



اتاق بازرگانی، صنایع، معادن و کشاورزی ایران

Iran Chamber of Commerce, Industries, Mines & Agriculture

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پیوست: فاقد

اتوماسیون اداری

باسمه تعالی

سال تولید؛ دانش بنیان ، اشتغال آفرین

رؤسای محترم تشکل های اقتصادی وابسته به اتاق ایران

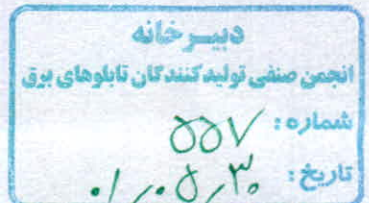
با سلام؛

احتراماً به استحضار میرساند طبق اطلاع واصله از وزارت امور خارجه کشورمان ، شرکت اوگاندایی (Mugatech Venture) علاقه مند به همکاری با شرکت های ایرانی در زمینه انرژی و انتقال نیرو می باشد.

ضمن ارسال مشخصات مناقصه پروژه انتقال نیرو در اوگاندا در فایل پیوست، مزید امتنان است چنانچه دستور فرمائید مراتب به کلیه اعضای محترم تشکل اطلاع رسانی و اسامی شرکت های علاقمند به همکاری با شرکت اوگاندایی را در اسرع وقت به معاونت بین الملل اتاق ایران اعلام نمایند.

سید جواد زمانی
معاون استان ها و تشکل ها

ذخیره مدارک
اطلاع رسانی
ارسال به شرکت های
با همکاری شرکت اوگاندایی
در مورد پروژه انتقال نیرو



بدون مهر برجسته فاقد اعتبار می باشد

تهران، کدپستی ۱۵۸۳۶۴۸۴۹۹، خیابان طالقانی، نبش خیابان شهید موسوی (فرصت)، شماره ۱۷۵، صندوق پستی ۴۶۷۱-۱۵۸۷۵

تلفن: ۸۵۷۳۰۰۰۰ فکس: ۸۵۷۳۳۳۳۳ www.iccima.ir email: info@iccima.ir



OLWIYO (UG) – KIBALI (D.R.C) Transmission Line

Private Investment – a 400 KV Transmission line

- 370 Kilometers



EXECUTIVE SUMMARY



Our consortium comprising of RVB Capital Advisors Inc., Power Invest DMCC and Crosslink Partners (U) Ltd has identified an off taker with a consumption of 47MW and thus seeks / proposes to build a new 400 kV Transmission Line from Olwiyo, Uganda to Kibali, Democratic Republic of Congo.

Barrick corporation – The company that operates the KIBALI GOLD MINE is willing to sign an off take agreement.

The estimated cost of the transmission line project is \$550million (including cost of land acquisition for the right-of-way acquisition and permitting costs.)

The estimated time needed for construction of the required facilities is 2 years with actual project completion time dependent on the time needed for right-of-way acquisition and permitting.



OVERVIEW

The proposed project would include construction of a new 400 kV AC transmission line.

The line will be aerial with a total length of approximately 370 Kilometers and consist of lattice or pole type structures carrying 1590 kcmil ACSR conductor.

The estimated ratings of the new facility would be 731 MVA normal and 885 MVA emergency.

RVB Capital Advisors Inc.- Crosslink Partners (U) Ltd will secure a right-of-way for the line that would be built. The area is sparsely populated, mainly Agricultural, with significant amounts of open space.

The proposed transmission line would be attached to existing bus at the OLWIYO substation through a new circuit breaker.



OVERVIEW

Olwiyo, Uganda – Kibali, D.R.C High Voltage Power Line Power Line

Location

Country Uganda & D.R.C

General direction South to North

From Olwiyo, Uganda

Passes through Nebbi, Arua, Ituri and Haut Ulele

To Kibali, D.RC

Ownership information

Owner Government of Uganda & Government of Democratic Republic of Congo

Partners Kibali Gold Mines SA Ltd & RVB Capital Advisory Inc., Power Invest DMCC & Crosslink Partners Ltd

Operator Uganda Electricity Transmission Company Limited & Société Nationale d'Electricité (SNEL – D.R.C)

Technical information

Type of AC current

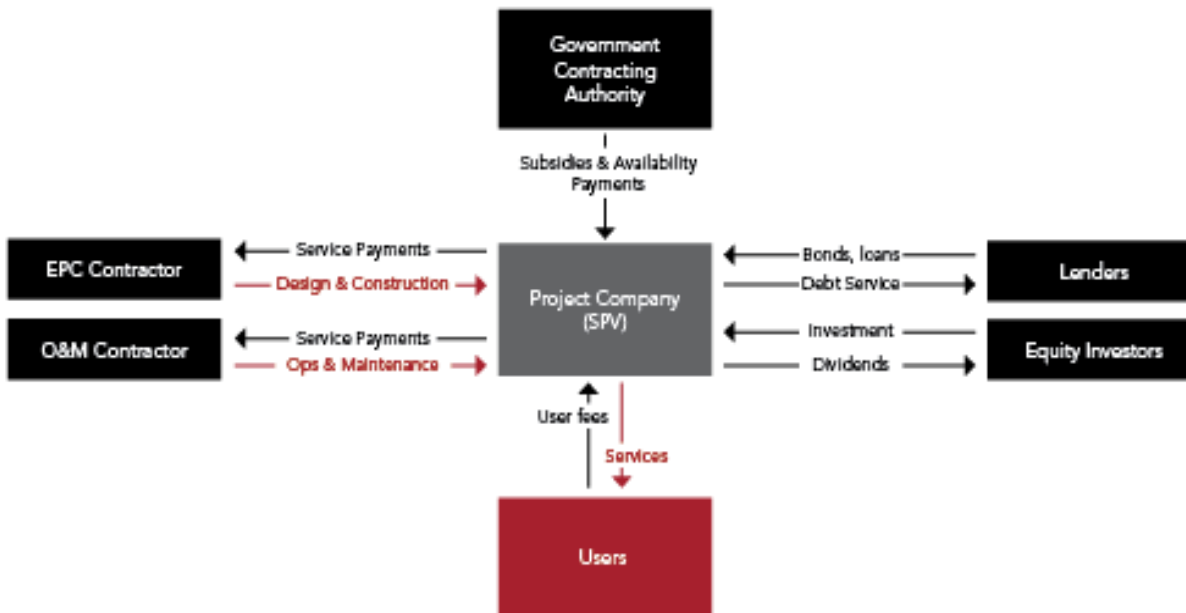
Total length 380 km

AC voltage 400kV

No. of circuits 2

EPC + FINANCE ARRANGEMENT

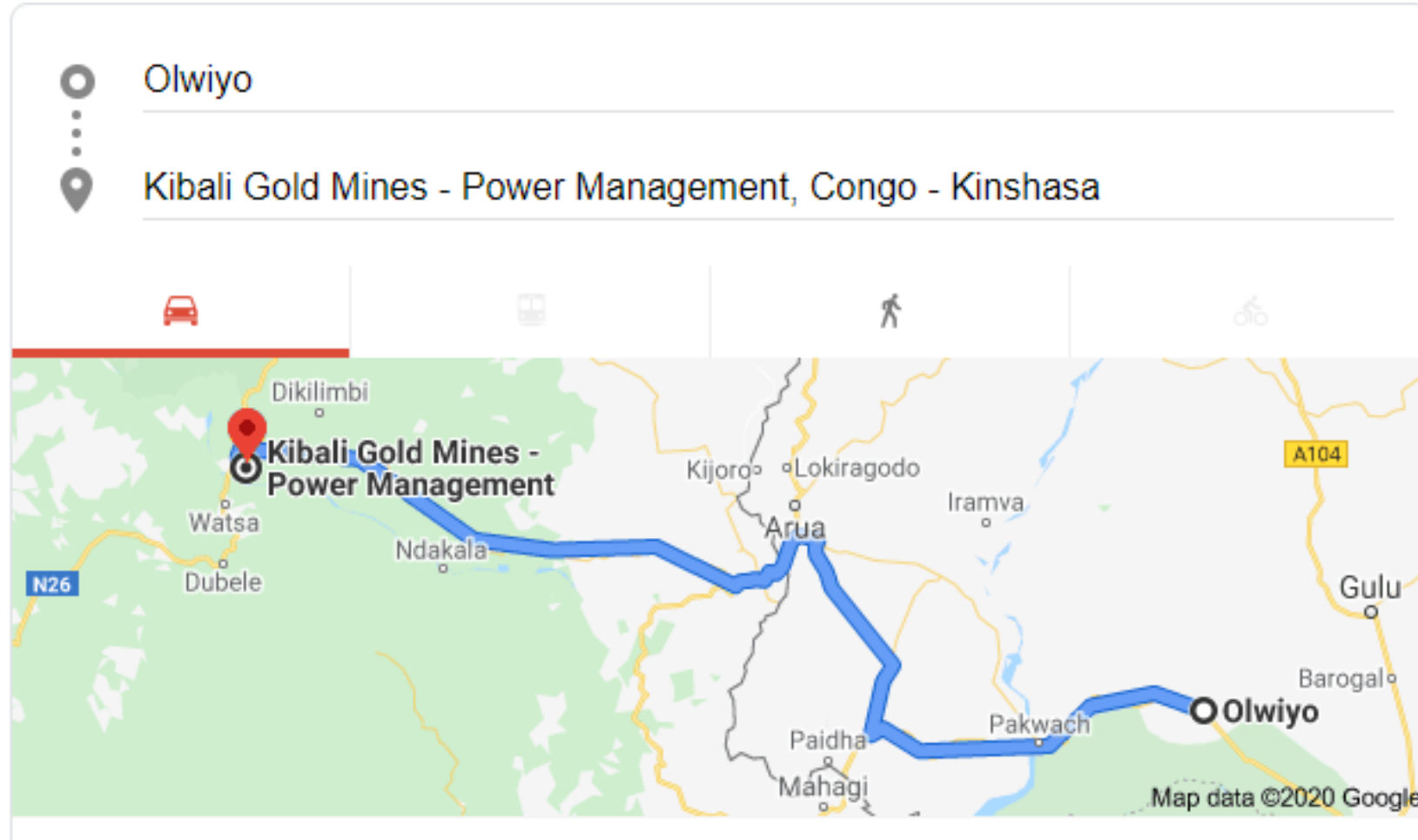
PPP Structure	Who funds the capital investment?	Who bears construction risk?	Who bears operation risk?	Who owns the assets?
EPC + Finance	Private company	Private company	Government/SOE	Government/SOE



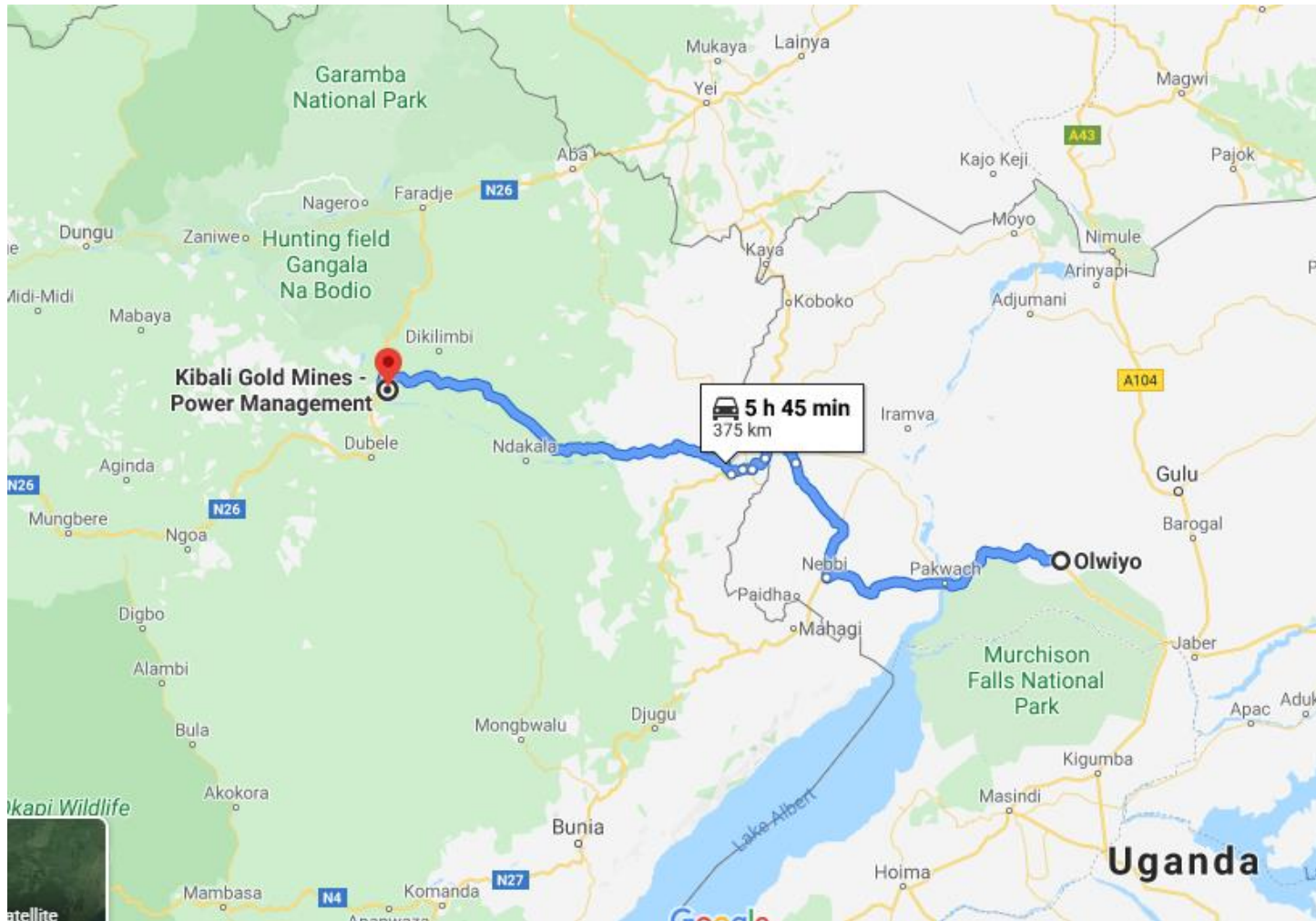
The 380 Kms 400KV transmission line project will be accomplished under the public private partnership (PPP) framework of EPC + Finance whereby the SPV (RVB Capital Advisory Inc. + Power Invest DMCC + Crosslink Partners Ltd) with a guarantee from the off-taker Kibali Gold Mines (SA) Ltd shall source for funds for Construction costs and hand over the completed transmission line to UETCL and Société Nationale d'Electricité (SNEL – D.R.C) for ownership and operation.

The transmission line development costs will be recovered in accordance with the Electricity Regulation Authority (ERA) Energy Rebate Guideline for Construction of Electricity Distribution Infrastructure.

PROPOSED ROUTE



PROPOSED ROUTE



At Olwiyo, the line takes a general northerly direction to Arua at the international border with D.R.C, a distance of about 187 Kms.

The distance traveled by this power line in Uganda is therefore approximately 190 Kms.

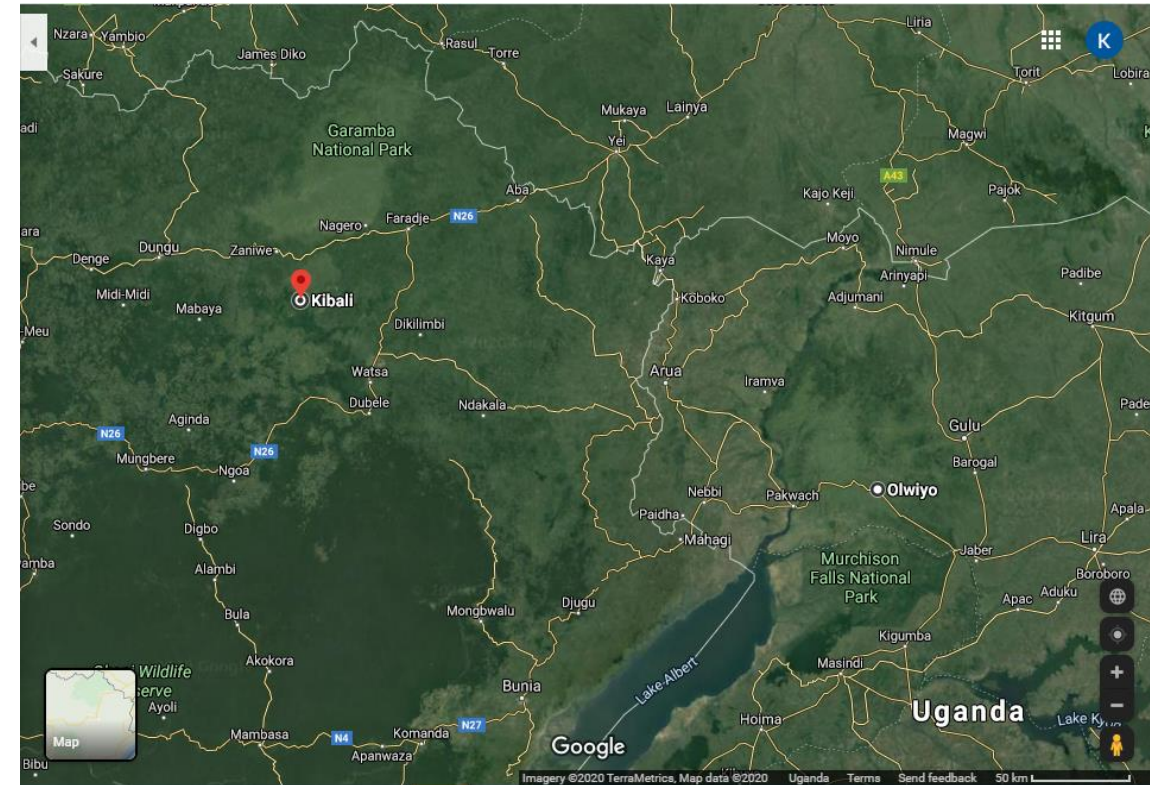
After crossing the international border into D.R.C, the line travels from Arua, through ITURI Province and HAUT ULELE Province, a distance of approximately 190 Kms.

PROJECT JUSTIFICATION

The deal is in tandem with the East Africa Community (EAC) Power Pool Agreement that calls on member states to connect electricity to each other. The EAC Power Pool is part of the wider Eastern Africa Power Pool (EAPP).

EAPP was originally midwifed by DR Congo, Egypt, Ethiopia, Kenya, Rwanda, Burundi, and Sudan in February 2005 and were later joined by Uganda, Djibouti and Tanzania, with a view of easing access to electricity in Eastern Africa.

The EAPP/EAC interconnection protocol provides standards for technical planning and operation of the interconnected transmission system.



PROJECT JUSTIFICATION

Lack of adequate supply of electricity in the Northern D.R.C region. No proper efforts have been taken to increase the access rate or improve the situation.

At the current generation capacity and proposed addition of 600 MW Karuma Hydro power project onto the grid, Uganda will have a surplus of upwards of 450MW.

To balance the economies of trade, there is need for the excess generated power to be exported to neighboring countries through the East African Power Pool market.



KARUMA TO JUBA TRANSMISSION LINE



This power line is planned to transmit electricity from the 600 megawatts Karuma Hydroelectric Power Station in Uganda, to Juba in South Sudan. It is part of the regional power-sharing protocols of the Nile Equatorial Lakes Subsidiary Action Program and of the East African Community.

Uganda plans to sell electricity to neighboring countries, including South Sudan after Karuma Hydroelectric Power Station and Isimba Hydroelectric Power Station become operational in 2019.

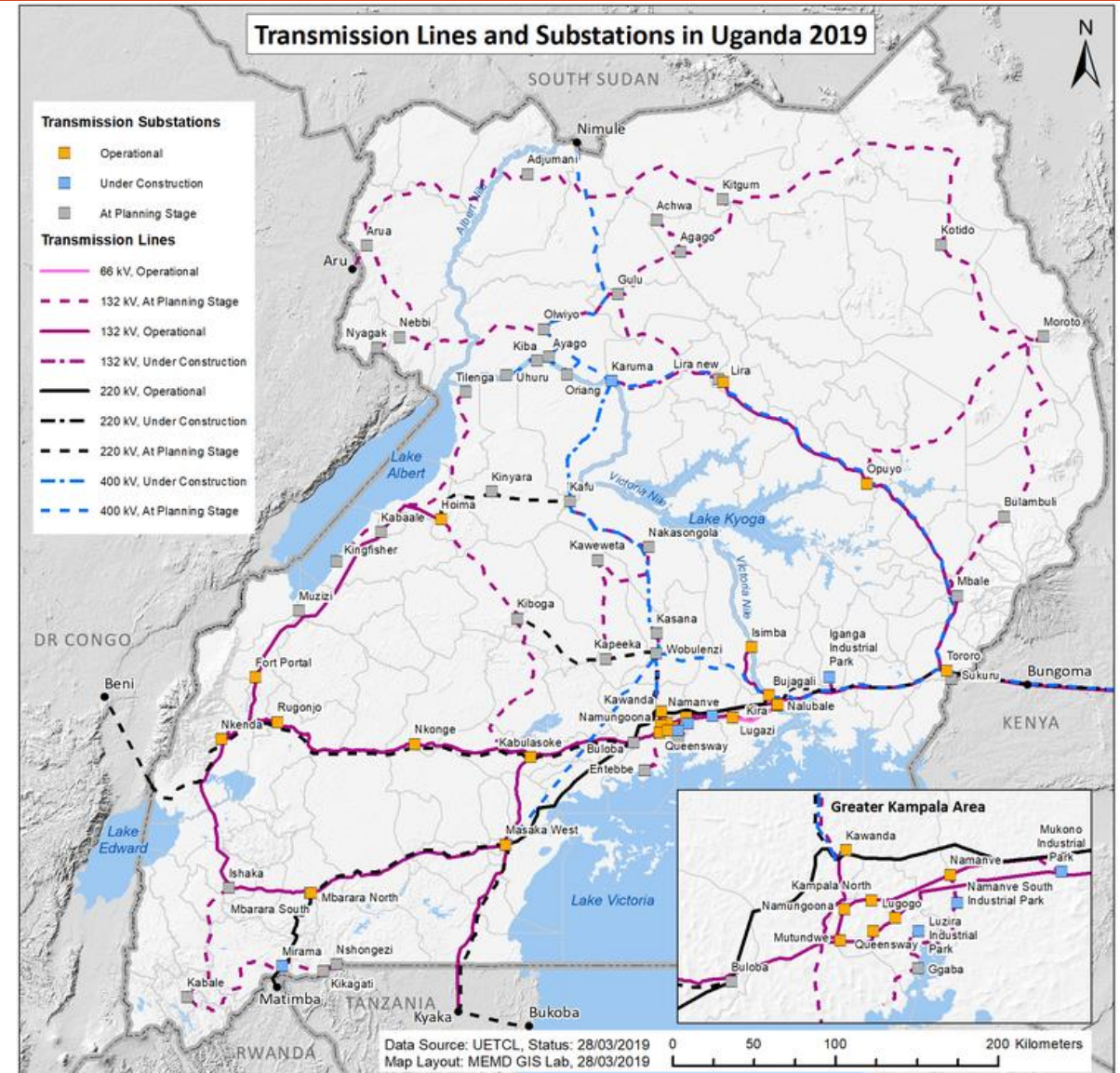


KARUMA – JUBA TRANSMISSION LINE

The 400kV power line, begins at the 400kV substation at Karuma Hydroelectric Power Station. The line travels in a north-westerly direction to [Olwiyo](#), in Nwoya District, in the Northern Region of Uganda. This distance is approximately 60 Kms.

At Olwiyo, the line takes a general northerly direction to Elegu at the international border with South Sudan, a distance of about 130 Kms. The distance traveled by this power line in Uganda is therefore approximately 190 Kms.

After crossing the international border into South Sudan, the line travels from Nimule, in Imatong State to Juba, the capital city of South Sudan, a distance of approximately 190 Kms.

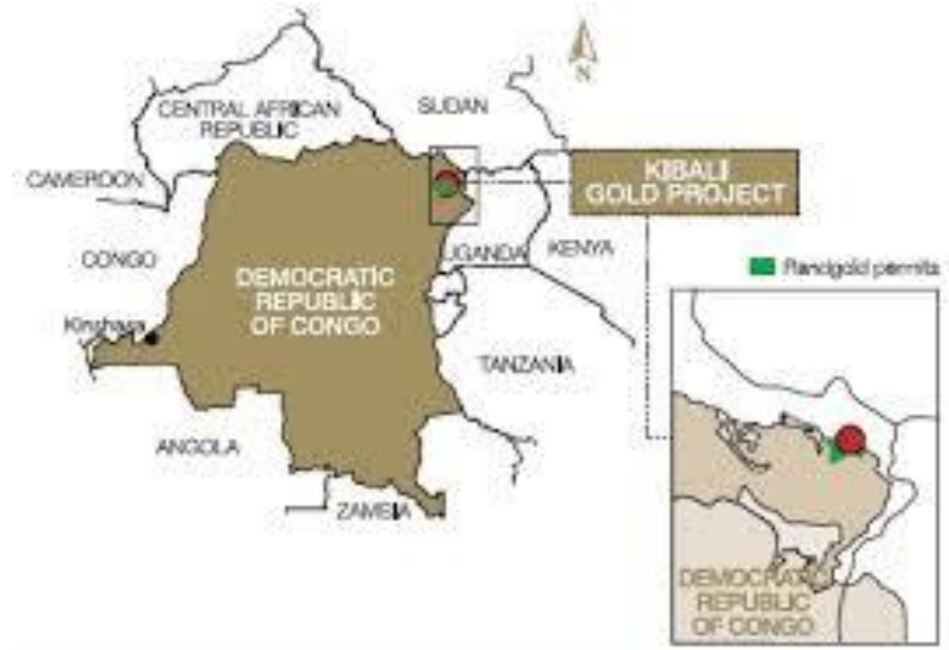


KIBALI GOLD MINE



The Kibali gold mine is located in the northeast of the Democratic Republic of Congo (DRC), approximately 220 km east of the capital of the Haut Uele province, Isiro, 150 km west of the Ugandan border town of Arua and 1 800 km from the Kenyan port of Mombasa.

- The mine is owned by Kibali Goldmines SA (Kibali) which is a joint venture company effectively owned 45% by Barrick , 45% by AngloGold Ashanti, and 10% by Société Minière de Kilo-Moto (SOK IMO- DRC GOV'T).
- The mine is operated by Barrick.



POWER SUPPLY AT KIBALI

Since there is no grid power available in the region, Kibali needs to be self-sustaining and indeed possesses considerable thermal power generation capacity to do so.

Diesel generated power comes from three banks of on-site high-speed diesel generators, each bank consisting of twelve x 1500 kVA, 400V CAT 3512B generators.

In order to mitigate the running costs of this facility, there is need for more economical hydro sources.



POWER SUPPLY AT KIBALI

A transmission line to deliver hydropower to the mine, will see a consequent drop in power costs.

Diesel generators will remain available as back up and as a spinning reserve for peak loads from the shaft hoist. This will have a marked effect on reducing the unit power operating costs.

Full power demand at full production is anticipated to be between 43 MW and 47 MW.

The load demand of the mine is not constant, and the average power consumption is approximately 40 MW.



FUEL CONSUMPTION AT KIBALI

The fuel storage installation includes three separate fuel farms.

Daily consumption is approximately 180,000 l during the wet season and 200,000 l during the dry season.

Approximately 65 to 70% of the consumption is used by the diesel generators at the thermal power station, 20% is used by mining and the remaining 10% is general use.

The main fuel farm for the mine has three one million litre tanks and six 100,000 l tanks, giving a total storage capacity of 3.6 MI.

Diesel is filtered before it is pumped into the main tanks and after it leaves the slave tanks.



WHO WE ARE

We are a consortium comprising of;

- **RVB Capital Advisors Inc**
- **Power Invest DMCC**
- **Crosslink Partners Ltd**

The sole purpose of the consortium is to bring together all the 3 partners as a Special Purpose Vehicle with the sole aim of executing the OLWIYO – KIBALI Transmission Line.

The Off-Taker for this project is KIBALI GOLD MINES (SA) LTD (Operated by BARRICK GOLD CORPORATION)



Power Invest



RVB CAPITAL ADVISORS INC.



RvB Capital Advisors Inc. is a privately-held company incorporated in Canada

Our transmission pedigree extends back to the early 1990s when our people helped plan electricity grid expansion and rehabilitation investments in Ghana.

Since 1990, we have been involved in +US \$4 billion of high voltage grid investment and management in the Americas and Africa.

We have worked with and completed deals for:

- State-owned grid companies**
- Regulators, Public and private stakeholders, including global engineering firms**
- Banks and investment funds, and**
- Private transmission companies**



RVB CAPITAL ADVISORS INC.



Our team encompasses transmission engineers, financiers and operators. RVB Capital Advisors Inc maintain active relationships with leading equipment suppliers and EPC contractors.

RVB Capital Advisors focus on making both transactions and development projects successful

RVB Capital Advisors Inc maintain offices where capital, talent, or key partners support our success.

Today RVB Capital Advisor's have offices in Toronto, Toulouse, Accra, Harare, Port Louis (Mauritius) and Cape Town

RVB Capital Advisors have the experienced people to provide clients with world-class engineering management, financial analysis, organizational and regulatory strategy, project finance structuring and power market development services



RVB Capital Advisors Inc. serve clients in several key areas:

- Transactional valuation and execution**
- Transmission finance**
- Independent (merchant, concession) business models**
- Organizational, regulatory and operational strategy**
- Power market development and integration**
- Transmission project planning and development**

POWER INVEST DMCC



Power Invest DMCC enable the full energy value chain to be realized. Power Invest DMCC specializes in identifying, developing, delivering and operating innovative power solutions.

A unique partnership of 3 companies, delivering energy from the fuel molecule to the efficient operation of power plants.

The Power Invest team has over 50 years of collective experience in project development and implementation. Power Invest have group offices in Australia, South Africa, the United Arab Emirates, Oman, and the Netherlands.

Power Invest's focus is on delivering fast, innovative power solutions to developing and new world countries.

Power Invest comprises Xaris Developments, CJM Management Consultancy and Thomassen Group. Power Invest have pooled experience and relationships in the power and gas industries to offer unparalleled access to clients to the best fuel, designs, equipment, EPCs and operators, underpinned by robust optimally-structured finance.



Power Invest

Our Value Proposition



POWER INVEST DMCC



Xaris was founded in 2010. It created a specialist arm for power project development, facilitating the structuring, development and management of fixed asset infrastructure with a strong focus on sustainable power solutions for emerging and changing markets. This focus is realised through long-term project financed power projects and equity/balance sheet financed emergency power solutions.

Thomassen invests in power plants and is an operations and maintenance (O&M) specialist. Thomassen has been responsible for the O&M of gas turbine based power plants in excess of 1500 MW in the Middle East and Africa since the year 2000. We provide a full-scope O&M service, from the manufacturing and provision of spares, to the development and implementation of maintenance plans that cater for planned and mitigate against un-planned maintenance.



CJM Management Consultancy is an United Arab Emirates-based company situated in Dubai. CJM brings 25+ years of knowledge and a powerhouse of cutting-edge business solutions to play in answering real business challenges through innovative thinking and deep industry knowledge in the Energy and Power Sector.

CROSSLINK PARTNERS LTD



CROSSLINK PARTNERS LTD is an East African “investment solutions” firm in the field of development investments and offers professionally-managed investment solutions to private, institutional and public investors.

The company’s investment solutions supply debt and equity financing predominantly to listed & non-listed firms in emerging and developing economies.

Through their inclusive business models, these firms help to meet the basic needs of broad sections of the population and to drive economic development.



CROSSLINK PARTNERS LTD

GROWTH CAPITAL FOR DEVELOPMENT

CROSSLINK PARTNERS LTD's investment vehicles aim to achieve market-based competitive returns* while obtaining positive social, economic and environmental impact. This triple bottom line is achieved by focusing on successful business models that:

- **Offer strong growth and are scalable**
- **Provide access to affordable, needs-oriented products**
- **Are relevant for macro enterprises**

ENERGY

Targeting growing energy demands with renewable energy, energy access and energy efficiency investments

> RENEWABLE ENERGY

AGRICULTURE

Developing the most vital sector in the emerging economy through responsible investments

> SUSTAINABLE AGRICULTURE

FINANCE

Enabling access to financial services and growing emerging financial markets with innovative business models

> FINANCIAL SECTOR

ENVIRONMENTAL, PERMITTING AND LAND ACQUISITION



The consortium will consult with all applicable regulatory agencies as required when constructing new transmission facilities.

The consortium will ensure that necessary documentation is supplied and procedures are followed throughout the duration of the project.

This would include studies and permitting for constructability and construction methods, site access and equipment staging, river crossing, environmental impacts, and development of mitigation plans to address any impacts if determined to be necessary.

