



**Report of the End Term Review of the Belgian contribution to the Electricity Access-Roll Out Programme – component 1 and 2 and Mid Term Review- component 3 of the Intervention “Improve the Access to Reliable On-grid Electricity Services for Households, Priority Public Institutions and Enterprises in Rural Rwanda”.**

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Marina BRUTINEL, ADE

Odax UGIRIMBABAZI, ADE

Executive summary, May 2021

This review is realised as part of the cooperation between Rwanda and Belgium.

This report has been drawn up by independent external experts.

The opinions expressed in this document are those of the authors and do not necessarily reflect the views of ENABEL, the Belgian Development Cooperation or the authorities of the countries concerned.

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## Executive Summary BE1

### Presentation of the evaluation

The object of the review is the bilateral cooperation project between Belgium and Rwanda named “Improving access to reliable on-grid electricity services for households and priority public institutions – Belgian contribution to EARP (BE1 EARP)” which started in May 2014 for an initial duration of 4 years with a budget of 17,448,252€ and a Belgian contribution of 17,000,000€.

The general objective of BE1 is for the energy sector to be able to provide sufficient, reliable and affordable energy for all Rwandans.

The purpose of BE1 project is to improve access to reliable on-grid electricity services for households and priority public institutions in rural areas. BE1 project is jointly implemented by Energy Development Corporation Limited (EDCL), subsidiary of Rwanda Energy Group Limited (REG) and the Belgium development Agency-ENABEL.

The project focuses on increasing rural electricity access through national electricity grid extensions, improving grid electricity reliability and affordability and developing capacity within the utility.

The end-term review of BE1 project responds to the following objective:

- i) To contribute to learning. By analysing the development process, the review allows us to explain what works, what does not work and why, and to thus draw lessons for other interventions or for the elaboration of new policies, strategies and programmes.
- ii) Accountability to the donor, partner and other internal actors by supplying an external assessment of the progress made and the results achieved.

The scope of the project at outcome level is the country (Rwanda). Most of its activities are however specifically carried out in 4 districts of Eastern Rwanda (Rwamagana, Kayonza, Ngoma, Kirehe) and in the capital city (Kigali), which is where the partner EDCL is based.

The evaluation covers the implementation period from the signing of the Specific Agreement by both Governments in February 2014 up to the end of project implementation, corresponding to the end of the Specific Agreement period in February 2020.

Due to the global pandemic, this evaluation was conducted remotely with the main evaluator, the team leader, operating remotely and the national expert located in the country. Almost all interviews could, however, be conducted by both evaluators except those realised by the local expert in the field (districts). Data collection methods include literature review, stakeholders’ interviews and field visits, used to build a picture as exhaustive as possible of the project performance thus far, and to triangulate information as much as possible in the context of a complex assignment.

## Results and conclusions

### DAC Criteria

#### **Project relevance is satisfactory**

The BE1 project is perfectly aligned with the objectives of the Belgian development cooperation policy in Rwanda, the national targets pursued by the Government of Rwanda and EDCL mandate and priorities. It responds to the needs and issues of beneficiaries among households, businesses and social services as end-users (except in terms of affordability gap) and to those of the utility in terms of training.

#### **Efficiency of the project is not satisfactory**

Very important delays have been encountered in some activities' implementation, bringing project duration to 72 months. Changes in project activities and heavy procurement procedures are major explanatory factors. Full disbursement can be achieved through subsequent interventions (BE2) operating as buffer. Activities are overall conducted in a cost-effective manner.

#### **Effectiveness of the project is satisfactory**

The monitoring system in place should be updated to allow to properly rate the performance of the intervention. The overall appreciation is however positive. The project has led to a large number of grid connections, developed adequate social and environmental safeguards and technical standards for the power network infrastructure and these outputs are being used to contribute to the intended outcome.

#### **The impact from the project is positive**

BE1 provides households, businesses and social institutions connected to the grid with important benefits mostly in terms of energy savings, improvements in health and education, increased economic opportunities, security, quality and speed of service and comfort of living. Some capacity is built within the utility and the financial resources are reinforced thanks to the large number of new subscriptions brought by the intervention.

#### **The expected sustainability of the project is good**

Sustainability is expected to be good at the level of the physical realisations which will become part of the existing national grid network. It will be strengthened by an expected sustained demand for electricity from all kinds of beneficiaries and by institutional structures and a regulatory framework that are already largely in place.

It is not known whether internal capacity built through apprenticeships has been retained by the utility.

#### **Transversal themes and horizontal aspects**

The gender dimension has not received any attention at project planning stage and lacks clear anchorage in the project with specific targets and indicators lacking. The project has however conducted some limited positive discrimination action towards women in terms of recruitment, while the long-term impact of electrification on women is expected to be positive.

The project has been implemented in compliance with Rwandan environmental protection law without any damaging impact.

The steering process is satisfactory. The team has been agile at proposing to reorient project activities and funding as needed, while ENABEL's flexibility in this process is recognized.

The current monitoring system does not allow to link BE1 performance to the indicators being monitored.

### **Lessons learned**

- Construction tenders generally experience delays owing to multiple factors, implementation periods should be planned accordingly
- Communication and awareness raising in rural areas are key to ensure smooth implementation of grid extension projects involving expropriations and compensations
- Project closure is generally a long process as the full payment of the contracts goes beyond the completion of work on site
- Availability of adequate human resources and their technical know-how is key to the success of an intervention
- The parallel implementation by the project team of project components targeting similar outcomes with similar indicators makes project monitoring complex.
- The flexibility to adapt to a changing context and evolving priorities reinforces the relevance of an intervention
- Reliance on international contractors for the supervision of works impacts the overall budget
- The situation linked to the COVID-19 pandemic has increased the urgency and importance of electricity access in fighting and slowing down the spread of the virus.

### **Recommendations in the context of a future intervention**

- Consider procurement rules in the project design to improve efficiency: based on co-implementer existing control procedures, consider reducing ENABEL's non-objection obligations.
- Improve efficiency by reducing cost of managing non-objection requirements, through greater harmonization among various development partners to avoid duplications and overlaps.
- Set realistic timeframes for execution of large infrastructure projects.
- Promote introduction of gender sensitive & transformative activities in future projects and report with gender disaggregated indicators.
- Design interventions so as to facilitate monitoring and evaluation, for example by elaborating a common logical framework if various components of a programme share the same global and specific objectives.
- Ensure projects allow for sufficient training and capacity building of partner organisations that will assume ownership of the infrastructures, or coordinate accordingly with other development partners to ensure all capacity-building and TA needs are covered.
- Increasing the internal supervision capacity within the utility would increase effectiveness, by reducing intervention costs and ensuring a swifter implementation.

## Executive Summary BE2

### Presentation of the evaluation

The object of the review is the bilateral cooperation project between Belgium and Rwanda named “Improving access to reliable on-grid electricity services for households and priority public institutions – Belgian contribution to EARP (BE2 EARP)” which started in December 2015 for an initial duration of 4 years with a budget of 13,650,000€ and a Belgian contribution of 12,000,000€.

The general objective of BE2 is for the energy sector to be able to provide sufficient, reliable and affordable energy for all Rwandans.

The purpose of BE2 project is to improve access to reliable on-grid electricity services for households and priority public institutions in rural areas. BE2 project is jointly implemented by Energy Development Corporation Limited (EDCL), subsidiary of Rwanda Energy Group Limited (REG) and the Belgium development Agency-ENABEL.

The project focuses on increasing rural electricity access through national electricity grid extensions, supporting beneficiaries (households, productive and community users) in improving their tier access level and improving coherence and coordination between EARP, off-grid energy access initiatives and the sector.

The end-term review of BE2 project responds to the following objective.

- i) To contribute to learning. By analysing the development process, the review allows us to explain what works, what does not work and why, and to thus draw lessons for other interventions or for the elaboration of new policies, strategies and programmes.
- ii) Accountability to the donor, partner and other internal actors by supplying an external assessment of the progress made and the results achieved.

The scope of the project at outcome level is the country (Rwanda). Most of its activities are however specifically carried out in 4 districts of Eastern Rwanda (Kirehe, Rwamagana, Kayonza and Ngoma) and in the capital city (Kigali), which is where the partner EDCL and other sectoral stakeholders are based.

The evaluation covers the implementation period from the signing of the Specific Agreement by both Governments in December 2015 up to the end of project implementation, corresponding to the end of the Specific Agreement period in December 2020.

Due to the global pandemic, this evaluation was conducted remotely with the main evaluator, the team leader, operating remotely and the national expert located in the country. Almost all interviews could, however, be conducted by both evaluators except those realised by the local expert in the field (districts). Data collection methods include literature review, stakeholders' interviews and field visits, used to build a picture as exhaustive as possible of the project performance thus far and to triangulate information as much as possible in the context of a complex assignment.

## Results and conclusions

### DAC Criteria

#### **Project relevance is satisfactory.**

The BE2 project is perfectly aligned with the objectives of the Belgian development cooperation policy in Rwanda, the national targets pursued by the Government of Rwanda and EDCL mandate and priorities. It responds to the needs and issues of beneficiaries among households, businesses and social services as end-users (except in terms of affordability gap) and to those of the MININFRA in terms of sector coordination.

#### **Efficiency of the project is not satisfactory**

Very important delays have been encountered in some activities' implementation, bringing project duration to 60 months. Changes in project activities, heavy procurement procedures, division of tasks between stakeholders and the outbreak of the Covid-19 pandemic are major explanatory factors. Activities are overall conducted in a cost-effective manner. Full disbursement can be achieved through subsequent interventions (BE3) operating as buffer.

#### **Effectiveness of the project is satisfactory**

The monitoring system in place should be updated to allow to properly rate the performance of the intervention. The overall appreciation is however positive. The project has led to an impressive number of grid connections (including indirect fill-in connections), conducted grid upgrading activities as planned, successfully promoted donor coordination at sectoral level and communications material. These outputs are being used to contribute to the intended outcome, although support to donor coordinator ended in 2018.

#### **The impact from the project is positive**

BE2 provides households, businesses and social institutions connected to the grid with important benefits mostly in terms of energy savings, improvements in health and education, increased economic opportunities, security, quality and speed of service and comfort of living. It also contributes to improving the quality of the service in 3 Eastern districts. Some tools have been put in place at eSWAp Secretariat to ensure sector coordination. Financial resources of the utility are reinforced thanks to the large number of new subscriptions brought by the intervention.

#### **The expected sustainability of the project is good**

Sustainability is expected to be good at the level of the physical realisations which will become part of the existing national grid network. It will be strengthened by an expected sustained demand for electricity from all kinds of beneficiaries and by institutional structures and a regulatory framework that are already largely in place.

The pursuit of a satisfactory sectoral coordination cannot be ensured.

#### **Transversal themes and horizontal aspects**

The gender dimension has not received any attention at project planning stage and lacks clear anchorage in the project with specific targets and indicators lacking. The project has however conducted some limited positive discrimination action towards women in terms of recruitment, while the long-term impact of electrification on women is expected to be positive.



The project has been implemented in compliance with Rwandan environmental protection law without any damaging impact.

The steering process is satisfactory. The team has been agile at proposing to reorient project activities and funding as needed, while ENABEL's flexibility in this process is recognized.

The current monitoring system does not allow to link BE2 performance to the indicators being monitored.

### **Lessons learned**

- Construction tenders generally experience delays owing to multiple factors, implementation periods should be planned accordingly
- Communication and awareness raising are key to ensure smooth implementation of grid extension projects involving expropriations and compensations
- Project closure is generally a long process as the full payment of the contracts goes beyond the completion of work on site
- Working on live lines requires careful planning and coordination with the utility so as to avoid delays
- Availability of adequate human resources and their technical know-how is key to the success of an intervention
- The parallel implementation by the project team of project components targeting similar outcomes with similar indicators makes project monitoring complex
- The flexibility to adapt to a changing context and evolving priorities reinforces the relevance of an intervention
- Reliance on international contractors for the supervision of works impacts the overall budget
- The situation linked to the COVID-19 pandemic has increased the urgency and importance of electricity access in fighting and slowing down the spread of the virus.

### **Recommendations in the context of a future intervention**

- Consider procurement rules in the project design to improve efficiency : based on co-implementer existing control procedures, consider reducing ENABEL's non-objection obligations.
- Improve efficiency by reducing cost of managing non-objection requirements, through greater harmonization among various development partners to avoid duplications and overlaps.
- Set realistic timeframes for execution of large infrastructure projects
- Promote introduction of gender sensitive & transformative activities in future projects and report with gender disaggregated indicators
- Design interventions so as to facilitate monitoring and evaluation, for example by elaborating a common logical framework if various components of a programme share the same global and specific objectives.
- Ensure projects allow for sufficient training and capacity building of partner organisations who are given ownership of the infrastructures or coordinate accordingly with other development partners to ensure all capacity-building and TA needs are covered.
- Increasing the internal supervision capacity within the utility would increase effectiveness by reducing intervention costs and ensuring a swifter implementation

## Executive Summary BE3

### Presentation of the evaluation

The object of the review is the bilateral cooperation project between Belgium and Rwanda named “Improving access to reliable on-grid electricity services for households and priority public institutions – Belgian contribution to EARP (BE3 EARP)” which started in February 2017 for an initial duration of 4 years with a budget of 12,000,000€ and a Belgian contribution of 10,000,000€.

The general objective of BE3 is for the energy sector to be able to provide sufficient, reliable and affordable energy for all Rwandans.

The purpose of BE3 project is to improve access to reliable on-grid electricity services for households and priority public institutions in urban, peri-urban and rural areas. The BE EARP is jointly implemented by Energy Development Corporation Limited (EDCL), subsidiary of Rwanda Energy Group Limited (REG) and the Belgium development Agency-ENABEL.

The project focuses on improving electricity supply through grid upgrade activities and strengthening the capacity of EDCL in planning, supervision and contract management.

The mid-term review of BE3 project responds to the following objective.

- i) To support steering. On the basis of an in-depth analysis, the review offers useful recommendations based on data (evidence-based). That way, the review supports strategic and operational decision making, and consequently, the steering of the interventions.
- ii) To contribute to learning. By analysing the development process, the review allows us to explain what works, what does not work and why, and to thus draw lessons for other interventions or for the elaboration of new policies, strategies and programmes.
- iii) Accountability to the donor, partner and other internal actors by supplying an external assessment of the progress made and the results achieved.

The scope of the project at outcome level is the country (Rwanda). Most of its activities are however specifically carried out in 7 districts (Kirehe, Ngoma, Kayonza, Rwamagana, Gatsibo and Nyagatare in the East and Rubavu in the West) and in the capital city (Kigali), which is where the partner EDCL is based.

The evaluation covers the implementation period from the signing of the Specific Agreement by both Governments in February 2017 up to the start of the mid-term evaluation in February 2021.

Due to the global pandemic, this evaluation was conducted remotely with the main evaluator, the team leader, operating remotely and the national expert located in the country. Almost all interviews could, however, be conducted by both evaluators except those realised by the local expert in the field (districts). Data collection methods include literature review, stakeholders’ interviews and field visits, used to build a picture as exhaustive as possible of the project performance thus far and to triangulate information as much as possible in the context of a complex assignment.

## Results and conclusions

### DAC Criteria

#### **Project relevance is very satisfactory.**

BE3 project is perfectly aligned with the objectives of the Belgian development cooperation policy in Rwanda, the national targets pursued by the Government of Rwanda and EDCL mandate and priorities. It responds to the needs and issues of beneficiaries among households, businesses and social services as end-users and to those of the utility in terms of technical assistance and training.

#### **Efficiency of the project is not satisfactory**

Very important delays have been encountered in some activities' implementation, extending project duration to 60 months. Heavy procurement procedures, the poor performance of a contractor and the outbreak of the Covid-19 pandemic are major explanatory factors. Activities are overall conducted in a cost-effective manner. Full disbursement is not likely to be achieved over the remainder of the implementation period (less than 12 months).

#### **Effectiveness of the project is partially satisfactory**

The absence of an updated monitoring system in place does not allow to rate the performance of the intervention at the time of the evaluation. Grid upgrading works have been completed in one district so far with a mixed appreciation of the results. Completion of result 2 on capacity building is lagging behind and should be partially achieved.

#### **The expected impact from the project is uncertain at this stage**

BE3 is set to improve the quality of the grid electricity service for households, businesses and social institutions connected to the grid by reducing power failures and improving hours of availability. The benefits are not yet measured nor really felt in Rubavu where works are completed but should realize their potential in the longer term. The situation is expected to improve in the remaining 6 Eastern districts. The effects of the capacity building activities on EDCL are not yet confirmed.

#### **The expected sustainability of the project is positive**

The expected sustainability is positive but remains to be confirmed for BE3, at a time when strengthening of grid infrastructure and capacity building is still underway. Sustainability is expected to be good at the level of the physical realisations which will become part of the existing national grid network. It will be strengthened by an expected sustained demand for electricity from all kinds of beneficiaries and by institutional structures and a regulatory framework that are already largely in place.

#### **Transversal themes and horizontal aspects**

The gender dimension has not received any attention at project planning stage and lacks clear anchorage in the project with specific targets and indicators lacking. The project has however conducted some limited positive discrimination action towards women in terms of recruitment, while the long-term impact of electrification on women is expected to be positive.

The project has been implemented in compliance with Rwandan environmental protection law without any damaging impact.

The steering process is satisfactory. The team has been agile at proposing to reorient project activities and funding as needed, while ENABEL’s flexibility in this process is recognized.

The monitoring system is not yet in place for BE3, which does not allow to monitor BE3 performance.

### Lessons learned

- Construction tenders generally experience delays owing to multiple factors, implementation periods should be planned accordingly.
- Project closure is generally a long process as the full payment of the contracts goes much beyond the completion of work on site.
- Working on live lines requires careful planning and coordination with the utility so as to avoid delays.
- Availability of adequate human resources and their technical know-how is key to the success of an intervention.
- The parallel implementation by the project team of project components targeting similar outcomes with similar indicators makes project monitoring complex
- The flexibility to adapt to a changing context and evolving priorities reinforces the relevance of an intervention.
- Reliance on international contractors for the supervision of works impacts the overall budget.
- The situation linked to the COVID-19 pandemic has increased the urgency and importance of electricity access in fighting and slowing down the spread of the virus.

### Recommendations for the pursuit of the intervention

Recommendation	Recommended timeframe	Responsibility
Closely monitor last EPC implementation in the East for delivery in time (Feb 22)	Immediately	Project team
Accelerate internal processing of invoices to speed up disbursement	Immediately	Project team and ENABEL Finance officer
Closely collaborate with the utility to reduce any delays due to works performed on live grids	Immediately	Project team and EUCL
Develop Logical Framework for operations in the East	Immediately	Project team
Finalize Logical Framework for Rubavu, collect data and monitor achievements	Immediately	Project team