RESULTS REPORT 2016-2017

IMPROVING ACCESS TO RELIABLE ON-GRID ELECTRICITY SERVICES FOR HOUSEHOLDS AND PRIORITY PUBLIC INSTITUTIONS BELGIAN CONTRIBUTION TO EARP – COMPONENT 2 (RWA 15 094 11)

CONTENT

1 Acronyms

AfDB	African Development Bank
CDEU	Capacity Development Energy Utility
BTC	Belgian Technical Cooperation, the Belgian development agency
DI	Director of Intervention
DP	Development Partner
EARP	Electricity Access Roll Out Program
EDCL	Energy Development Corporation Limited
EDPRS	Economic Development Poverty Reduction Strategy
EPC	Engineering procurement construction
ESMAP	Energy Sector Management Assistance Program
ETR	End term review
EUCL	Electricity Utility Corporation Limited
EWSA	Energy Water and Sanitation Authority
GMO	Gender Monitoring Office
GOR	Government of Rwanda
HOC	Head of Cooperation
ICP	Indicative Cooperation Program (between Rwanda and Belgium)
ITA	International Technical Assistant
M&E	Monitoring and Evaluation
MD	Managing Director
MTF	Multi-Tier Framework
MTR	Mid-term review
PIM	Project Implementation Manual
PMU	Project Management Unit
RAF	Administrative and Financial Responsible
RAFI	International Financial and administrative Responsible
REF	Rural Electrification Strategy
TFF	Technical and Financial File
WB	World Bank

The majority of the remarks, lessons learned and conclusions are similar for all three BE-EARP interventions. Indeed, these interventions are sharing exactly the same human resources and consequently, the team is managing practically the three interventions as one single project.

2 Intervention at a glance

2.1 Intervention form

Intervention title	Improving Access to Reliable On-Grid Electricity Services for Households and Priority Public Institutions Belgian Contribution To EARP
Intervention code	RWA 15 094 11
Location	Eastern Province
Total budget	€ 13,650,000 Belgian contribution : € 12,000,000 Rwandan contribution : € 1,650,000
Partner Institution	Ministry of Infrastructure /Rwanda Energy Group (REG)
Start date Specific Agreement	17/12/2015
Date intervention start	17/12/2015
Planned end date of execution period	16/12/2019
End date Specific Agreement	16/12/2020
Target groups	Households, Social infrastructure- health facilities, schools and administrative offices
Impact[1]	The energy sector is able to provide sufficient, reliable and affordable energy for all Rwandans
Outcome	The access to reliable on-grid electricity services for households and priority public institutions in rural areas is improved
Outputs	Rural electricity connectivity is increased through national electricity grid extension
	Beneficiaries (households, productive and community uses) are supported in improving their access level
	Coherence and coordination are improved between EARP and other energy access initiatives
Year covered by the report	2016 and first half of 2017

2.2 Budget execution

	Budget	**Expenditure**		**Balance**	**Disbursement rate at the end of June 2017**
		Previous years	**Period covered by the report**		
Total	10,253,500	n/a	2016 : 149,567.43 2017 : (Q1+Q2) : 81.760,40	10,022,172.1	2%
Output 1*	8,903,500	n/a	2016 : 0 2017 : 2,248.59	8,901,251.41	0%
Output 2**	500,000	n/a	2016 : 0 2017 : 0	500,000.00	0%
Output 3	850,000	n/a	2016 : 149,567.43 2017:	620,920.76	27%

[1] Impact refers to global objective, Outcome refers to specific objective, output refers to expected result

			79.511,81		

*Two lots were swapped between BE1EARP and BE2EARP: Lot 2, originally part of BE1 and to be constructed through 2-step approach was shifted to BE2, while Lot 6, originally part of BE2 and to be constructed through EPC was shifted to BE1, with the two other lots to be constructed with the EPC approach.

** This refers to the result area related to grid strengthening (shifted from BE1), as the original output 2 of BE2EARP has been cancelled (see later).

2.3 Self-assessment performance

2.3.1 Relevance

	Performance
Relevance	D

The GoR's large-scale rural electrification strategy has been reoriented in June 2016 (new Rural Electrification Strategy- RES) from a focus on on-grid connections to a more balanced approach toward off-grid systems (mostly stand-alone solar systems) for the poorest households.

A recent World Bank survey (MTF draft report by ESMAP made available in 08/2017) shows that most of the beneficiaries in rural areas only consume power to charge phones and sometimes to light their house. They do not need a (very expensive) connection to a grid to satisfy those little needs.

According to the new strategy, the national electric grid should primarily serve "high consumption users and drive economic growth". The RES does no longer explicitly assign to EARP the objective of connecting social institutions, schools and health centres. Therefore, the national grid extension strategy should no longer focus onto connecting as many households as possible.

This means that the specific objective of this intervention has become largely irrelevant, if we refer to the new RES.

In practice, GoR implements the RES loosely. EDCL did not revise its EARP strategy when GoR adopted the new strategy and EDCL still pushes EARP projects to connect as many households as possible. In that spirit, 2 addenda have been approved to EPC contracts financed by BE1EARP to increase the number of connected households, as this remains one major indicator of the intervention. See additional comment in annex 4.1.

The component on the HV transformer for Shango substation is nevertheless still relevant but the project will certainly not be able to execute it because of the problems concerning the construction of Shango substation.

2.3.2 Efficiency

	Performance
Efficiency	C

Too much time and efforts have been devoted to activities that either:

- have lingered abusively during BE1, which is also affecting the implementation of BE2 (tendering processes for distribution grid extension works and supervision),
- have been cancelled because of lack of relevance (soft activities related to beneficiaries / part of coordination and coherence activities),
- have faced important challenges during implementation (service contract for the supervision of grid extension works within BE1, also affecting BE2)

As the formulation of the next phases of BE-EARP took place, much time was spent on discussing the best approaches to do the construction. This was partly due to a rather lightly made commitment in the project document of BE1 EARP to use the "in-house" approach for the construction of some "simple" lots. The in-house approach sees EDCL do with their own staff the design and the construction of the electric lines.

Contract management in co-management, in a context where BTC does not sign contracts any longer and where the partner is new and not accustomed to traditional BTC co-management approach also creates complications and losses of efficiency.

2.3.3 Effectiveness

	Performance
Effectiveness	A

Effectiveness is the degree to which the outcome (Specific Objective) is achieved. The specific objective is the access to reliable on-grid electricity services for households and priority public institutions in rural areas is improved. Even if some activities are being cancelled or delayed (see relevance and efficiency), the main activity (extension of grid distribution and grid strengthening except for the HV transformer in Shango substation) contributing directly to the realization of this outcome will be completed within the project's lifespan.

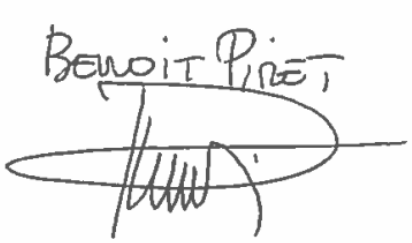
2.3.4 Potential sustainability

	Performance
Potential sustainability	D

Potential sustainability is the degree to which the benefits of the intervention continue to be delivered after its completion.
There is a strong political will to maintain the grid. This should ensure that the benefits continue in the future. At the same time, there are fundamental questions about the financial sustainability of the grid as many users do not buy enough electricity to ensure the financing of its proper operation and maintenance. Without subsidies, EUCL cannot properly operate and maintain the grid.
Affordability is also a big challenge. In the present context, Rwanda has one the most expensive electricity in Africa. This is a problem for rural households that cannot not afford the cost.

2.4 Conclusions

- The project is facing challenges for implementing all activities described in the TFF. Nevertheless, the main component (extension of grid distribution and grid strengthening – coming from BE1EARP) will be completed within the project's lifetime and will contribute greatly to the achievement of the outcome.
- The main reasons for the lack of efficiency are the unavailability of key resources (no RAFI since June 2016 until September 2017 and no ITA Power Network until February 2017), the co-management modality (more procedures, etc.) and the many changes of strategy during implementation.
- Due to the new rural electrification strategy, at institutional level (MININFRA), the specific objective has become, strictly speaking, irrelevant.

National execution official	BTC execution official
Clementine Umugwaneza Due to the particularly difficult context of the intervention since January 2017 and the unavailability of our partners to invest time in anything else than the strict follow-up of the priority activities (implementation of the construction tenders), we have abandoned the idea to obtain their feedback and approval of this report. The report reflects the position of BTC project team and representation. It is highly probable that our partner would not have signed off this report	Benoit Piret 

3 Results Monitoring[2]

3.1 Evolution of the context

This part is similar for all BE-EARP interventions.

3.1.1 General context

In June 2016, the Government of Rwanda adopted a new rural electrification strategy (RES). This strategy emphasizes the use of home-solar systems for rural electrification, rather than on-grid electricity. Indeed, such systems are considered better adapted for large-scale rural electrification. Therefore, the new strategy lowers the target for new on-grid connections. The adoption of the new strategy has not had any impact so far on the implementation of EARP (see paragraph on relevance in the previous chapter).

3.1.2 Institutional context

The recent (May 2017) hiring of a new CEO for REG did not change the orientation of the EARP program until now. The new CEO urges to increase collaboration between EDCL and EUCL. This is likely to have an impact on our BE3EARP project (provision of expertise) and on the collaboration between the two BTC projects in REG (EARP with EDCL and CDEU with EUCL).
There is a lack of coordination at ministry and REG levels on off-grid and on-grid. Indeed, there is a risk that households get off-grid connection just before having the grid built close to their home.

3.1.3 Management context: execution modalities

The intervention is mainly in **co-management modality**. This modality, as implemented today, has mainly two major drawbacks:

- **Strong limitation for quick implementation and decision-making process.** For example, public procurement processes are generally taking more than 9 months (in some cases even more than 12 months) between publication and contract signature. The application of the principle of co-management has led to too many and too long discussions on organizational and operational aspects, in particular on bidding documents and on acceptability of deliverables of service tenders, with unreasonable delays as direct consequence.
- **Unclear responsibility concerning contract management**. The partner signs the contract alone while BTC wants to remain involved in the daily management of the contracts. For new partners not accustomed to the traditional co-management approach (when BTC used to sign the contract with the partner), this new situation generates questions of accountability towards their own hierarchy and audit authorities. A number of questions on how to practically implement co-management in this context have not been properly answered at the start-up of the intervention and has created tensions.

3.1.4 Harmo context

The intervention is relatively well harmonized for the following reasons:

- On-grid electrification strategy is based on a study performed by SOFRECO in 2013, dividing Rwanda in different lots to electrify. Consequently, there is no overlap between source of financing for on-grid electrification.
- Coordination between donors exists at Sector Working Group and Technical Working Groups. It does not deal with EARP operational issues though. An EARP steering committee would be a useful innovation but other donors are reluctant to share much information. This is done on an ad-hoc basis and not systematically. For example, BTC suggested joint evaluations of EARP with WB and AfDB. In theory, Heads of Cooperation agree. In practice, implementers resist (“ok, if this is not more work for us!” is the attitude). But doing a joint evaluation IS more work …

[2] Impact refers to global objective, Outcome refers to specific objective, output refers to expected result

- There is a collaboration with another BTC intervention at EUCL, namely the CDEU-project, which aims at strengthening the capacity of the utility. However, this collaboration should be improved. The Request from the new CEO is an opportunity.

3.2 Performance outcome

Outcome 1: The access - including use of - reliable on-grid electricity services for households, enterprises and priority public institutions in peri-urban and rural areas is improved

3.2.1 Progress of indicators

The following table is taken from the draft baseline report.

Not yet all target values have been collected. The project is currently collecting the last data regarding consumption levels from SUPREMA, the cash power system, to determine the remaining target values. As the indicators on outcome level are directly depending on the output of the project's activities, no actual values can currently be collected, as these activities have not yet been completed.

Category of indicators	**Results / Indicators**	**Baseline values**	**Target values**		
		2016	2017	2018	2019
Number of connections	**I1.1.1** Number of new connections with an activated Cash Power meter at household level	0	0	3903	3903
	I1.1.2 Number of new connections with an activated Cash Power meter at public institution level	0	0	61	61
	I1.1.3 Number of new connections with an activated Cash Power meter at business level	0	0	501	501
Use of electricity	**I 1.1.4** Average consumption per household (kWh/month) for newly connected houses below 15 kWh/month	0	0	10	10
	I 1.1.5 Average consumption per household (kWh/month) for newly connected houses above 15 kWh/month	0	0		
	I 1.1.6 Number of newly connected households consuming less or equal than 15 kWh/month	0	0		
	I 1.1.7 Number of newly connected households consuming more than 15 kWh/month	0	0		
	I 1.1.8 Average consumption per public institution (kWh/month) for newly connected buildings	0	0		
	I 1.1.9 Average consumption per business(kWh/month) for newly connected buildings	0	0		

	I 1.1.10 Number of newly connected households with electric lighting and charging telephones	0	0	3698	3698
	I 1.1.11 Number of newly connected households with other electric equipment (other than electric lighting and charging telephones)	0	0	1232	1232
	I 1.1.12 Number of three-phase consumers	0	0	21	21
Grid strengthening	**I 1.1.14** Average monthly number of technical breakdown per km of MV-line in the target area				
	I 1.1.15 Average duration of technical breakdown per km of MV-line in the target area				
	I 1.1.16 Number of overloaded distribution transformers				
	I 1.1.17 Average monthly number of transformer failures				
	I 1.1.18 Monthly percentage of faults resolved in <24h				
	I 1.1.19 Aggregated index of access to energy				

3.2.2 Analysis of progress made

Because of delays in the implementation, most of the outputs have not yet been delivered. Indeed, the nature of the main activities (building the distribution network and strengthening the existing grid), leads to have the outcome at the completion of the project and not during the project lifetime.

3.2.3 Potential Impact

As discussed in the paragraphs on relevance, it is not obvious that connecting rural households to the grid will indeed provide a better access. Evidence shows that poor households connected to the grid do not change their energy behavior. They keep using electricity mostly for charging their mobile phones and sometimes for lighting. Many people who are on-grid cannot afford the cost of the kWh.

3.3 Performance output 1

Output 1: Rural electricity connectivity is increased through national electricity grid extension

3.3.1 Progress of indicators

The following table is taken from the baseline report. As the related activities are still taking place, the project did not yet collect information on actual values.

Results Indicators /	Baseline values	Target values	
	2016	Intermediate (2018)	Final (2019)

I 1.1.1.1 Kilometres of MV-lines constructed (lot 2)	0	45	45
I 1.1.1.2 Kilometres of LV-lines installed (lot 2)	0	80	80
I 1.1.1.3 Number of distribution transformers (lot 2)	0	29	29
I 1.1.1.4 Number of connections (lot 2)	0	2500	2500
I 1.1.1.5 KM of MV-lines constructed (lot 11)	0	12	12
I 1.1.1.6 Kilometres of LV-lines installed (lot 11)	0	29	29
I 1.1.1.7 Number of distribution transformers (lot 11)	0		15
I 1.1.1.8 Number of connections (lot 11)	0		2179
I 1.1.1.9 Shango power transformer installed[3]	no		yes
I 1.1.1.10 Number of upgraded transformers	0		16
I 1.1.1.11 Kilometres of MV-lines strengthened	0		8.45 km
I 1.1.1.12 Kilometres of LV-lines strengthened	0		42 km
I 1.1.1.13 Electrical materials to be used in grid extension and grid strengthening are purchased	No	Yes	n/a
I 1.1.1.14 EMP properly developed and implemented for all grid extension activities	No	Yes	n/a
I 1.1.1.15 RAP properly developed and implemented for all grid extension activities	No	Yes	n/a

3.3.2 Progress of main activities

Progress of main activities [4]	Progress:			
	A	B	C	D
1 Build electricity network extension on targeted areas			X	
2 Supervise the grid extension construction works			X	
3 Develop and implement adequate environmental management plan and resettlement action plan for the network extension activity		X		

3.3.3 Analysis of progress made

1. Build electricity network extension on targeted areas

This activity has two components : the first one is related to actual grid extension and the second one is related to the installation of a high-voltage power transformer in Shango substation.
The grid extension part is divided in two implementation modalities:

- Lots A, B and C : grid extension to be realized by private companies with materials bought by the project in a separate tender.
- Lots MV/LV 11 : grid extension to be realized by partner's construction teams with materials

[3] This activity is likely to be withdrawn

[4] A: The activities are ahead of schedule
B The activities are on schedule
C The activities are delayed, corrective measures are required.
D The activities are seriously delayed (more than 6 months). Substantial corrective measures are required.

bought by the project in a separate tender.

After 18 months of implementation, the project has signed the contracts for materials supply (for both modalities) and is about to sign the contracts for the lots A, B and C. The implementation partner's construction teams will start end of 2017. Consequently, activities on field will only start end of 2017.

For the installation of a HV transformer in Shango substation, the situation has been stuck since the beginning of the project because of the unclear situation of Shango substation. The Shango substation is part of larger project to build a 220 kV network in Rwanda and neighboring countries. A compoenent of this project was to build substations including Shango. Unfortunately, the company in charge of this poject has been greatly delaying the project. The probability of not having the substation ready before the end of the BTC intervention (which is a prerequisite) is very high.

2. Supervise the grid extension construction works

Under BE1-EARP, a contract of supervision was signed with a Spanish consulting company, NIPSA, In August 2015. The contract also applies on lots A, B and C of BE2-EARP. When the EPC contracts have started, in November 2016, the supervision company refused to come to Rwanda for performing its activities. After negotiation, NIPSA finally accepted to resume work and the resident project manager arrived end of March 2017. Both parties agreed that they should sign an addendum as soon as possible in order to make the situation legally conform and clear. Nevertheless, the involved parties could not find an agreement and in July 2017, the project decided to terminate the contract of NIPSA (end date is 15th August 2017).
BTC-HQ has agreed that the supervision of works will be performed by EDCL if they present a reasonable proposition for ensuring the quality of the works. As of 18 September 2017, the supervision of the BE1 EPC contracts, and thus also of lots A, B and C from BE2, is ensured by EDCL internal team.
For more information on the contract with NIPSA, please refer to the audit conducted in June 2017.

3. Develop and implement adequate environmental management plan and resettlement action plan for the network extension activity

This aspect of the project does not pose any major problem. An adequate environmental management plan is developed.

3.4 Performance output 2

The original formulated output 2, *beneficiaries (households, productive- and community uses) are supported in improving their access level*, has been cancelled and is replaced by the former output 2 of BE1: *Electricity grid reliability is increased through grid strengthening and harmonized standards.*

3.4.1 Progress of indicators

The following table is taken from the baseline report. As the related activities are still taking place, the project did not yet collect information on actual values.

Indicators	**Baseline values**	**Target values**	
	2016	Intermediate (2018)	Final (2019)
I 1.1.2.1 Kilometres of MV-lines strengthened	0		8.45 km
I 1.1.2.2 Kilometres of LV-lines strengthened	0		42 km

I 1.1.2.3 Electrical materials to be used in grid extension and grid strengthening are purchased	No	Yes	n/a

3.4.2 Progress of main activities

Old result 2

Progress of main activities	Progress:			
	A	B	C	D
1 Sensitize and educate beneficiaries around electricity usage	Activity cancelled			
2 Scale-up financial support to improve connection affordability for vulnerable customers in the intervention area	Activity cancelled			

New result 2

Progress of main activities	Progress:			
	A	B	C	D
1 Upgrade identified installations in targeted areas to strengthen existing grid			X	
2 design and supervise grid strengthening works			X	

3.4.3 Analysis of progress made

1 Upgrade identified installations in targeted areas to strengthen the existing grid

Similarly, to the lot MV/LV 11 (see output 1), the project will implement this activity with the partner's construction teams and with materials bought by the project in a separate tender.

2 Design and supervise grid strengthening works

The supervision will be similar than the one for lot MV/LV 11.

3.5 Performance output 3

Output 3: Coherence and coordination are improved between EARP and other energy access initiatives

3.5.1 Progress of indicators

The following table is taken from the baseline report. The project does not have yet collected information on actual values.

Indicators	Baseline value	Target values		
	2016	2017	2018	2019
I 1.1.3.1 Number of energy Sector Working Groups (eSWG) per year		1 SWG / semester		
I 1.1.3.2 Number of Technical Working Groups (TWG) per year		At least one meeting for each TWG / semester		
I 1.1.3.3 Number of TWG recommendations discussed at SWG level				
I 1.1.3.4 Number of SWG recommendations integrated in				

national strategies				
I 1.1.3.5 Access data, including consumption levels are integrated in Management Integrated System (MIS) of EUCL				

3.5.2 Progress of main activities

Progress of main activities [5]	Progress:			
	A	B	C	D
1 Support eSWAP in overall energy sector coordination		x		
2 Perform multi-tier energy access sample surveys using the Global Tracking Framework	Activity cancelled			
3 Support EUCL in organizing multi-tier access data monitoring for its customers	Activity cancelled			
4 Support REG/MININFRA to use collected data for decision making and coordination	Activity cancelled			
5 Capitalize and communicate on lessons learned			x	

3.5.3 Analysis of progress made

1. Support eSWAP in overall energy sector coordination

   Paying salaries for eSWAP staff is ongoing. While Belgium was the co-chair of the Energy Sector Working Group, the embassy supported the eSWAP (one additional person was hired at the embassy specifically to support the functioning of the eSWAP team). At the functional review of MININFRA took much more time than expected and made it clear that MININFRA did not want a BTC TA in their team, the whole idea of building the organizational capacity of MININFRA has been abandoned.

2. Perform multi-tier energy access sample surveys using the Global Tracking Framework

   This activity has been cancelled because the World Bank, through ESMAP, confirmed that they were planning to do exactly the same thing. The draft report was shared by World Bank on August 2017.

3. Support EUCL in organizing multi-tier access data monitoring for its customers

   This activity has been cancelled because we realize it fell under the scope of a World Bank support to EUCL (implementation of a new ERP system).

4. Support REG/MININFRA to use collected data for decision making and coordination

   This activity is cancelled and it was linked to the production of multi-tiers surveys and to the hiring of a ITA for MININFRA, which did not work out

5. Capitalize and communicate on lessons learned

   Not yet started

[5] A: The activities are ahead of schedule
B The activities are on schedule
C The activities are delayed, corrective measures are required.
D The activities are seriously delayed (more than 6 months). Substantial corrective measures are required.

3.6 Transversal Themes

3.6.1 Gender

This part is similar for all BE-EARP interventions.

3.6.1.1 2.6.1.1 According to you and your implementing partner what are the main gender gaps in the areas / outcomes covered by your intervention?

Up to date, the project has not been giving significant consideration to gender due to lack of time and human resources. However, a gender profile on the energy sector is under development through the Study and Expertise Fund (SEF) and in close collaboration with the Gender Monitoring Office (GMO). The study will help the project to better understand the gaps in the energy sector.

3.6.1.2 How does your intervention take gender into account?

Up to date, the project has not been conducting any activities related to gender. Nevertheless, the project has done or is planning to do the following:

- Ensure a gender balance regarding the selection of interns.
- Collect gender sensitive data when connecting new households.
- Perform gender sensitization activities while connecting new households.
- Ask a gender action plan to the contractors performing grid extension.

3.6.1.3 Has your intervention been through a Gender budget scan or through any other method to mainstream gender?

A tentative gender budget scan was conducted in early 2017, as an exercise to help the project team to understand the gender sensitiveness of the intervention. So far, this exercise did not lead to any concrete actions. Did your intervention organized any awareness activity for the staff, implementing partner? (Workshops, trainings, etc.)

3.7.1.4. Do you collaborate or are you in contact with a gender-friendly actor in Rwanda?

The project has contacted the Gender Monitor Office and had few meetings. A collaboration program is supposed to be prepared.

3.7.1.5. What are your challenges to take gender into consideration in your intervention?

The main challenges for the project in general has been the unavailability of sufficient human resources and the different delays and changes in the project, as described in previous chapters of this report. As a consequence, the main focus of the project has been to perform the main activity of the project (to start the grid extension works) and not sufficient attention could be given to transversal themes such as gender related activities.

3.7.1.6. What are your proposal to address those challenges?

Currently the project does not have proposals.

3.6.2 Environment

An adequate environmental management plan for the network extinction activity has been developed.

3.7 Risk management

We simplified the template for the risks in order to ease understanding. We only mention the major risks dealt with in the period.

Description of Risk or Issue	Action
Inefficient project organisation	New proposal for project organization to be discussed when new intervention manager comes on board
Unclear contract management rules	The PIM on contract management procedures will be clarified as soon as the new RAF is on board
The quality of wooden poles (from NFC) is too low (cracks, etc.) and consequently, the distribution lines will not be sustainable.	Specific letter from BTC to EDCL on this topic
The poles (to be used for inhouse and lots A, B and C) will arrive several months before being used in any construction works. In the meanwhile, they will be stored at the EARP store. Due to the limited space, they will be mixed with other poles and used in other projects.	Follow-up with store manager.
The EARP store does not manage correctly the electrical materials to be purchased and some materials are 'lost' or cannot be used (defects) within the project.	Follow-up with store manager.
The meters will not be provided on time and there are not enough meters at EARP store. Consequently, the contractors will not be able to connect all the households and the effectiveness of the project will be much less.	We launched an order for additional meters. Due to the delay on the construction, the danger of being late has decreased seriously.
Weak supervision firm (NIPSA, contract signed under BE1)	Termination of the contract
Transfer of responsibility of supervision to EDCL: the unavailability of personnel could lead to low quality of in-house supervision by EDCL and therefore, it is insufficient to ensure good quality of the works	clear agreement (signed on 12/09) and close follow-up by the BTC project team of the respect of the agreement + acceptance audit at the end of each construction contract

4 Steering and Learning

4.1 Strategic re-orientations

Following the official approval of the RES by the GoR in June 2016, the activities of the project have been re-examined, in order to assess their relevance in the new context. Reallocations have been proposed by EDCL/MININFRA and discussed in a high level meeting on July 8, 2016, in the presence of the chair and co-chair of the steering committee. The strategic re-orientations are the following:

	Activity	Budget (k€)	Proposed Reallocation	Decision and comments
BE2 1.1	Build electricity network extension on targeted areas (Shango)	2000	To be kept	**Approved** *Comments:* EDCL must designate a specific project leader to engage with the project team on this activity. The budget has been now available for more than half a year, without any concrete action to define the need and prepare the tender. This activity is still problematic and will probably not be carried forward in the timeframe of BE2EARP because of a very complicated contractual situation around the construction of the whole Shango substation.
BE2 2.1	Sensitize and educate beneficiaries around electricity usage	300	To be kept for both on grid and off grid	**Approved** *Comments:* These activities might be included in the TOR of the awareness campaigns (to be confirmed at a later stage) In the end, this did not happen and EDCL never requested to use the budget for this activity.
BE2 2.2	Scale-up financial support to improve connection affordability for vulnerable customers in the intervention area	200	RES Programme 1	**Approved** *Comments:* Under condition of good information of BTC on the final design and acceptance by the group of DPs The decision to support RES Programme 1 has been repealed later by an email of the co-chair to the chair, after a discussion with the Belgian embassy. Moving to off-grid is considered as a major change to the specific objective and cannot be approved by BTC.

	Activity	Budget (k€)	Proposed Reallocation	Decision and comments
BE2 3.2	Perform multi-tier energy access sample surveys using the Global Tracking Framework	100	Awareness campaigns	**Decision postponed** *Comments:* BTC informed that, after an exploratory mission to Spain (Cormillas University), a draft budget existed for the support to the implementation of the Rural Electrification Modelling (REM) tool of the MIT in MININFRA, EDCL and RURA, for a total of about 260 kEUR. MININFRA/EDCL expressed their surprise, as it was understood by them that MIT support on REM would come without need of extra-funding. It was agreed that a specific meeting would be organised with MININFRA / EDCL / MIT-Cormillas / BTC to discuss the issue and clarify the needs. The final decision will be made after that meeting.
BE2 3.3	Support EUCL in organizing multi-tier access data monitoring for its customers	80	RES Programme 1	
BE2 3.4	Support REG/MININFRA to use collected data for decision making and coordination	80	RES Programme 1	
BE2 3.5	Capitalize and communicate on lessons learned	40	Awareness campaigns	**Not accepted** *Comments:* It was agreed that this budget should be reserved to allow the measurement of the baseline and of the impact of the electrification. The idea is to interview each household who is connected, at the time of the connection. This approach will at the same time provide a measurement of the baseline (asking the type of energy usage of the newly connected household) but also will allow calculation of the immediate impact and possible longer term impact of the connection (forecasted use by the households). This approach will be conceived in a way to be deployed not only on the lines funded by Belgium but for all new lines.

4.2 Recommendations

A major recommendation is not to use the unallocated balance[6] of BE2EARP for grid extension activities, as the ESMAP report on access shows that this does not make sense. We should focus on strengthening the existing grid (but the beneficiaries are no longer the poorest people) or revise the specific objective and go into off-grid access.

[6] There is also the budget for the HV transformer in Shango substation since this activity will probably not be performed.

4.3 Lessons Learned

Lessons learned	Target audience
The execution modality (co-management) leads to a slow and heavy system and the project should integrate this fact in planning.	Project implementation team
The project is managing three different interventions and the sum of all activities were way above its capacity to implement them all in an effective manner.	Formulation team
Human resources are really the key of success of the interventions. Recruitment should be really in the centre of attention of all involved stakeholders.	All stakeholders.
Technical knowledge within the project implementation is key to ensure the success of the interventions.	All stakeholders

5 Annexes

5.1 Quality criteria

1. RELEVANCE: The degree to which the intervention is in line with local and national policies and priorities as well as with the expectations of the beneficiaries		
In order to calculate the total score for this quality criterion, proceed as follows: 'At least one 'A', no 'C' or 'D' = A; Two times 'B' = B; At least one 'C', no 'D'= C; at least one 'D' = D		
Assessment RELEVANCE: total score	A	
	B	
	C	
	D	
	x	
1.1 What is the present level of relevance of the intervention?		
	A	Clearly still embedded in national policies and Belgian strategy, responds to aid effectiveness commitments, highly relevant to needs of target group.
	B	Still fits well in national policies and Belgian strategy (without always being explicit), reasonably compatible with aid effectiveness commitments, relevant to target group's needs.
	C	Some issues regarding consistency with national policies and Belgian strategy, aid effectiveness or relevance.
x	D	Contradictions with national policies and Belgian strategy, aid efficiency commitments; relevance to needs is questionable. Major adaptations needed.
1.2 As presently designed, is the intervention logic still holding true?		
	A	Clear and well-structured intervention logic; feasible and consistent vertical logic of objectives; adequate indicators; Risks and Assumptions clearly identified and managed; exit strategy in place (if applicable).
X	B	Adequate intervention logic although it might need some improvements regarding hierarchy of objectives, indicators, Risk and Assumptions.
	C	Problems with intervention logic may affect performance of intervention and capacity to monitor and evaluate progress; improvements necessary.
	D	Intervention logic is faulty and requires major revision for the intervention to have a chance of success.

Note: the project is in complete contradiction with the new Rural Electrification Strategy. At the same time, the GoR is not supporting this strategy. So, the intervention is fully in line with the political economy but not with the official policy and strategy. Our partners would therefore anwer A to question 1.1, whereas BTC answers D.

2. EFFICIENCY OF IMPLEMENTATION TO DATE: Degree to which the resources of the intervention (funds, expertise, time, etc.) have been converted into results in an economical way		
In order to calculate the total score for this quality criterion, proceed as follows: 'At least two 'A', no 'C' or 'D' = A; Two times 'B', no 'C' or 'D' = B; at least one 'C', no 'D'= C; at least one 'D' = D		
Assessment EFFICIENCY : total score	A	
	B	
	C	
		X
	D	
2.1 How well are inputs (financial, HR, goods & equipment) managed?		
	A	All inputs are available on time and within budget.
	B	Most inputs are available in reasonable time and do not require substantial budget adjustments. However there is room for improvement.

X	C	Availability and usage of inputs face problems, which need to be addressed; otherwise results may be at risk.
	D	Availability and management of inputs have serious deficiencies, which threaten the achievement of results. Substantial change is needed.
2.2 How well is the implementation of activities managed?		
	A	Activities implemented on schedule
	B	Most activities are on schedule. Delays exist, but do not harm the delivery of outputs
X	C	Activities are delayed. Corrections are necessary to deliver without too much delay.
	D	Serious delay. Outputs will not be delivered unless major changes in planning.
2.3 How well are outputs achieved?		
	A	All outputs have been and most likely will be delivered as scheduled with good quality contributing to outcomes as planned.
	B	Output delivery is and will most likely be according to plan, but there is room for improvement in terms of quality, coverage and timing.
X	C	Some output are/will be not delivered on time or with good quality. Adjustments are necessary.
	D	Quality and delivery of outputs has and most likely will have serious deficiencies. Major adjustments are needed to ensure that at least the key outputs are delivered on time.

3. EFFECTIVENESS TO DATE: Degree to which the outcome (Specific Objective) is achieved as planned at the end of year N				
In order to calculate the total score for this quality criterion, proceed as follows: 'At least one 'A', no 'C' or 'D' = A; Two times 'B' = B; At least one 'C', no 'D'= C; at least one 'D' = D				
Assessment EFFECTIVENESS : total score	A	B	C	D
		X		

3.1 As presently implemented what is the likelihood of the outcome to be achieved?		
	A	Full achievement of the outcome is likely in terms of quality and coverage. Negative effects (if any) have been mitigated.
X	B	Outcome will be achieved with minor limitations; negative effects (if any) have not caused much harm.
	C	Outcome will be achieved only partially among others because of negative effects to which management was not able to fully adapt. Corrective measures have to be taken to improve ability to achieve outcome.
	D	The intervention will not achieve its outcome unless major, fundamental measures are taken.
3.2 Are activities and outputs adapted (when needed), in order to achieve the outcome?		
x	A	The intervention is successful in adapting its strategies / activities and outputs to changing external conditions in order to achieve the outcome. Risks and assumptions are managed in a proactive manner.
	B	The intervention is relatively successful in adapting its strategies to changing external conditions in order to achieve its outcome. Risks management is rather passive.
	C	The intervention has not entirely succeeded in adapting its strategies to changing external conditions in a timely or adequate manner. Risk management has been rather static. An important change in strategies is necessary in order to ensure the intervention can achieve its outcome.
	D	The intervention has failed to respond to changing external conditions, risks were insufficiently managed. Major changes are needed to attain the outcome.

4. POTENTIAL SUSTAINABILITY: The degree of likelihood to maintain and reproduce the benefits of an intervention in the long run (beyond the implementation period of the intervention).		
In order to calculate the total score for this quality criterion, proceed as follows: At least 3 'A's, no 'C' or 'D' = A ; Maximum two 'C's, no 'D' = B; At least three 'C's, no 'D' = C ; At least one 'D' = D		
Assessment POTENTIAL SUSTAINABILITY : total score	A	
	B	
	C	
	D	
	x	
4.1 Financial/economic viability?		
	A	Financial/economic sustainability is potentially very good: costs for services and maintenance are covered or affordable; external factors will not change that.
	B	Financial/economic sustainability is likely to be good, but problems might arise namely from changing external economic factors.
X	C	Problems need to be addressed regarding financial sustainability either in terms of institutional or target groups costs or changing economic context.
	D	Financial/economic sustainability is very questionable unless major changes are made.
4.2 What is the level of ownership of the intervention by target groups and will it continue after the end of external support?		
x	A	The steering committee and other relevant local structures are strongly involved in all stages of implementation and are committed to continue producing and using results.
	B	Implementation is based in a good part on the steering committee and other relevant local structures, which are also somewhat involved in decision-making. Likeliness of sustainability is good, but there is room for improvement.
	C	The intervention uses mainly ad-hoc arrangements and the steering committee and other relevant local structures to ensure sustainability. Continued results are not guaranteed. Corrective measures are needed.
	D	The intervention depends completely on ad-hoc structures with no prospect of sustainability. Fundamental changes are needed to enable sustainability.
4.3 What is the level of policy support provided and the degree of interaction between intervention and policy level?		
	A	Policy and institutions have been highly supportive of intervention and will continue to be so.
	B	Policy and policy enforcing institutions have been generally supportive, or at least have not hindered the intervention, and are likely to continue to be so.
	C	Intervention sustainability is limited due to lack of policy support. Corrective measures are needed.
X	D	Policies have been and likely will be in contradiction with the intervention. Fundamental changes needed to make intervention sustainable.
4.4 How well is the intervention contributing to institutional and management capacity?		
	A	Intervention is embedded in institutional structures and has contributed to improve the institutional and management capacity (even if this is not an explicit goal).
X	B	Intervention management is well embedded in institutional structures and has somewhat contributed to capacity building. Additional expertise might be required. Improvements in order to guarantee sustainability are possible.
	C	Intervention relies too much on ad-hoc structures instead of institutions; capacity building has not been sufficient to fully ensure sustainability. Corrective measures are needed.
	D	Intervention is relying on ad hoc and capacity transfer to existing institutions, which could guarantee sustainability, is unlikely unless fundamental changes are undertaken.

Note: Connecting so many poor rural households to the grid, EDCL is not securing revenues for EUCL that will have many difficulties operating and maintaining the grid with direct subsidies from the Government of Rwanda. Our partners do not see this situation as a problem as they are confident that the GoR will always find the financial means to support EUCL. This is in contradiction with the official

policy of having EDCL and EUCL to be autonomous and financially sound and independent. BTC sees this contradiction as a problem for the sustainability. Our partners do not share this view.

5.2 Decisions taken by the steering committee and follow-up

Due to the conflict arising from the choice of in-house approach for the electrification of Lot2, it is removed from the contract of NIP SA	22 June 2016
In replacement of Lot2, Lot6 is included in the contract of NIP SA	22 June 2016
A grant agreement will be prepared and signed for in-house (Lot2 and MV/LV Lot11) financing by the project	22 June 2016
A tender under régie modality will be launched for the supervision of the lots to be implemented through in-house approach	22 June 2016
Activities of test pilot solutions to support connection affordability for low income customers in the intervention area is reallocated to RES programme 1.	8 July 2016
Lot 2 and network strengthening (BE1) will be financed by BE2 and lot 6 (BE2) will be financed by BE1.	21 Oct 2016
New repartition for construction approaches : EPC for lots 4, 6 and 10 ; In-house for lot 11 and network strengthening ; Two-step for lot 2	21 Oct 2016
A new supervision has to be hired for operations under in-house approach. The scope of NIPSA has to be renegotiated to evolve from network strengthening to lot 2.	21 Oct 2016 21 Oct 2016
Funds from BE1 and BE2 will be reallocated to the voucher system for off-grid systems under two conditions (good information of BTC and acceptance by DPs ; acceptance by the Belgian Embassy).	21 Oct 2016
The re-advertisement of ITA power networks will be done with the new ToRs, the task of support for planning being considered as one of the various tasks of the position instead of being allocated a specific workload.	21 Oct 2016
The principle to harmonize salaries across the organization, eliminating the incoherencies linked to different DP standards is accepted.	21 Oct 2016
The BE-EARP accountant will be promoted to chief accountant, once the internal promotion process will be correctly followed and documented.	21 Oct 2016
Given NIP SA is failing on its duties, engineers of EDCL, EARP and BEEARP will temporarily perform all duties of NIP SA (designs, FAT, material acceptance, approval of invoices and on-site supervision of the works)	6 Feb 2017
The salaries of the national staff within BEEARP is harmonized to eliminate incoherencies linked with different DP standards and/or different staffs	9 Feb 2017

5.3 Updated Logical framework

	Activities to reach result 1: Rural electricity connectivity is increased through national electricity grid extension	**Changes**
A 1.1	Build electricity transmission and distribution lines in targeted areas	One lot has been shifted to BE1
A 1.2	Supervise the grid extension construction works	One lot has been shifted to BE1
A 1.3	Develop and implement EMP and RAP for network extension activity in compliance with ESMF and RPF	Implemented as planned
	Activities to reach former result 2: Beneficiaries (households, productive- and community uses) are supported in improving their access level.	**Changes**
A 2.1	Sensitize and educate beneficiaries around electricity usage	Activity cancelled
A 2.2	Scale-up financial support to improve connection affordability for vulnerable customers in the intervention area	Activity cancelled
	Activities to reach new result 2: Electricity grid access affordability is improved through pilot activities in the area of intervention	**Changes**
A 3.1	Upgrade identified installations in targeted areas to strengthen the existing grid	Originally part of BE1, will be implemented as planned within BE2
A 3.2	Design and supervise grid strengthening works	Originally part of BE1, will be implemented as planned within BE2
	Activities to reach result 3: Coherence and coordination are improved between EARP and other energy access initiatives	**Changes**
A 4.1	Support eSWAP in overall energy sector coordination	Implemented as planned
A 4.2	Perform multi-tier energy access sample surveys using the Global Tracking Framework	Activity cancelled
A 4.3	Support EUCL in organizing multi-tier access data monitoring for its customers	Activity cancelled
A 4.4	Support REG/MININFRA to use collected data for decision making and coordination	Activity cancelled
A 4.5	Capitalize and communicate on lessons learned	Will be implemented as planned

5.4 MoRe Results at a glance

Logical framework's results or indicators modified in last 12 months?	The baseline report is currently in a final stage and indicators have been adapted conform to BE1, which is slightly different than the suggested indicators in the TFF.
Baseline Report registered on PIT?	The baseline report is not yet finalized
Planning MTR (registration of report)	end 2017/beginning 2018
Planning ETR (registration of report)	end 2019
Backstopping missions	A backstopping mission was held in September 2016

5.5 “Budget versus current (y – m)” Report

Budget vs Actuals (Year to Month) of RWA1509411

Project Title : **ENERGY SECTOR: IMPROVING ACCESS TO RELIABLE ON-GRID ELECTRICITY SERVICES FOR HOUSEHOLDS AND PRIORITY PUBLIC INSTITUTIONS - Phase 2**

Budget Version: **C01**
Currency : EUR
YtM : **Report includes all closed transactions until the end date of the chosen closing**

Year to month : 30/06/2017

	Status	Fin Mode	Amount	Start to 2016	Expenses 2017	Total	Balance	% Exec
A THE ACCESS TO RELIABLE ON-GRID ELECTRICITY SERVICES			10.253.500,00	149.567,43	**81.760,40**	231.327,83	**10.022.172,17**	**2%**
01 Rural electricity connectivity is increased through			8.903.500,00	0,00	**2.248,59**	2.248,59	**8.901.251,41**	**0%**
01 Build electricity transmission and distribution lines and		COGES	8.250.000,00	0,00	**647,01**	647,01	8.249.352,99	0%
02 Supervise the grid extension construction works		COGES	577.500,00	0,00	**1.601,58**	1.601,58	575.898,42	0%
03 Develop and implement EMP and RAP for network		COGES	76.000,00	0,00	**0,00**	0,00	76.000,00	0%
02 Beneficiaries (households, productive and community			500.000,00	0,00	**0,00**	0,00	**500.000,00**	**0%**
01 Sensitize and educate beneficiaries around (i) Electricity		REGIE	300.000,00	0,00	**0,00**	0,00	300.000,00	0%
02 Scale-up pilot solutions to support connection affordability		REGIE	200.000,00	0,00	**0,00**	0,00	200.000,00	0%
03 Coherence and coordination are improved between			850.000,00	149.567,43	**79.511,81**	229.079,24	**620.920,76**	**27%**
01 Support eSWAP in energy sector coordination		COGES	550.000,00	149.567,43	**79.511,81**	229.079,24	320.920,76	42%
02 Perform multi-tier access sample surveys using Global		REGIE	100.000,00	0,00	**0,00**	0,00	100.000,00	0%
03 Support EUCL in organizing multi-tier access data		REGIE	80.000,00	0,00	**0,00**	0,00	80.000,00	0%
04 Support REG/MININFRA to use monitored data for		REGIE	80.000,00	0,00	**0,00**	0,00	80.000,00	0%
05 Capitalize and communicate on lessons learned		REGIE	40.000,00	0,00	**0,00**	0,00	40.000,00	0%
X CONTINGENCIES			57.004,00	38,69	**159,01**	197,70	**56.806,30**	**0%**
01 Contingencies			57.004,00	38,69	**159,01**	197,70	**56.806,30**	**0%**
01 Contingencies co-management		COGES	37.004,00	38,69	**159,01**	197,70	36.806,30	1%
02 Contingencies direct management		REGIE	20.000,00	0,00	**0,00**	0,00	20.000,00	0%
Z GENERAL MEANS			1.689.496,00	9.334,61	**98.691,70**	108.026,31	**1.581.469,69**	**6%**
01 Salaries			1.430.496,00	341,54	**71.520,92**	71.862,46	**1.358.633,54**	**5%**
01 ITA in sector coordination		REGIE	432.000,00	0,00	**5.133,28**	5.133,28	426.866,72	1%
02 Project Co-manager		REGIE	180.000,00	0,00	**0,00**	0,00	180.000,00	0%
		REGIE	1.871.000,00	9.334,61	**32.429,06**	41.763,67	1.829.236,33	2%
		COGEST	10.129.000,00	149.606,12	**148.182,05**	297.788,17	9.831.211,83	3%
		TOTAL	12.000.000,00	158.940,73	**180.611,11**	339.551,84	11.660.448,16	3%

Budget vs Actuals (Year to Month) of RWA1509411

Project Title : **ENERGY SECTOR: IMPROVING ACCESS TO RELIABLE ON-GRID ELECTRICITY SERVICES FOR HOUSEHOLDS AND PRIORITY PUBLIC INSTITUTIONS - Phase 2**

Budget Version: **C01**
Currency : EUR
YtM : **Report includes all closed transactions until the end date of the chosen closing**

Year to month : 30/06/2017

	Status	Fin Mode	Amount	Start to 2016	Expenses 2017	Total	Balance	% Exec
03 Technical staff		COGES	529.056,00	0,00	**66.262,64**	66.262,64	462.793,36	13%
04 Responsible Administration and Finance International		REGIE	180.000,00	341,54	**125,00**	466,54	179.533,46	0%
05 Administration and Finance local staff		COGES	80.640,00	0,00	**0,00**	0,00	80.640,00	0%
06 Drivers		COGES	28.800,00	0,00	**0,00**	0,00	28.800,00	0%
02 Investments			30.000,00	0,00	**22.696,80**	22.696,80	**7.303,20**	**76%**
01 Vehicles		REGIE	20.000,00	0,00	**18.974,80**	18.974,80	1.025,20	95%
02 ICT and office equipment		REGIE	10.000,00	0,00	**3.722,00**	3.722,00	6.278,00	37%
03 Running Costs			121.000,00	4,00	**2.667,98**	2.671,98	**118.328,02**	**2%**
01 Vehicle Operating Costs		REGIE	36.000,00	0,00	**952,29**	952,29	35.047,71	3%
02 Communication costs		REGIE	36.000,00	0,00	**1.525,07**	1.525,07	34.474,93	4%
03 Field Missions		REGIE	24.000,00	0,00	**0,00**	0,00	24.000,00	0%
04 External Communication costs		REGIE	10.000,00	0,00	**0,00**	0,00	10.000,00	0%
05 Training		REGIE	10.000,00	0,00	**0,00**	0,00	10.000,00	0%
06 Financial costs		REGIE	5.000,00	4,00	**4,65**	8,65	4.991,35	0%
07 VAT costs		REGIE	0,00	0,00	**185,97**	185,97	-185,97	?%
04 Audit, Monitoring and Evaluation			108.000,00	8.989,07	**1.806,00**	10.795,07	**97.204,93**	**10%**
01 Monitoring and evaluation: baseline, MTR, ETR		REGIE	60.000,00	0,00	**0,00**	0,00	60.000,00	0%
02 Audits		REGIE	40.000,00	0,00	**0,00**	0,00	40.000,00	0%
03 Backstopping		REGIE	8.000,00	8.989,07	**1.806,00**	10.795,07	-2.795,07	135%
99 Conversion rate adjustment								**0%**
		REGIE	1.871.000,00	9.334,61	**32.429,06**	41.763,67	1.829.236,33	2%
		COGEST	10.129.000,00	149.606,12	**148.182,05**	297.788,17	9.831.211,83	3%
		TOTAL	12.000.000,00	158.940,73	**180.611,11**	339.551,84	11.660.448,16	3%

5.6 Communication resources

No communication resources yet.