



ELECTRICITY REGULATORY AUTHORITY

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REGULATORY DECISION OF THE 228th AUTHORITY MEETING.

The Authority, at its 228th Meeting held on Wednesday 2nd April 2014, in the ERA Boardroom at ERA House Plot 15 Shimoni Road, upon consideration and taking into account the information availed to it in respect of the following matters, **RESOLVED** inter alia as follows:-

APPLICATIONS FOR GRID EXTENSION BY UMEME LIMITED

UMEME Limited submitted application No. UMEME 052/2014, dated 3rd March 2014, for extension of the grid beyond its 1 km foot print, relating to the following schemes :-

- (i) China International Water & Electric Corporation, Busana – 33kV line 2.8 km, 1x200 kVA and 1x315kVA, for works to be undertaken by KS Hydro Power (U) Ltd, at the estimated cost of UGX 232,404,408 and;
- (ii) Kyamulibwa Maize Mill- 11kV line 2.1 km, 1x100kVA, for works to be undertaken by Tetra Technical Services, at the cost of UGX 124,344,843.

The application in (i) was found to contain the required information, while the application in (ii) was found to be defective as the proposed contactor did not have a valid installation permit.

Accordingly, the Authority approved the application by China International Water & Electric Corporation in respect of Busana – 33kV line 2.8 km, 1x200 kVA and 1x315kVA, for works to be undertaken by KS Hydro Power (U) Ltd at the estimated cost of Ugx.232,404,408 and rejected the application by Tetra Technical Services in respect of the Kyamulibwa Maize Mill- 11kV line 2.1 km, 1x100kVA.

LICENSE APPLICATION BY LUBILIA KAWEMBE HYDRO UGANDA LIMITED FOR THE PROPOSED 5.4 MW HYDRO POWER PLANT IN KASESE DISTRICT

On 18th April 2012, Lubilia Kawembe Hydro Ltd submitted a License application to develop and operate a 5.4 MW Hydropower Project on River Lubilia in Kasese District.

A public notice was advertised on 30th November 2013, for 30 days calling for comments, representations and objections from the public, the period expired without any comment being received.

A public hearing in respect of the project was held on 12th February 2014, at which the major issue raised was the plans for the compensation of the Project Affected Persons.

The legal, financial and technical aspects of the License application were reviewed and found to be in conformity with the requirements of Section 33 of the Electricity Act, 1999.

Notably:-

A. Technical Assessment

The developer indicated that the project would be developed as an Engineering Procurement Contract (EPC) and had invited bids from OM Metals Infraprojects, India, Megatron Federal, South Africa and Semco Maritime, Denmark and that the award of the contract would be finalized upon achieving financial closure.

The developer had acquired the NEMA Certificate of Approval for the proposed project, which had been further updated to conform to national and international environmental requirements.

The Resettlement Action Plan had been undertaken and the likely Project Affected Persons were ready to pave way for the project development.

B. Economic Assessment

The total cost of the project was indicated to be US\$14.16 million, with the cost per MW at US\$2.622 million. The major cost contributors were civil works (US\$ 7.46 million) and electromechanical works (US\$3.08 million) and interest during construction US\$1.33 million.

The cost per MW and the Operation and Maintenance Costs were lower than the REFIT benchmarks.

The applicable Feed-in-Tariff for project was US\$0.099/kWh, at which the project would operate to earn a return of 14.3% and stood to earn an extra US\$0.014/kWh, if considered under the GETFIT program.

C. Financial Assessment

The developer indicated that 35% of the project development costs would be financed through equity amounting to USD 4.965 million, provided by DI Frontier Market Energy and Carbon Fund K/S. DI Frontier gave written confirmation committing to provide full equity financing for the development of the Project.

Accordingly, the Authority approved issuance of a generation and sale License for the 5.4 MW Hydropower Project across River Lubilia in Kasese District, by Lubilia Kawembe Hydro Ltd, subject to the following conditions:-

- (i) Posting a performance bond of **US\$ 27,000** (Twenty seven thousand American dollars), to secure financial close and construction start by construction start date.

- (ii) Posting a performance bond of **US\$ 13,500** (thirteen thousand five hundred American dollars), to secure Commercial Operations Date (COD).
 - (iii) A License term of **22 years**, including construction time of 24 months.
 - (iv) A levelized tariff of US\$0.099/kWh for the License term.
 - (v) Conformity and use of the standardized GETFiT power purchase agreement.
 - (vi) Adoption of the NEMA approval conditions to be part of the License conditions.
 - (vii) Achievement of Financial closure in line with the project implementation time plan.
 - (viii) Acquisition of the Riverbank Permit issued by NEMA for purposes of construction of part of the project in the river bank.
 - (ix) Submission of a revised implementation time plan for Lubilia Hydropower Project.
 - (x) Undertaking of an additional power evacuation study to comprehensively analyze the load and voltage profile of the distribution network, onto which the proposed plant will be connected to ensure proper and timely evacuation of the proposed plant.
 - (xi) Confirmation by Umeme and UETCL that the plant can be fully evacuated in line with the interconnection studies.
 - (xii) Securing the power evacuation arrangements including the funding and construction and;
 - (xiii) Make provisions to ensure that the plant can operate in island mode.
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PERMIT APPLICATION BY THE UGANDA ELECTRICITY GENERATION COMPANY LIMITED IN RESPECT OF THE PROPOSED 183 MW ISIMBA HYDRO POWER PLANT IN KAYUNGA DISTRICT

The Uganda Electricity Generation Company Limited (UEGCL) submitted a Notice of Intended Application (NIA) for a License to conduct a feasibility study for the development of a 183 MW Hydropower Project on River Nile in Jinja, Kamuli and Kayunga Districts.

The proposed Isimba Hydropower Project is one of the projects that were earmarked by Government, through the Hydropower development master plan (March 2011), as being vital for mitigating power shortages.

The legal, financial and technical aspects of the Notice of Intended Application were reviewed and found to be in conformity with the requirements of Section 29 of the Electricity Act, 1999.

Notably:-

A. Technical Assessment

UEGCL had engaged the services of Fichtner Consulting engineers and Norplan AS from Germany and Norway respectively and both companies were found to have vast experience in the Ugandan energy sector.

UEGCL had concluded most of the feasibility study activities and was processing approvals from National Environmental Management Authority, the Chief Government Valuer and the Directorate of Water Resource Management.

From the information submitted, it was deduced that UEGCL had engaged competent firms to conduct the feasibility studies for the proposed project supplemented by its in-house capacity.

B. Economic and Financial Assessment

The project would be constructed through a bilateral cooperation agreement between the Governments of Uganda and China and that the full terms and conditions of the agreement would be submitted to the Authority upon completion.

Accordingly, the Authority approved the issuance of a twelve (12) months permit to Uganda Electricity Generation Company Limited to carry out comprehensive feasibility studies in respect of the proposed 183 MW Hydropower Project on River Nile, subject to submission of a revised implementation time plan for the outstanding activities.

PERMIT APPLICATIONS BY THE UGANDA ENERGY CREDIT CAPITALIZATION COMPANY LIMITED (UECCCL)

On 24th January 2014, Uganda Energy Credit Capitalization Company Limited (UECCCL) submitted Notices of Intended Applications (NIA) for Licenses for Generation and Sale of Electricity from the Uganda Energy Credit Capitalization Company Limited.

UECCCL was a government entity set up for the purpose of facilitating investment into Uganda's renewable energy sector, with particular emphasis on the provision of financial, technical and other support for renewable energy infrastructure development in Uganda and its major target was enabling private sector participation in renewable energy projects' development.

UECCCL intended to establish ten (10) small Hydropower projects in various Districts in the Western Uganda and had sourced and obtained grant support from the Dutch government through the Orio NL EVD International.

The Notice of Intended Application was published in the Uganda Gazette and the New Vision Newspaper of 7th February 2014 and no objections were received from the general public.

The legal, financial and technical aspects of the Notice of Intended Application were reviewed and found to be in conformity with the requirements of Section 29 of the Electricity Act, 1999.

Notably:-

A. Technical Assessment

The Technical partner, Royal Haskoning DHV was an international engineering and project management consultancy with over 130 years of experience. The company is engaged in the fields of asset management, aviation, buildings, energy, industry, infrastructure, maritime, mining, strategy, transport, urban and rural planning, water management and water technology. The firm was found to be of demonstrable technical capacity to undertake the projects.

UECCCL also submitted a certified copy of the Royal Haskonings DHV's certificate of incorporation and the grant agreement between the Governments of Uganda and Netherlands, regarding support to the proposed project in which it was stated that Royal Haskonings DHV would be the technical consultants for the proposed project.

B. Economic and Financial Assessment

UECCCL had obtained a grant and technical support from the Royal Dutch government through the Orio NL EVD International, which extended to development costs, construction / implementation costs as well as initial operation and maintenance expenses of up to € 883,223.

Accordingly, the Authority approved the issuance of a twelve (12) months permits to Uganda Energy Credit Capitalization Company Limited to undertake feasibility studies and other activities leading to the development of the following proposed projects:-

- (i) 400 KW Hydropower Project on River Nyakabale – Rukungiri District.
- (ii) 500 KW Hydropower Project on River Nyahuka – Bundibugyo District.
- (iii) 1958 KW Hydropower Project on River Hoima – Hoima District.
- (iv) 500 KW Hydropower Project on River Nchwera – Mitooma District.
- (v) 500 KW Hydropower Project on River Nsongya – Kabarole District and;
- (vi) 730 KW Hydropower Project on River Warugo – Bushenyi District.

APPLICATION FOR A PERMIT TO CARRY OUT FEASIBILITY STUDIES LEADING TO THE DEVELOPMENT OF A 11 MW HYDROPOWER PROJECT BY SCHIMA GROUP LIMITED.

Schima Group Limited submitted a Notice of Intended Application (NIA) dated 2nd July 2013, for a License for the generation and sale of electricity from the proposed 11 MW Hydropower Project in Kibale District on river Nkusi.

The Notice of Intended Application was published in the Uganda Gazette and the New Vision Newspaper of 26th July 2013 and no objections were received from the public.

The legal, financial and technical aspects of the Notice of Intended Application were reviewed and found to be in conformity with the requirements of Section 29 of the Electricity Act, 1999.

Notably:-

A. Technical Assessment

Technical evaluation of the technical partners revealed that Dongfang Electric Cooperation had requisite skills and capacity to undertake the feasibility study of the proposed project.

B. Financial Assessment

The financial evaluation of the project sponsors revealed that the financial partners were financially capable of raising \$10m, which represents 30% of the total project costs as equity, from their operations and remain in operation.

Accordingly, the Authority approved the issuance of twelve (12) months Permit to conduct feasibility studies in respect of the proposed 11 MW Nkusi Small Hydropower Project, subject to submission of an implementation time plan.

APPLICATION FOR LICENSE RENEWAL BY KASESE COBALT COMPANY LIMITED (KCCL).

Kasese Cobalt Company Limited (KCCL) was granted a generation and sale License No. 082, to own and operate a generating facility (9.9 MW) for sale of electricity to the national grid effective 1st January 2003.

Historically, the License had been renewed annually upon application of KCCL, pursuant to the provisions of Section 45 (3) of the Electricity Act, 1999 (Chapter 145, Laws of Uganda), upon the Licensee demonstrating compliance with the License conditions, the Act and Regulations thereto.

The Authority at its 220th Meeting of 31st July 2013, approved a levelised tariff of US\$ 0.0538/kWh for a period of 20 years.

During the statutory inspection carried out for KCCL, on 28th February 2013 and 3rd December 2013, it emerged that KCCL had complied with 8 out of 11 technical license conditions. Management agreed and executed an action plan with monitorable time lines to remedy the areas of noncompliance.

Accordingly, the Authority approved the renewal of License No 082, for a fixed term of 20 years from 1st January 2014 to 31st December 2034, subject to the agreed action plan to remedy the aspects of noncompliance.

LICENSE APPLICATION BY PH INDUSTRIAL FARMS UGANDA LTD FOR THE 1.0 MW BIOMASS GASIFICATION POWER PROJECT IN GULU DISTRICT. [AUTHORITY PAPER NO. 228.15]

PH Industrial Farms Limited was granted Permit No. 2011/037, effective 1st November 2011, to carry out the feasibility studies related to the development of a 16 MW Biomass fueled project.

On 19th March 2012, PH Industrial Farms Uganda Ltd applied to for a License to develop and operate a 1.0 MW biomass power project located 60 km North East of Gulu town, in Maa-Owero Village, Mede Parish, Palaro Sub County, Gulu District. The project is a joint venture with Simba Telecom.

The legal, financial and technical aspects of the license application were reviewed and found to be in conformity with the requirements of Section 33 of the Electricity Act, 1999.

Notably:-

A. Legal aspects

The developer indicated that an Agreement had been executed with Chapter Ten Limited to purchase the maize waste (stalks and cobs) at a price of USD 5 per ton for a period of 20 years and that Chapter Ten Limited had secured a sublease of 1,000 hectares of land on a Freehold, plot 14 Aswa Block 5 Angal, Mede, Palaro in Gulu District, mainly to grow maize commercially.

It was observed that the title deed of the project had a restrictive covenant (i.e for the use of farming or residential) which would have to be released to allow development of a biomass gasification plant on the project land.

B. Technical Assessment

The developer indicated that it intended to implement the project under an Engineering Procurement Construction (EPC) contract with Guang Dong Shineng Electric Equipment Co. Ltd of China. A contract between the Applicant and the EPC contractor had been initialed but pending signature, until financial closure for the project was reached.

A stakeholders' consultative meeting was held in Gulu Town at Palamo Hotel, at which it emerged that there was a dispute between Gulu and Amuru Districts as to the positioning of the project land. However, the leaders of both Districts agreed that the project Licensing process and related activities continue, as they resolve the land positioning dispute, through the lawful channels available.

C. Financial Assessment

The project sponsor Simba Telecom was expected to provide 30% of the capital requirement as equity while borrowing the balance of the capital cost requirement. The evaluation revealed that Simba Telecom had the capacity to raise a portion of the equity contribution, since it had retained earnings of US\$ 8,870 million (US\$3.5 million) against the required US\$0.9 million in equity.

Accordingly, the Authority approved the issuance of a generation and sale license for the 1.0 MW biomass gasification power plant in Gulu District by PH Industrial Farms Ltd subject to the following License conditions:-

- (i) Posting a performance bond of **US\$ 5,000** (Five thousand United States dollars) to secure financial close and construction start.
- (ii) Posting a performance bond of **US\$ 2,500** (Two thousand five hundred United States dollars) to secure Commercial Operations Date (COD).
- (iii) A License term of **21 years**, including construction time of 12 months.
- (iv) A levelised tariff of US\$0.103/ kWh for the license term.

- (v) A construction / EPC implementation period of 12 months.
 - (vi) Achievement of Financial closure in line with the project implementation time plan.
 - (vii) Submission of a revised implementation time plan for 1.0 MW biomass gasification power project.
 - (viii) Submission of a copy of land title with the restrictive covenant removed to allow the proposed project land to be used for development of the biomass gasification power plant; submission should be within two (2) months from the effective date of the license and before commencement of project construction.
 - (ix) Acquisition of both the underground Water Abstraction and waste water Disposal Permits from the Directorate of Water Resource Management before commencement of the project construction.
 - (x) Undertake an additional power evacuation study to establish the cost estimate for the power evacuation power line.
 - (xi) Confirmation by Umeme and UETCL that the plant can be fully evacuated in line with the interconnection studies and;
 - (xii) Confirmation that the plant is designed and constructed in such a way that it can operate in island mode.
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APPLICATION FOR EXTENSION OF PERMIT NO. 2013/048 FOR THE PROPOSED 3 MW HYDROPOWER PROJECT ON RIVER MAHOMA BY MAHOMA UGANDA LIMITED.

Mahoma Uganda Limited was issued with Permit No. 2013 / 048, for 12 months effective 12th November 2012, to undertake detailed studies in respect of a 3 MW Hydropower Project along River Mahoma in Kabarole District.

On 7th October 2013, Mahoma Uganda Limited submitted an application for Permit extension, which was considered at the 224th Authority meeting of Tuesday 3rd December 2013 and found to be inadequate in content.

Accordingly, the developer submitted the following additional information to bridge the information gap, comprising of:-

- (i) Hydrological review of River Mahoma;

- (ii) A report detailing the determination of the proposed plant capacity and the design of the civil structures and;
- (iii) Specifications of the proposed electromechanical equipment.

Analysis of the additional submission revealed that the developer had completed the following feasibility studies:-

- (i) Hydrology study.
- (ii) Topological survey.
- (iii) Environmental Impact Assessment and;
- (iv) Preliminary design.

The progress report indicated that work on the following activities had commenced:-

- (i) Detailed engineering designs.
- (ii) Financial and economic feasibility study.
- (iii) Project business plan.
- (iv) Process of acquiring land required for the project and;
- (v) Power evacuation study.

Accordingly, the Authority approved the issuance of a six (6) months permit extension to Mahoma Uganda Limited, subject to the following:-

- (i) Posting a performance bond of US\$ 7,500, valid for nine (9) months and;
- (ii) Submission of an updated feasibility study implementation time plan with clear milestones.

Benon M. Mutambi, Ph.D.
CHIEF EXECUTIVE OFFICER