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Implementation of the grid extension projects to increase rural electrification: What are the key constraints?

Overview

Over the past 10 years, Government of Uganda (GoU) has committed a lot of funds to rural electrification through construction of various power lines across the country. Rural electrification projects aim at reducing inequalities in access to electricity and the associated opportunities for increased social welfare, education, health and income generating opportunities

The Rural Electrification Agency (REA) is mandated to spearhead the acceleration of rural electrification. One of the interventions is expanding the grid to rural areas through construction of power lines.

This briefing paper discusses the main causes of ineffectiveness of the grid extension projects that are hindering increased rural electrification and gives recommendations for improvement. The analysis focused on three financial years 2011/12, 2012/13 and 2013/14.

Key Issues

- Late completion of all projects under review
- Delay in implementing the Resettlement Action Plan is continuously hindering completion of the grid extension project.
- A number of completed grid extension projects have not been commissioned
- Low access to power by the local population due to poverty.

Introduction

Rural electrification is an integral component of the Government's overall policy and program to promote national socio-economic development and integration. The National Development Plan prioritizes investment in energy infrastructure to accelerate socioeconomic transformation for prosperity. This is done through the implementation of the Rural Electrification Strategy Program (RESP). The previous RESP aimed at increasing rural electricity access from 1% in 1999 to 10% by 2012. The current RESP, 2013 – 2022 is designed to achieve a much faster acceleration of national

geographical coverage and consumer access of 22%.

The Rural electrification programs were designed from the RESP to reduce inequalities in access to electricity and associated opportunities; for increased social welfare, education, health and income generating opportunities.

It is hoped that these aims will be achieved by maximizing connections to major economic centers and social service facilities, and through implementing grid extension projects, among other interventions.

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A significant number of grid extension projects have been constructed. In that regard, district headquarters are supposed to be connected as a result of the schemes.

Government and development partners have made substantial investment to rural electrification. However, currently, less than 5% of the rural population has electricity service. This level of electrification is an impediment to the achievement of the desired transformation.

Table 1 summarizes the funding allocation to the rural electrification program for the financial years; under review.

Table 1: Funding allocation to the Rural Electrification Program.

Source of Funding	Financial Years			
	2011/12 Ushs billion	2012/13 Ushs billion	2013/14 Ushs billion	Total Ushs billion
GoU	11.204	1.638	12.063	24.91
Donors				
NORAD	43.217	36.5	16.336	96.053
IDA	25.833	31.275	2.643	59.751
GEF	1.826	1.825	-	3.651
Total	82.08	71.238	31.042	184.365

Source: IFMS data; REA

A total of US\$184.4 billion had been received for implementation of the grid extension project. Funding from development partners comprised of 84.5% of the total funds for the program while GoU funds contributed 13.5% (See Table 1).

Implementation of the grid extension projects has been carried out over the years. Some positive contributions have been realized.

For instance; a number of grid extension projects that were monitored have been constructed, commissioned and handed over to distribution companies to provide power to the people. Some of these include; Soroti-Katakwi-Amuria, Ayer-Kamdini-Bobi, Lira-Apala-Aloi, Ibanda-Kabujogera-Kamwenge, Muhanga-Kamwezi, Bukwiri-Kyankwanzi, Ibanda-Kazo-Rushere, and Kikubamutwe-Nankwanga. However, the low level of rural electrification connection has impeded the ability of some rural households to engage in income generating activities. Given the low connection rate, REA was not able to realize the target of 10% rural electrification by 2012.

Key Constraints to Effective Rural Electrification.

a) Poor Performance of Grid Extension Projects

Table 2 shows the period of completion for sampled grid extensions. As shown in figure 2, none of the projects sampled were completed by the Expected Completion Date (ECD) or within the first two months after the expected date.

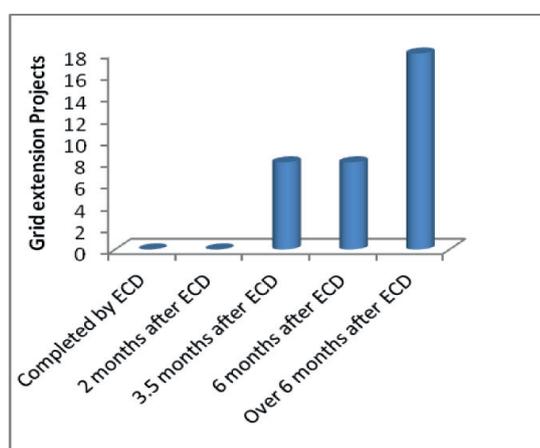
Out of the 34 grid extension projects monitored, 53% of the power lines were completed over 6 months after the expected completion date. A total of 23.5% of the power lines were completed between 3 to 5 months after expected completion date and also, while 23.5% were completed 6 months after expected completion dates.

Table 2: Period of Completion for Sampled Grid Extension Project.

Period of Completion	Name of Line
3-5 months after expected completion date	Soroti-Katakwi-Amuria, Ayer-Kamdini-Bobi, Ibanda-Kabujogera-Kamwenge, Kikubamutwe-Nankwanga, Mubende-Kyegegwa-Kyenjojo, Rwakasiga-Kyemritsi-Nyamabare, Rwabutura-Kengando-Kaziba, Rakai-Isingiro
6 months after expected completion date	Ibanda-Kazo-Rushere; Muhanga-Kamwezi, Kashekuru-Kyeibanga, Lyantonde-Kaliro-Lwebitakuli, Konge-Kashozi; Lot 3: Mbale/Manafwa/Kapchowrwa/Paliisa/Tororo/Butaleja/Bulambuli; Lot 4 Masindi/Lira/Nakasongola
Over 6 months after expected completion date	Rwabutura-Rwengando-Kaziba, Kashekuru-Keibanga, Lira-Apala-Aloi, Buseruka-Hoima Interconnector line, Namutamba-Bugobi, Migyera-Nyakitoma, Busamaga-Bufumbo, Bukwiri-Kyankanzi, Kabale-Kisoro, Kayeigoro-Kashozi-Kanekye, Sembabule-Rwemiyaga, Lyantonde-Lumbugu; Opeta-Achokola/Icema- Otwal, Ruhira Millenium Village, Ntenjeru-Bule-Mpenja, Masindi-Waki-Buliisa, Bujwaha-Bulyango,

Source: BMAU reports (2011/12-2013/14); Project contractors; REA Progress reports

Figure 2: Physical Performance of Grid Extension Projects.



BMAU monitoring reports; interviews with contractors

b) Delays in implementing the Resettlement Action Plans

All projects monitored indicated problems in implementing the Resettlement Action Plan (RAP) as one of the causes delaying project implementation. Some of the land compensation issues included; locals refusing contractors to: access land where lines are to pass; erect poles in their compounds, and cut their trees before being compensated. Some people had threatened to sue REA for accessing their land before compensation. In Hamurwa Trading Centre (on the Kabaale-Kisoro power line) a local resident refused REA contractors to erect poles on his land, rejected any discussions and compensation with the agency.

c) Financial constraints

Financial challenges are faced especially by local contractors. These included; escalation of the exchange rate leading to higher costs of construction materials, and delayed payment of contractors by REA. Late payments were in Apal-Adwar-Kiru, Rwakasiga-Kyempitsi-Nyamabale, Kayeigoro-Kashozi-Kanekye, Kashekuru-Kyeibanga, and Rwabutura-Rwengando-Kiziba, Buseruka-Hoima Interconnector.

d) **Poor coordination linkages** between implementing agencies. For example, on the Gulu-Moyo-Adjumani power line (REA and Uganda National Roads Authority (UNRA)); Buseruka- Hoima Interconnector (REA, UNRA, Uganda National Water and Sewerage Corporation) also delayed project implementation

e) Complete but not powered lines

On the Sembabule-Lwemiyaga, Lyantonde-Kaliro-Lwebitakuli, Rakai-Isingiro, Lyantonde-Lumbugu lines, contractors have completed construction of power lines and tested the infrastructure. However, it is not powered, so the community is not benefiting from the project. On the Migyera-Nyakitoma line, the line was not energized for a long time as the contractor had failed to correct some snags on the line. Delays in handing over completed project to operators who in turn connect the intended beneficiaries leaves the infrastructure idle and susceptible to thefts. A number of transformers were vandalized on the Lyantonde-Lumbugu power

line. One of the incidences is illustrated in the picture below. The thefts included; cutting jumpers, stealing of copper and oil from transformers.



Vandalised transformers on the Lyantonde-Lumbugu power line

On the Bukwiri-Kyankwanzi line there were very few connections made. Majority of the locals cannot afford the power. As a result, they feel it is a bother for REA to destroy their property and erect poles in their compounds. In other instances, the lines are energized, but people do not know. Other people are “waiting” for government to connect them. On the Ibanda-Kazo-Rushhere line, the project was viewed as useless to them as the locals have always lived without power and therefore do not perceive benefits from the project.

f). Few connections made on the power lines

Most rural dwellers are subsistence farmers whose earnings are not enough to cater for basic necessities. Those who need power resort to power theft. This vice is very common in Mbale and Manafwa districts where thin wires are used to tap power from the transmission lines causing power losses. On the Busamaga-Bufumbo; Namawanga-Nabweyo, Sibanga-Namakole line, monitoring visits in March 2012 indicated that there were no rightfully connected customers as all residents were involved in power theft.

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CONCLUSION

The grid extension projects are being implemented countrywide but with few connections on ground. Failure to complete projects on time, delays in addressing way leave issues, and inability to commission completed projects partly led to the non realization of the 10% target of rural electrification by 2012. There is therefore need to intensify efforts in addressing the bottlenecks in the grid extension projects if government is to achieve the strategy of rural electrification access of 22% by 2022.

RECOMMENDATIONS.

The REA should address the Resettlement Action Plan before projects start to enable contractors execute their work without disturbance from the communities.

1. The REA should intensify its sensitization campaigns to the beneficiary local communities about upcoming grid extension projects to get community buy in.
2. The REA should release adequate funds to the contractors in time to ensure that planned works are implemented as scheduled.
3. The REA should commission projects immediately they are complete and hand them over to power operators to enable intended people benefit from the project.
4. The REA should roll out the subsidy of connecting households and business enterprises in low income rural communities country wide.

References:

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