040 as proposed by the recent *UN Energy Clean Cooking Roadmap*.

While progress in closing the clean cooking access gap was achieved by relying on market-based approaches, these reach their limits when energy needs to be supplied to people who cannot afford market prices. Thus, Dutch energy access interventions should continue to promote both MECS and biomass ICS and be scrutinised for their targeting mechanisms for the poor and vulnerable, adhering to the leave-no-one-behind principle.

**Trend 2: Both the MECS and biomass ICS market segments have radically changed over past 5 years**  
→ Each market segments requires tailored RBF support

The MECS market is predominantly established in urban areas, apart from the market for biogas. In sub-Saharan Africa, access to MECS was by 2021 mostly provided via LPG, and reached only 18 % of the total population on average (36 % in urban areas and 5 % in rural areas).

Recent public support to MECS focuses on a comparatively new and limited number of international and vertically integrated manufacturers, and some advanced last mile distributors, that sell e-cooking, LPG, biogas, and ethanol with PAYGo schemes. The rapid growth of these companies has increased the competitiveness of these high-cost technologies compared to cheaper biomass-fuelled ICS. The e-cooking, LPG, biogas, and ethanol segment attracts the most private investment and carbon finance. The segment shows strong market growth (albeit from very low levels of market penetration), but is largely focussed on urban to semi-urban affluent customer groups. Significant end-user subsidies would be required to make MECS affordable for the wider population, including low-income and rural households.

Over past decades, a significant number of local manufacturers have been qualified to locally build natural draft ICS. The sustainability of this market segment has been criticised due to quality issues as well as the prevalence of semi-commercial or NGO-driven distribution strategies. Recent interventions therefore focus on professionalisation of such local ICS producers to reach industrial production levels, building commercial distribution networks, and improving access to commercial and carbon finance.

In parallel, a small group of industrial scale ICS manufacturers has emerged. Some are vertically integrated, while others cooperate with advanced last mile distributors and cover the full product range, from natural draft to forced draft biomass stoves. Some companies have been able to attract substantial investments, public grants, and carbon finance. These manufacturers benefit most from carbon finance, as carbon revenues may surpass retail costs of products, which means that free distribution of product could be profitable.

**Future clean cooking interventions should be tailor-made to these different market segments as well as reflecting the maturity of companies and markets.** Depending on needs of targeted companies, the RBF offer should focus on leveraging instead of replacing carbon finance and might be complemented with technical assistance, BDS, grant support, and advance payments, thereby ensuring a level playing field for local/early-stage companies. See **Window D** “Increasing companies’ carbon market readiness”.

**Trend 3: Carbon finance has become an important factor**

→ Support companies to become carbon finance ready & tap into carbon finance to subsidize pro-poor access

Carbon finance is becoming an important means to de-risk cooking sector business cases for further investments thereby helping companies to scale. By 2022, carbon revenues represented 22 % of total revenues of clean cooking companies monitored by the Clean Cooking Alliance (CCA). Like other types of finance, carbon finance generally goes to a select group of market leaders (CCA, 2023).

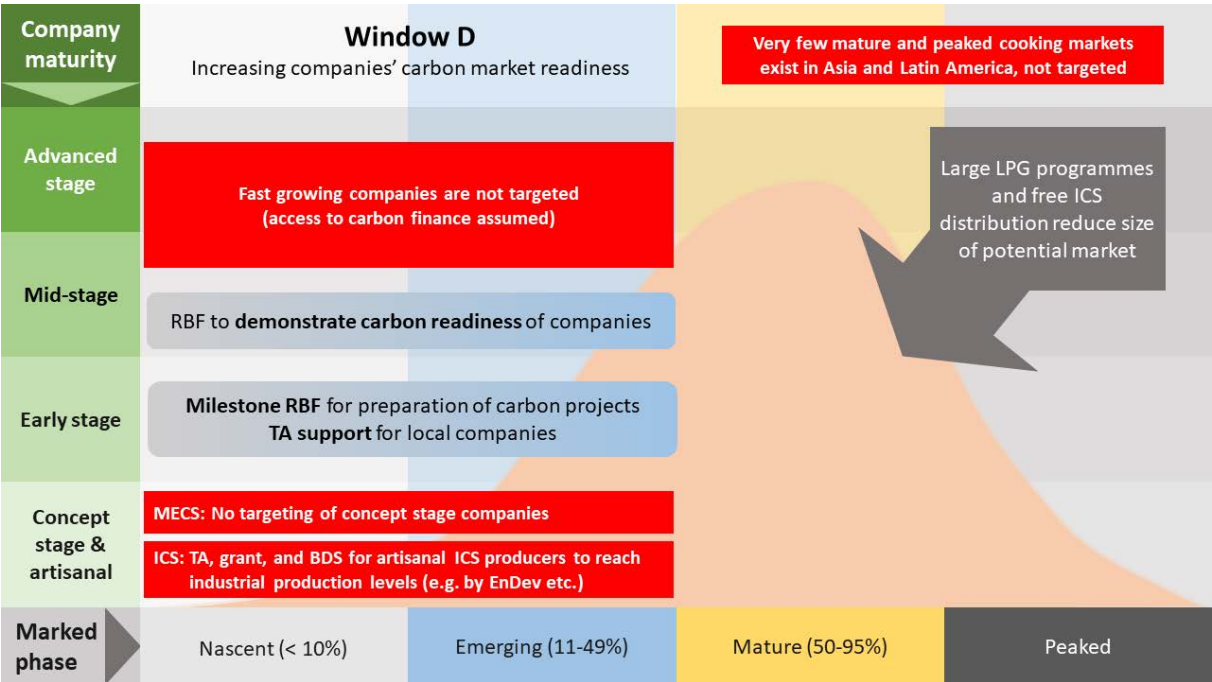
For **fast-growing companies** which successfully built their business model and growth on carbon finance, we do not see a further role for public support as additionality would be questionable. Also, one should **not target countries with large scale, carbon-financed, free distribution programmes** as these disrupt emerging markets and erode public support for market-based approaches.

Especially **early to mid-stage companies** still need support to tap carbon market opportunities. For these, we recommend offering a **milestone RBF** for achieved steps in securing carbon finance and a sales-based RBF component to build companies’ track record on required monitoring, reporting and verification, while additional TA might be required for local companies, to enable them to successfully participate in an RBF facility. See **Window D** “Increasing companies’ carbon market readiness”.

More food for thought is a recent World Bank experience: the Rwanda-based [Energy Access and Quality Improvement Project \(EAQIP\)](#) mobilised \$ 10.8 million carbon finance from the [Carbon Initiative for Development Fund \(Ci-Dev\)](#) to purchase carbon credits generated through clean cooking and off-grid operations. Carbon revenues were channelled back into a government-run pro-poor RBF fund to make it revolve and scale up its ambitions. It is a learning case on how to use carbon finance to address the challenge of pro-poor/social impact-oriented energy access interventions that require ongoing public subsidy. It is also relevant for host countries that want to keep carbon revenues in-country (e.g. Kenya). However, there are also drawbacks, such as the need for a strong policy advisory component for partner government and companies, and complex legal aspects to consider when it comes to carbon certificate ownership. Such an approach would be most useful in replenishing demand-side subsidy interventions. See **Window E** “Piloting a clean cooking revolving fund”.

In general, the existing uncertainties about ICS voluntary carbon projects (due to on-going methodology revisions) and unresolved regulatory issues (e.g., accounting rules under Article 6 mechanisms being still in discussion) call for close sector monitoring. In early 2024, we cannot ignore carbon finance as it might become a major game changer, especially in judging public subsidies’ additionality. However, with the given uncertainties, one also needs to build in flexibility in RBF design to adapt to changing circumstances. For example, in the extreme case that biomass ICS gets, as a non-metered technology, excluded from future carbon finance, RBF support schemes for biomass ICS can help to make up for the foregone private capital.

*Suggested RBF Window D on carbon market readiness for clean cooking companies*



The table on the subsequent page summarises main rationales, intervention strategies, and alignment & partnership options of the two suggested windows.

## Summary of suggested RBF windows for the clean cooking sector

	Window D: Increasing companies' carbon market readiness	Window E: Piloting a clean cooking revolving fund
Relevance & objective	<p>Carbon finance is becoming an important source of finance, especially for biomass ICS.</p> <p>Support smaller companies/aggregators to access carbon finance.</p>	<p>Subsidies for low-income households usually face long-term funding issues that endanger their sustainability.</p> <p>Use carbon finance incomes to replenish national-level revolving (RBF) fund for subsidising pro-poor clean cooking access</p>
RBF offer	<p>Milestone RBF for different steps in the process of setting up carbon projects.</p> <p>Sales-based RBF to demonstrate MRV capacity of companies for carbon projects.</p> <p>Complementary TA for assisting companies/aggregators throughout this process.</p>	<p>Host governments claim carbon ownership; they enter into a contract with a buyer; carbon revenues are used to replenish national energy access programme to reach out to more beneficiaries.</p>
Example countries	<p>All Dutch partner countries in SSA. Complementarity with ongoing and planned RBF support is essential. Market building for biomass ICS is questionable in countries with free distribution programmes.</p>	<p>As in window D; but host government's commitment and capacities are crucial.</p>
Pros	<p>Leveraging carbon finance for early- and mid-stage companies keeps the cooking sector diverse and competitive; access to carbon finance helps companies with long-term financial viability.</p>	<p>Relevant approach for pro-poor/social impact-orientated energy access interventions that need continuous public subsidies; relevant for host countries which want to keep carbon revenues in-country.</p>
Cons	<p>Smaller companies may not be able to hedge against volatile carbon prices and delayed credit payments; they might become overly dependent on an unreliable revenue stream.</p> <p>The boom and bust of the voluntary carbon market will continue for another 2-3 years until more regulatory clarity emerges. These regulatory and integrity risks can undermine efforts invested in building up carbon market readiness of companies.</p>	<p>Includes a strong policy advisory component to partner government; probably complex legal aspects to consider; many details unclear.</p> <p>Extensive set-up period and possibly only mid-term clean cooking market and access impacts. Less relevant for achievement of 2030 targets.</p>
Alignment & partnership options	<p>All partners that facilitate access to commercial and carbon finance should work together, e.g., CCA's <i>Venture Accelerator</i> which supports capacity of early-stage companies; CCA's <i>new Partnership Platform for Clean Cooking Finance</i> to de-risk investments. Alignment could be pursued at entry stage, at which e.g., the RBF contract and the de-risking measures of CCA's platform can help companies to access capital to pre-finance their activities. It could also come in at exit stage to match companies with commercial off-takers.</p>	<p>Needs a carbon credit buyer/trader as a partner, e.g., World Bank cooperated with Ci-Dev. Governments of targeted countries need to be strong supporters of the RBF.</p>
Next steps	<p>Get an assessment from carbon market specialists if general idea is feasible; do a more in-depth risk analysis for DGIS/RVO and company perspective; decide whether standalone or as a complementary component; could e.g. become part of the SME Finance Facilitator of RVO's Higher Tier Cooking Component; Would need a localised approach for offering direct TA to local companies.</p>	<p>Would have greatest benefit in replenishing demand-side subsidy interventions, which most likely are not going to be part of a future SDG 7 Results-type of programme. Keep idea in mind for another future intervention.</p>

## 6 References

CCA (2023) *2023 Clean Cooking Industry Snapshot*. Clean Cooking Alliance (CCA). Available at: <https://cleancooking.org/wp-content/uploads/2022/05/CCA-2022-Clean-Cooking-Industry-Snapshot.pdf>.

EnDev (2021) *Transforming energy access markets with Results-based - Lessons from 7 years of implementation under EnDev's RBF Facility financed by UK Aid*. Eschborn: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. Available at: [https://endev.info/wp-content/uploads/2021/08/EnDev\\_RBF-Lessons-Learnt-Report\\_2021.pdf](https://endev.info/wp-content/uploads/2021/08/EnDev_RBF-Lessons-Learnt-Report_2021.pdf).

GOGLA (2023) *Global Off-Grid Solar Market Data - Semi-Annual Sales and Impact Data: January - June 2023*. Available at: <https://www.gogla.org/reports/global-off-grid-solar-market-report>.

Lighting Global et al. (2022a) *Off-Grid Solar Market Trends Report 2022: Outlook*. DOE/EE--0989, 1220825. Washington, DC: World Bank Group. Available at: <https://doi.org/10.2172/1220825>.

Lighting Global et al. (2022b) *Off-Grid Solar Market Trends Report 2022: State of the Sector*. Washington, DC: World Bank Group. Available at: <https://openknowledge.worldbank.org/handle/10986/38140?locale-attribute=es>.

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