End User Subsidies Lab Official Launch

Session 1: Rwanda End User Subsidy (Pro Poor RBF)
Agenda

• Official Launch of the End User Subsidy Lab – Dana Rysankova (World Bank/ESMAP)

• Welcoming Words - Annick Muhama (Ministry of Infrastructure)

• Pro Poor RBF Technical Design – Sarah Leitner (GIZ/EnDev) & Gratien Vuningoma (ECDL)

• Renewable Energy Fund Window 5 – Christa Kageruka (Development Bank of Rwanda)
  • Design of Window 5
  • Similarities and differences to the Pro Poor RBF

• Q&A

• Wrap up
LAUNCH OF THE END USER SUBSIDY LAB

Dana Rysankova, Global Lead Energy Access, World Bank
The End User Subsidy Lab seeks to promote the uptake of carefully and well-informed end user subsidies:

- Crowding in knowledge, resources and expertise from all stakeholders interested in participating
- Offering a platform for exchange, dialogue and extensive consultation among different stakeholders
- Sharing lessons learned, tools, and information broadly
- Testing prototype end user subsidy designs

The lab is coordinated by ESMAP, GOGLA, and ACE TAF but welcomes the participation of all stakeholders.
**WHY END USER SUBSIDIES?**

- **Significant progress has been made towards SDG7, but large portions of the population will remain unserved in 2030.**
- **Covid-19 pandemic is pushing an additional 100 million people into extreme poverty.**

### Global electricity access deficit

<table>
<thead>
<tr>
<th>Year</th>
<th>Can afford</th>
<th>Cannot afford</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>1.20</td>
<td>0</td>
</tr>
<tr>
<td>2019</td>
<td>0.72</td>
<td>0</td>
</tr>
<tr>
<td>2030</td>
<td>0.40</td>
<td>0.23</td>
</tr>
</tbody>
</table>

Sources: (1) World Bank, Global electricity access deficit, (2) Lighting Global, 2020 Market Trends Report - adapted from OCA
End User Subsidies can be channeled through either household or company.

End User Subsidies (demand side subsidies) **directly** reduce the price to the end user. Whereas supply side subsidies bring down the price **indirectly** by leveraging market dynamics or partially absorbing the cost of business.
Initial Market Price

Technology and Design Innovation

Production Scale and Distribution Efficiency

Increased Competition among companies

Lower cost of doing business and improved enabling environment

Increased Awareness and Demand

Aspirational Product and Consumer Value

Savings or income generating potential

Consumer Financing

End User Subsidies to Bridge Remaining Affordability Gap

Both Demand and Supply Levers are Needed to Increase Affordability & Willingness to Pay

Vulnerable households

End User Subsidies Lab
**ADDING END USER SUBSIDIES TO THE TOOLBOX**

**END USER SUBSIDIES CANNOT REPLACE ONGOING SUPPORT BUT COMPLEMENTS IT**

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**Enabling Policy Environment**
Quality standards, clear tax regulations, OGS embedded into access planning etc..

**End User Subsidies**
Providing support to low-income households in accessing products.

**Access to Finance**
Credit lines, dedicated debt funds, availability of equity.

**Grant Funding**
Promote R&D, market entry, market research, results-based financing.
WHY WERE END USER SUBSIDIES NOT INTRODUCED EARLIER?

• How to ensure scarce public funding is used in most efficient way?
  • when is the right point in market development to start end user subsidies?
  • how to determine the affordability gap and corresponding subsidy amount?
  • how to avoid leakage and ensure subsidy reaches target households?
  • how much will it cost?

• What can we learn from previous experiences?
  • Are there experiences from adjacent sectors that we can learn from?
  • Are the lessons from few end user subsidy pilots we see in select countries transferable to other markets?
  • How can increased digitalization be leveraged?

• How to avoid market spoilage and market sustainability?
  • how to avoid 'training' the households to pay lower price indefinitely?
  • how can an exit strategy look like?
  • is there a risk of private sector getting hooked on subsidies?
  • how do end user subsidies best complement proven tools on the supply side?

Many Important Questions – Few Definitive Answers
High Risk!
1. Growing Consensus on the Need for End User Subsidies

For full effectiveness, they need to be complemented by supply side subsidies and risks associated need to be mitigated.

2. Recognition that the Sector Needs to Learn ‘How To’ Design and Mitigate Risks

There is limited knowledge on how to best design end user subsidies in different country contexts and how to address design challenges. More pilots and knowledge sharing is needed which requires funding.

3. Need to Mainstream End User Subsidies into National Electrification Programs

To mainstream end user subsidies, all stakeholders need to become more comfortable that the sector knows how to mitigate risks. More expertise and experience is required.
Build expertise and knowledge in the sector

Promote exchange and facilitate learnings

Develop effective subsidy projects

Mainstream end user subsidies into energy access programs

Next Step: End User Subsidy Lab
## End User Subsidy Lab Concept - Proposed Activities

**Go to knowledge hub**

Insights from sector specific or adjacent sectors will be collected, curated, and made available via an easily searchable online platform.

- Resource Hub online: [https://www.gogla.org/off-grid-solar-smart-subsidies/reports-and-resources](https://www.gogla.org/off-grid-solar-smart-subsidies/reports-and-resources)
- Webinar series profiling learnings from end user subsidy pilots or projects: Rwanda (today), Bangladesh (week of October 25), Togo, Kenya

**Create a Pipeline of ‘ready to fund and roll out’ country specific designs**

Support country teams with guidance and expertise in developing and testing end user subsidy designs: the lab will partner with up to three countries.

- Support development of prototype design, incl. additional research or analytics work required
- Help to fundraise to implement the pilot
- Accompany pilot with monitoring & evaluation
- Inform potential scale-up of a successful pilot

**Enabling Transformative Thought Leadership**

to further stimulate the development of innovative and impactful designs, the lab will act as a thought leader and ideate new frameworks and approaches that can help to reduce the affordability gap and promote inclusive and holistic market development.

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To implement all foreseen activities, more funding is needed -> ESMAP and GOGLA continue to fundraise
Country Selection Criteria:

• Prevailing affordability gap.
• Appetite from government, development partners, and industry to contribute to, develop and test prototype design.
• Ideally presence of a WB access project that can scale successful pilot.
• Diversity: test ideas in different contexts.

Prototype Design Building Blocks:

• Objective of end user subsidy
• Delivery channel
• Strategy for targeting
• Monitoring and verification approach
• Outline of eligibility criteria
• Approach to determine initial subsidy level
• Funding required for pilot and scale up
• Institutional arrangements, incl. implementing agency
• Exit strategy
## Timeline and Next Steps

<table>
<thead>
<tr>
<th>Date</th>
<th>Indicative Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>30/09/2021</td>
<td>Launch of Lab and Rwanda Webinar</td>
</tr>
<tr>
<td>09-10/2021</td>
<td>Countries to develop and test prototype designs in selected</td>
</tr>
<tr>
<td>Q4 2021</td>
<td>• Webinar Series: Kenya, Togo, Bangladesh</td>
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<tr>
<td></td>
<td>• Start design process of prototypes, consultation of all national stakeholders</td>
</tr>
<tr>
<td>Q2 2022</td>
<td>Prototypes developed, fundraising to implement pilots</td>
</tr>
<tr>
<td>Q3 2022</td>
<td>Implementation plan with funders/ budget identified.</td>
</tr>
<tr>
<td>Q3-4/2022</td>
<td>Start pilots (subject to funding)</td>
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</table>
The Lab seeks to leverage network effects. If you have interest in the work or would like to contribute to its success, please be in touch with:

- ACE TAF,
- GOGLA,
- or ESMAP/Lighting Global

To stay up to date with our activities and learn more, please visit our website:

https://www.gogla.org/end-user-subsidies-lab
Thank you.
Please share comments and feedback!
drysankova@worldbank.org
Welcoming Words from the Ministry of Infrastructure

Annick Muhama
Ministry of Infrastructure
Speakers

Chiara Rogate
World Bank – Africa Energy Unit

Gratien Vuningoma
ECDL

Sarah Leitner
GIZ/EnDev

Christa Kageruka
Development Bank of Rwanda

(Moderator)
End-user Subsidy Schemes
Pro Poor RBF
The Pro Poor RBF - background

Objective

Accelerate access to electricity for low-income households in selected off-grid areas using targeted incentives to increase the affordability of SHS

Implementation period: November 2019 – March 2021

Incentive budget: EUR 2.1 million

Funded by: FCDO & USAID / Power Africa

Implemented by: EnDev Rwanda, Rwanda Energy Group (REG) & Urwego Bank

Approach: Results-Based Financing, Leave no one behind
The Pro Poor RBF—how it worked

1. Company applies to Pro Poor RBF
2. Pro Poor team vets application
3. Contract is signed between company and fund manager
4. Company makes sales at subsidized price to eligible customers
5. Company submits claim to Pro Poor
6. Pro Poor team verifies sales
7. Fund manager disburses incentives to company.
FAQ 1 – How was the target group defined?

Low-income households

Living in off-grid areas

Without electricity access

- Based on Ubudehe classification
- Ub. 1, 2 & 3 households targeted
- Priority given to Ub 1 based on budget earmarking

- As defined in the National Electrification Plan (NEP)
- Narrowed to 5 districts in the Southern Province given pilot nature

- Also excl. households who previously purchased an SHS

Lessons learned: Using available data
Capitalise on available national data and databases for targeting.
FAQ 2 – How was the subsidy level calculated?

Basic principles

• Subsidy levels are reflective of differing ability to pay of Ubudehe categories.

• Only basic electricity access in line with Rwandan Ministerial Guidelines on Minimum Standard Requirements for Solar Home Systems is subsidised.

• Customers can choose any eligible system they want.

• All customers need to contribute to the purchase of the system to create ownership and ensure maintenance.
FAQ 2 – How was the subsidy level calculated?

- **Average Pay-As-You-Go (PAYG) price of 6 low-cost systems globally available complying with the Ministrial Guidelines**

- **Assumed ability to pay based on various survey data on disposable income and energy expenditure by Ubudehe categories**

<table>
<thead>
<tr>
<th>Ubudehe category</th>
<th>Absolute subsidy level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ubudehe 1</td>
<td>EUR 90</td>
</tr>
<tr>
<td>Ubudehe 2</td>
<td>EUR 70</td>
</tr>
<tr>
<td>Ubudehe 3</td>
<td>EUR 50</td>
</tr>
</tbody>
</table>
FAQ 2 – How was the subsidy level calculated?

- Challenge: If companies offer system below assumed base price, companies will be oversubsidised.

- Solution:
  - Addition of relative subsidy level in %
  - Application of the lower of the two subsidy levels

<table>
<thead>
<tr>
<th>Ubudehe category</th>
<th>Absolute subsidy level</th>
<th>Relative subsidy level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ubudehe 1</td>
<td>EUR 90</td>
<td>87 %</td>
</tr>
<tr>
<td>Ubudehe 2</td>
<td>EUR 70</td>
<td>68 %</td>
</tr>
<tr>
<td>Ubudehe 3</td>
<td>EUR 50</td>
<td>49 %</td>
</tr>
</tbody>
</table>
FAQ 2 – How was the subsidy level calculated?

Example 1:
• System cost: EUR 150
• HH Ubudehe category: 1
  - Relative subsidy level: EUR 150 * 0.87 = EUR 131
  - Absolute subsidy level: EUR 90

Example 2:
• System cost: EUR 98
• HH Ubudehe category: 1
  - Relative subsidy level: EUR 98 * 0.87 = EUR 85
  - Absolute subsidy level: EUR 90

<table>
<thead>
<tr>
<th>Ubudehe category</th>
<th>Absolute subsidy level</th>
<th>Relative subsidy level</th>
</tr>
</thead>
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<tr>
<td>Ubudehe 1</td>
<td>EUR 90</td>
<td>87 %</td>
</tr>
</tbody>
</table>
FAQ 2 – How was the subsidy level calculated?

Lessons learned: Designing dynamic subsidies

• Take into account product eligibility criteria when thinking about the structure and design of the subsidy.
  ○ E.g. if eligible products are limited in terms of size or price, either the absolute or relative subsidy level may suffice.

• Consider framework conditions, market dynamics, customer behaviour, etc. when setting subsidies.
  ○ E.g. take standards into account, think about whether you want to set a higher subsidy level aiming to decrease or start lower with potential need to increase.

• Review and if necessary adjust subsidy (and price) levels to respond to market trends and external factors impacting costs.
FAQ 3 – How can companies identify eligible customers and the right subsidy level in the field?

• Solution: web-based Eligibility Tool

• Users: Companies

• Functions:
  o Check customer eligibility and applicable subsidy
  o Pre-register („reserve“) customer if moving forward with sale
  o Confirm customers and secure subsidy upon system installation
  o Track budgets
FAQ 3 – How can companies identify eligible customers and the right subsidy level in the field?

1. Eligibility check: Enter ID, product, location
2. Pre-reservation
3. Confirmation

Eligibility Tool

1. National ID used to retrieve HH ID and Ub category, and check Ub eligibility

LODA MEIS

REG OMIS

1. REG SHS sales database
2. Pro Poor subsidised sales database
3. NEP
4. Budget tracker (Ubudehe budget, company budget)
FAQ 3 – How can companies identify eligible customers and the right subsidy level in the field?

1. Eligibility check: Enter ID, product, location
2. Pre-reservation
3. Confirmation

Eligibility Tool

LODA MEIS
1. REG SHS sales database
2. Pro Poor subsidised sales database
3. NEP
4. Budget tracker (Ubudehe budget, company budget)

REG OMIS

HH ID used to check for past SHS purchases by the HH
FAQ 3 – How can companies identify eligible customers and the right subsidy level in the field?

1. Eligibility check: Enter ID, product, location
2. Pre-reservation
3. Confirmation

Location used to check for eligible area and grid / mini-grid access accd. to NEP

1. Eligibility Tool

LODA MEIS

1. REG SHS sales database
2. Pro Poor subsidised sales database
3. NEP
4. Subsidy levels and budget tracker (Ubudehe budget, company budget)
FAQ 3 – How can companies identify eligible customers and the right subsidy level in the field?

1. Eligibility check: Enter ID, product, location
2. Pre-reservation
3. Confirmation

Eligibility Tool:
- Product and Ub. used to look up applicable incentive level and check available company and Ub budget

LODA MEIS

REG OMIS
- 1. REG SHS sales database
- 2. Pro Poor subsidised sales database
- 3. NEP
- 4. Budget tracker (Ubudehe budget, company budget)
Eligibility check result

The village is covered by the scheme

The customer is not blocked for the scheme

The customer’s Ubudehe category is within its current budget

The company is within its current budget

Customer name: Someone

Product: Sun King Home 120 Easybuy, Greenlight Planet

Original price (FRW): 178,353.86 FRW

Ubudehe category: 3

Subsidy (FRW): 50,448.00 FRW

Subsidized prize (FRW): 127,905.86 FRW
FAQ 3 – How can companies identify eligible customers and the right subsidy level in the field?

1. Eligibility check: Enter ID, product, location

2. Pre-registration

3. Confirmation

Eligibility Tool

*Information from eligibility check is saved with pre-registration date*

Customer and subsidy budget reserved for 30 days

1. LODA MEIS

2. REG OMIS

1. REG SHS sales database

2. Pro Poor subsidised sales database
   a) Pre-registrations
   b) Confirmations

3. NEP

4. Budget tracker (Ubudehe budget, company budget)
# The Eligibility Tool – Pre-registrations

## Pending pre-registrations

The pre-registration has been filed

- **15/12/2019**
  - Village: Bayi (Nyanza district)
  - Customer name: Someone
  - National ID: 1198781928374019
  - Product: Sun King Home 120 Easybuy, Greenlight Planet
  - Agent: Ignite Administrator
  - Subsidized end-price (FRw): 107,726.66

- **13/12/2019**
  - Village: Nyagatovu (Nyanza district)
  - Customer name: Someone
  - National ID: 1198671928364710
  - Product: Sun King Home 120 Easybuy, Greenlight Planet
  - Agent: Ignite Administrator
  - Subsidized end-price (FRw): 87,547.46

- **12/12/2019**
  - Village: Rugarama (Gisagara district)
  - Customer name: Someone
  - National ID: 1198570101761853
  - Product: Sun King Home 60 Easybuy, Greenlight Planet
  - Agent: Ignite Administrator
  - Subsidized end-price (FRw): 28,099.54
  - Village: Gakomanye (Huye district)
    - Customer name: Someone
    - National ID: 1199480135072157
    - Product: Sun King Home 120 Easybuy, Greenlight Planet
    - Agent: Ignite Administrator
    - Subsidized end-price (FRw): 107,726.66
  - Village: Kayejo (Nyamagabe district)
    - Customer name: Someone
    - National ID: 1195980018833005
    - Product: Sun King Home 60 Easybuy, Greenlight Planet
    - Agent: Ignite Administrator
    - Subsidized end-price (FRw): 48,278.74
  - Village: Nyaminyonga (Nyanza district)
    - Customer name: Someone
    - National ID: 1199370131306107
    - Product: Sun King Home 60 Easybuy, Greenlight Planet
    - Agent: Ignite Administrator
    - Subsidized end-price (FRw): 28,099.54
  - Village: Nyakabuye (Nyamagabe district)
    - Customer name: Someone
    - National ID: 1193780003357061
    - Product: Sun King Home 60 Easybuy, Greenlight Planet
    - Agent: Ignite Administrator
    - Subsidized end-price (FRw): 48,278.74
  - Village: Kagano (Nyanza district)
    - Customer name: Someone
    - National ID: 1198480057591079
    - Product: Sun King Home 60 Easybuy, Greenlight Planet
    - Agent: Ignite Administrator
    - Subsidized end-price (FRw): 68,457.94
FAQ 3 – How can companies identify eligible customers and the right subsidy level in the field?

1. Eligibility check: Enter ID, product, location

2. Pre-reservation

3. Confirmation

Pre-registration is moved to confirmations and confirmation date is added

1

1

Eligibility Tool

LODA MEIS

REG OMIS

1. REG SHS sales database
2. Pro Poor subsidised sales database
   a) Pre-registrations
   b) Confirmations
3. NEP
4. Budget tracker (Ubudehe budget, company budget)
FAQ 3 – How can companies identify eligible customers and the right subsidy level in the field?

Lessons learned: Considering digital tools

- Digitalise eligibility check and claiming as much as possible to facilitate programme management (both for companies and administrators).

- Consider data protection regulation, network coverage and devices being used by company agents when designing and employing digital tools.

- Take into account server structure and network quality of databases you need connect to and, if possible, have a plan B in case the tool is down.

- Ensure you have capacities for trouble shooting and to adapt IT tools throughout implementation.
FAQ 4 – What have we learned during implementation?

Lessons learned: Raising awareness and gaining local support

• Conduct awareness raising campaigns among customers to ensure they are informed eligibility criteria, programme requirements and product offerings.

• Engage with local authorities throughout the preparation and implementation to gain support for customer mobilisation and verification.

• Clearly define role of local government and formalise the cooperation.
FAQ 4 – What have we learned during implementation?

Lessons learned: Verifying results

• Work with companies to improve data quality – it will save time and money during verification.

• Use multiple verification methods to balance reliability and cost efficiency.

• For phone verification, call customers multiple times on different days at different times and allow companies to provide alternate numbers to ensure you reach them.

• Be prepared that customers may not be able to give you the company or product name, exact purchase date or price.
FAQ 4 – What have we learned during implementation?

Lessons learned: Setting impulses through disbursement schedules

• Consider the impact of different disbursement models on price, company and customer behaviour.
  ○ E.g. single upfront payment can help to reduce cost of capital and end-user prices; multiple payments or monthly top ups can ensure better long-term service

• When considering multi-tranche disbursement, ensure you have the contractual means to manage final verifications and payments.
Thank you for your attention!

Sarah-Melissa Leitner
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sarah.leitner@giz.de

Gratien Vuningoma
Off-grid Specialist
gvuningoma@edcl.reg.rw
Annex 1: How was contracting and disbursement managed?

- **Donors**
  - DFID RBF Facility
  - USAID Power Africa (RW)

- **Grant agreement**
  - EnDev
    - Receives funds for:
      - Incentive payments
      - Management
      - IT tools
      - Verification, etc.

- **Companies**
  - Receives funds for:
    - Incentive payments
    - Administration budget
  - Receives incentives, which are **passed on 100% to eligible beneficiaries**

- **Beneficiaries**
  - Receives subsidised SHS

- **Service Level Agreement (SLA)**
  - Urwego Bank
    - Receives grant agreements

- **Sales contract**
Annex 1: How was contracting and disbursement managed?

Lessons learned: Using fund managers

- Key for successful RBF: fast processes
- Advantage of fund managers: less bureaucratic hurdles for contracting and disbursements
- Key considerations for working with fund managers:
  - Role of fund manager
  - Appropriate training / support for fund manager
  - Incentive for fund manager

Lessons learned: Using companies as intermediaries

- Advantages of channeling funds through companies:
  - minimize transaction costs
  - overcome challenges related to literacy
  - overcome challenges related to connectivity / digital literacy
Annex 2: What companies and products were eligible?

Eligible companies

• Open to all solar companies or commercially operating organisations in Rwanda

• Eligibility criteria incl.
  ○ registration
  ○ compliance with tax and social security requirements
  ○ signed Cooperation Agreement with REG
  ○ compliance with government reporting requirements
  ○ end-of-life management policy, etc.

Supported solar systems

• Newly imported SHS complying with the *Ministerial Guidelines on Minimum Standard Requirements for Solar Home Systems*

• Lighting Global certified SHS already in Rwanda at the time of the programme launch
Annex 2: What companies and products were eligible?

Lessons learned: Ensuring broad company participation

- Overly bureaucratic eligibility criteria can eliminate smaller / local companies.
- Even with manageable eligibility criteria, upfront funding for stock purchases can be a challenge for smaller / local companies.
- Keeping programme processes flexible and being adaptable is crucial to ensure business model diversity and innovation.

Lessons learned: Setting impulses for market development

- Applying national or international product standards can help improve overall product quality in the market and improve customer perception.
- Including criteria on e.g. e-waste can encourage companies to think about end-of-life management. (Criteria should not be too restrictive.)
Annex 3: How was the verification process structured?

Basic principles

- Robust methodology and reliable results
  - At least two separate verification steps
  - Independence of verifiers
  - Representative samples

- Cost efficiency

- Quick to perform
Annex 3: How was the verification process structured?

- **Data / document verification**
  - Cross check Eligibility Tool registrations with monthly sales reports and fulfillment of claim requirements (by implementation team)
  - Tool: Results Form

- **Phone verification**
  - Independent phone verification (by implementation team + IVAs)
  - Statistical sampling (50% of total), random sampling
  - Tool: Online survey tool, Results Form

- **Field verification**
  - Independent field verification (by implementation team + IVAs)
  - Statistical sampling (50% of total), target sampling (geographic clusters)
  - Tool: Online survey tool, Results Form

- **Contract verification**
  - Contract verification (by implementation team)
  - Initially: only customers with issues, under COVID: replaced field verification
  - Tool: Results Form
RENEWABLE ENERGY FUND WINDOW 5

Off-grid Solar Home System Results-based Financing (RBF)

Rwanda End-user Subsidy Webinar | 30th September 2021
Christa KAGERUKA | Development Bank of Rwanda
The Renewable Energy Fund (REF) Project

**Objective** is to increase electricity access in Rwanda through off-grid technologies (stand-alone SHS, mini-grid)

**Compliance with eligibility criteria** is required to access finance

**Qualified solar systems** of minimum quality standards and Tier 1 and above access levels

**Funding** comprises US$ 48.94 million

**Expected Impact** of 445,500 new off-grid connections (1.8 million people)

**USD 15 million RBF** (Window 5) provides subsidy to eligible Ubudehe 1, Ubudehe 2, and Ubudehe 3 households.

**Energy Access and Quality Improvement Project (EAQIP)** has added additional **USD 15 million** in Window 5.
Window 5 Results-based Financing
Rationale

- **Rationale:** It is widely known across the off-grid sector by all stakeholders that affordability is the biggest challenge faced by the sector. This is true as the target market for Solar Home Systems (SHS) falls in the lowest income bracket of Rwandan households.

- As a result, the Government of Rwanda in partnership with the World Bank initiated a **US$ 15 million** subsidy window under REF project.
- The facility was approved with its the Operations Manual by the REF Steering Committee and the World Bank.
- The EAQIP project has allocated another US$ 15 million as continuation to Window 5
### Performance targets

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<tr>
<th>INDICATOR</th>
<th>UNIT</th>
<th>END TARGET</th>
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<tbody>
<tr>
<td>Number of estimated households and micro-enterprises with access to subsidized off-grid SHS</td>
<td>Number</td>
<td>370,000</td>
</tr>
<tr>
<td>Number of people provided with access to electricity</td>
<td>Number</td>
<td>1,480,000</td>
</tr>
<tr>
<td>Total result-based grant financing provided</td>
<td>USD</td>
<td>30,000,000</td>
</tr>
<tr>
<td>Renewable energy generation capacity from SHS under Window 5</td>
<td>MW</td>
<td>5.47</td>
</tr>
</tbody>
</table>
Subsidy levels and household eligibility criteria

- Resident of SHS zones as identified by National Electrification Plan (NEP) at the time of registration in Eligibility Tool;
- The Window 5 subsidy will be provided only to Ubudehe 1, 2 and 3 households (HHs);
- The Window 5 subsidy will only be provided to a household once;
- Households who are currently benefiting from a SHS subsidy (i.e. grant that lowers end-user pricing) from other programs, such as from development partners or local government, are not eligible;
- Households already connected to the grid, to a mini-grid or to another SHS, at the time of registration, are not eligible for the Window 5 subsidy.

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>PERCENTAGE COVERAGE (OF FINAL PRICE)</th>
<th>MAXIMUM SUBSIDY (IN FRW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ubudehe 1</td>
<td>90%</td>
<td>FRW 100,000</td>
</tr>
<tr>
<td>Ubudehe 2</td>
<td>70%</td>
<td>FRW 80,000</td>
</tr>
<tr>
<td>Ubudehe 3</td>
<td>45%</td>
<td>FRW 50,000</td>
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</table>
Subsidy disbursement schedule with SHS PAYGO price of FRW 115,000 or more

<table>
<thead>
<tr>
<th>DISBURSEMENT</th>
<th>CONDITION</th>
<th>UBUDEHE I</th>
<th>UBUDEHE II</th>
<th>UBUDEHE III</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Installment</td>
<td>Upon installation and verification by EDCL</td>
<td>45,000</td>
<td>45,000</td>
<td>45,000</td>
</tr>
<tr>
<td>2nd Installment</td>
<td>After adequate customer service for 1 year is confirmed and at least 15% of customer’s contribution (incl. down payment) and verification by EDCL.</td>
<td>45,000</td>
<td>30,000</td>
<td>-</td>
</tr>
<tr>
<td>3rd Installment</td>
<td>After adequate customer service for 3 years is confirmed and 100% of the customer’s contribution and verification by EDCL.</td>
<td>10,000</td>
<td>5,000</td>
<td>5,000</td>
</tr>
<tr>
<td><strong>Total subsidy</strong></td>
<td></td>
<td><strong>100,000</strong></td>
<td><strong>80,000</strong></td>
<td><strong>50,000</strong></td>
</tr>
</tbody>
</table>
## Subsidy disbursement schedule

**Subsidy disbursement schedule with SHS PAYGO price below FRW 115,000**

<table>
<thead>
<tr>
<th>DISBURSEMENT</th>
<th>CONDITION</th>
<th>UBUDEHE I</th>
<th>UBUDEHE II</th>
<th>UBUDEHE III</th>
</tr>
</thead>
<tbody>
<tr>
<td>1(^{st}) Installment</td>
<td>Upon installation and verification by EDCL</td>
<td>50%</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>2(^{nd}) Installment</td>
<td>After adequate customer service for 1 year is confirmed and at least 15% of customer’s contribution (incl. down payment) and verification by EDCL.</td>
<td>45%</td>
<td>45%</td>
<td>45%</td>
</tr>
<tr>
<td>3(^{rd}) Installment</td>
<td>After adequate customer service for 3 years is confirmed and 100% of the customer’s contribution and verification by EDCL.</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Total subsidy</strong></td>
<td></td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>
Subsidy disbursement schedule for cash sales

<table>
<thead>
<tr>
<th>DISBURSEMENT</th>
<th>CONDITION</th>
<th>UBUDEHE I</th>
<th>UBUDEHE II</th>
<th>UBUDEHE III</th>
</tr>
</thead>
<tbody>
<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt; Installment</td>
<td>Upon installation and verification by EDCL</td>
<td>80%</td>
<td>80%</td>
<td>80%</td>
</tr>
<tr>
<td>2&lt;sup&gt;nd&lt;/sup&gt; Installment</td>
<td>After 3 years of adequate customer service is confirmed and verification by EDCL.</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td><strong>Total subsidy</strong></td>
<td></td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>
Eligibility criteria for company participation

- Quality of operations
- Warranty and after-sales service
- Recycling
- Licensed with adequate ownership structure
- Agreement with Energy Development Corporation Limited (EDCL)
- Adequate funding
- Satisfactory end-user pricing scheme
- Quality products
- Adequate accounting systems and management information and well-organized IT support
- Gender quotas, for EAQIP only
Window 5 implementation process flow

Step 1: OSCs are invited to participate in the REF project

Step 2: OSCs apply for subsidy through BRD online platform - https://www.brd.rw/brd/ref/

Step 3: REF PIU conducts appraisal and gets no objection from the World Bank

Step 4: REF PIU presents the appraisal report to its MICC for approval

Step 5: BRD issues a notification letter to successful OSC with conditions precedent to sign Grant Subsidiary Agreement

Step 6: BRD signs a Grant Subsidiary Agreement with OSC

Step 7: OSC installs the system after confirming customer eligibility in the Eligibility Tool

Step 8: OSC submits Claim Form to EDCL (maximum 2 claims per quarter)

Step 9: EDCL assess the claim and approves verification report, based on desk/phone and field verification

Step 10: BRD approves EDCL’s verification report. World Bank provides NO (for the first reports only)

Step 11: BRD makes disbursement against the verification report from EDCL
**Window 5 implementation progress**

Under the REF window 5 subsidy, BRD and the World Bank have approved total amount of US$ 7.1 Million to 22 Off-grid solar companies (OSCs). 19 OSCs have signed grant subsidy agreements with a value of US$6.5 Million. 10 Companies have started implementation and have pre-registered and confirmed sales totaling 2,069 and 22,293 connections, respectively. In terms of subsidy disbursement, BRD has disbursed a total amount of US$ 601,520 to 4 OSCs.

<table>
<thead>
<tr>
<th>NO OF OSCS APPROVED</th>
<th>AMOUNT APPROVED (USD)</th>
<th>NO OF OSCS SIGNED AGREEMENTS</th>
<th>AMOUNT SIGNED (USD)</th>
<th>AMOUNT DISBURSED (USD)</th>
<th>PROGRESS AS OF 24/09/2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>7,172,891</td>
<td>19</td>
<td>6,570,481</td>
<td>601,520</td>
<td>HHS PRE-REGISTERED</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>HHS CONNECTED</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SUBSIDY COMMITTED (USD)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2,069</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>28,328</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2,659,985</td>
</tr>
</tbody>
</table>
## Similarities with the Pro-poor RBF

<table>
<thead>
<tr>
<th>SIMILARITIES</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target beneficiary</td>
<td>Both provide subsidy to final end-users (Ubudehe 1, 2 and 3)</td>
</tr>
<tr>
<td>Verification mechanism</td>
<td>Both verify the achieved results before the subsidy is disbursed.</td>
</tr>
<tr>
<td>Implementation tool</td>
<td>Both use Eligibility Tool for pre-registration, registration/sales</td>
</tr>
<tr>
<td></td>
<td>confirmation.</td>
</tr>
<tr>
<td></td>
<td>Both use NEP and LODA database to assess the eligibility of the</td>
</tr>
<tr>
<td></td>
<td>households</td>
</tr>
<tr>
<td>Partnership</td>
<td>Both work with EDCL</td>
</tr>
</tbody>
</table>
# Differences to the Pro-poor RBF

<table>
<thead>
<tr>
<th>DIFFERENCES</th>
<th>PRO-POOR</th>
<th>WINDOW 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geographical coverage</td>
<td>5 districts</td>
<td>Countrywide</td>
</tr>
<tr>
<td>Subsidy level</td>
<td>€ 90, € 70, € 50 for U1, U2 and U3 respectively</td>
<td>FRW 100k, FRW 80k, FRW 50k for U1, U2 and U3 respectively</td>
</tr>
<tr>
<td>Currency of subsidy</td>
<td>Subsidy agreement in Euro but convertible in FRW during disbursement</td>
<td>Both subsidy agreement and payment in FRW</td>
</tr>
<tr>
<td>Disbursement schedule</td>
<td>Single disbursement after installation and verification</td>
<td>3 installment for PAYGO and 2 installments schedules for cash business model</td>
</tr>
<tr>
<td>Business model</td>
<td>Supports only PAYGO</td>
<td>Both PAYGO and Cash (including through SACCO)</td>
</tr>
</tbody>
</table>
Thank You
Q&A time!

- Write your questions in the Q&A box
- Mention if it is for one of our speakers in particular
Thank you for attending! Want to learn more?

End User Subsidies Lab

Off-grid solar solutions provide the cheapest and fastest way to electrify hundreds of millions of homes and businesses — and yet over 100 million people will still be unable to afford them in 2020. It is increasingly clear that we need to bridge this “affordability gap” and end user subsidies, which directly reduce costs for consumers, will play a key role. However, in order to avoid twinologies — which can stymie energy access efforts — such subsidies must be designed carefully. To enable stakeholders to jointly design and deliver effective and user-friendly, GOGLA, ESAPI, Lighting Global and Africa Clean Energy CLEEN, have created the End User Subsidies Lab, pooling knowledge, technical expertise, and funding. We welcome all stakeholders to contribute to the Lab with resources available to them, be it knowledge, expertise, or financial contributions.

About the End User Subsidies Lab

Get an overview of the Lab and its key 2021 workstreams to catalyze smart, holistic end user subsidies.

What is an end user subsidy?

Get an overview of how end user subsidies can help reach the poorest, how they compare to supply-side subsidies, and more.

Reports and Resources

From reports detailing why end user subsidies are needed to papers profiling smart design, find the latest tools and resources.

Event Recordings

Find recordings from recent events and webinars on smart subsidies and bridging the affordability gap. Listen to the sessions.

Country Case Studies

End user subsidies for off-grid solar are already operating in several countries. Coming soon: Case studies of their design and implementation.

Visit our Resource Hub

https://www.gogla.org/end-user-subsidies-lab