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**TECHNICAL PAPER ON GRAND INGA HYDROPOWER PROJECT  
WHICH IS ONE OF THE AGENDA 2063 FLAGSHIP PROJECTS**

# **TECHNICAL PAPER ON GRAND INGA HYDROPOWER PROJECT WHICH IS ONE OF THE AGENDA 2063 FLAGSHIP PROJECTS**

## **1. Background**

One of the Agenda 2063 Flagship Projects is the “Grand Inga Hydropower Project” in D.R. Congo. It is under preparation following an overall scheme which should reach by stage a total capacity over 42,000 MW and designed to contribute to electricity supply to the entire continent.

Its first phase named Inga 3 will be equipped for 4,800 MW with low head dam, with an option of 7,800 MW with high head dam. Other five phases, Inga 4 up to Inga 8, are also envisaged. It is worth recalling that Inga 1 is under operation since 1972 with a capacity of 342 MW and Inga 2 since 1982 with 1424 MW.

Given the today very low electricity access rate of 15% only, the DRC government is committed to enhance hydropower generation, on the identified many big and/or medium size sites, to cover the increased national demand, expand the access up to 30% by 2025 and also export electricity to neighboring countries in order to support socio-economic development of the country.

Therefore, to meet these objectives, the Government has embarked on following policy and programmes: liberalization of the electricity sector, enhancing Public Private Partnerships (PPP), rehabilitation of existing power plants such as Inga1 and Inga2, improving and expanding transport and distribution network, undertaking new power plants construction, being big like Inga Dam or medium size projects, as well as enhancing regional cooperation in the energy sector.

## **2. Implementation status**

The Inga 3 will be developed under PPP model following AUC guidance and training workshop organized on 1-3 February 2012 for national experts from the DRC Ministry of Energy and the National Power Utility SNEL.

A Treaty on Grand Inga Project was signed between South Africa and DRC on 29 October 2013 and ratified by DRC Parliament on 21 November 2014. The two countries also signed a Cooperation Agreement on Energy Resources on 9 September 2014.

The 4800 MW power generated by Inga 3 will be shared as follows: (i) 2500 MW for South Africa; (ii) 1300 MW for extractives industries and populations of Katanga (SNEL); and (iii) 1000 MW for Kinshasa and other DRC cities (SNEL).

The estimated cost of this project is around USD 14 billion ((USD 8.6 billion (private developer) + 3.4 billion (DRC) + 2 billion (SA)).

Negotiations with Nigeria to purchase around 3000 MW through the construction of INGA-Calabar Interconnection Line started in February 2014 but the Agreement is still to be finalized.

DRC Government has adopted on 17 June 2014 a new law liberalizing the electricity sector. The setting up of the dedicated Authority named ADPI-DRC (Agence pour le Développement et la Promotion du Projet Grand Inga) mandated to development and promotion of the Inga Site (Inga 3 and subsequent phases of Grand Inga hydro project) was completed on 13 October 2015 with the designation of Coordinator of this Authority in the Office of H.E. the Head of State. The Agency has recently been transformed into an independent Authority with administrative and financial autonomy.

A new law dedicated to Grand Inga project development, named INGA Law, is under preparation and was expected to be ratified by end of 2017 in order to create a conducive climate to attract private investments in the development of the DRC huge hydropower potential.

In February 2016, ADPI-DRC signed with the Suez Canal Economic Zone Authority of Egypt a Cooperation Agreement on the development of Grand Inga Project.

African Development Bank (AfDB), World Bank, Agence Française de Développement /France, European Investment Bank, Development Bank of Southern Africa (DBSA), have all shown interest in contributing to the financing of the INGA 3 project.

Among others, AfDB financed the feasibility studies updating, while the World Bank committed resources for the Environmental and Social Impact Assessment (ESIA) studies, the communication strategy and the financial audits for the years 2014, 2015, and 2016. But, in July 2016, the World Bank announced the suspension of its support to this project. With the support of the AUC, dialogue with the AfDB to finance this ESIA component was initiated in Nov. 2016 and a positive response from AfDB has just been received.

The Government has retained the services of financial and legal advisors to proceed with the selection of the project sponsor for the development of INGA 3 hydropower project following the PPP model as recommended by AUC. The selection process of the private developer started in August 2015.

DRC has recently decided to change Inga 3 concept from 4,800 MW to 12,000 MW capacity and has requested the two consortia remaining in competition as private developer to submit a joint optimized project proposal, which is expected by end of this first quarter of 2018.

The new project concept of 12,000 MW will require review of the just concluded technical studies, launch of complementary studies such as Environmental and Social Impact Assessment studies, but also the review of commercial aspects of the additional power generated to sustain bankability of the Inga 3 project: new power market and partner countries need to be identified and agreements secured.

AUC supported the participation of ADPI-DRC for Inga project promotion during the first STC meeting on Transport, Energy and Tourism held in March 2017 in Lome, during the 2017 World Hydropower Congress held in May 2017 in Addis Ababa, and during the 3<sup>rd</sup> PIDA Week held in Swakopmund-Namibia in December 2017.

AUC supported also capacity building of ADPI-DRC through the visit to the Sudanese Dams Implementation Unit in charge of multipurpose dams construction and associated projects in Sudan in July 2017.

Coordination meetings of keys stakeholders, namely AfDB, AUC and DRC team, were organized in May, July and November 2017 with key recommendations of the way forward for the speedy development of the important project.

***The launching ceremony of the construction of Inga 3 is planned for end of 2018, expecting that all technical studies and resource mobilization process would be completed before this deadline. Construction is expected to be completed in five to seven years.***

### **3. Implementation Challenges**

It is important to mention that political stability of the DRC over the next decades would be an essential prerequisite to enable Grand Inga project completion, sustain the INGA 3 operation and the development of the other phases of the Grand Inga project and related power transmission corridors.

The speedy completion of all technical studies including positive conclusions of the ESIA studies as well as the negotiations with partner countries committed to purchase the additional power generated by the Inga 3 new concept project would not delay nor hamper the development of the project. Finally, the capacity of DRC Government to mobilize its own contribution to this project would be encouraging.

### **4. Recommendations and way forward**

Following activities need to be implemented prior to the launch of Inga 3 construction:

- Inga Law ratification and dissemination;
- Completion of all technical studies including ESIA;
- Operationalization of the signed Treaty between South Africa and DRC;

- Operationalization of the Cooperation Agreement signed with Egypt including commercial treaty on power purchase agreement;
- Conclusions of the negotiations with Nigeria;
- Identification and negotiations with additional partner countries (Sudan, SADC countries, etc.);
- Conclusion of the negotiations with the private developer of Inga 3 with signing of Concession agreement and Special Purpose Vehicle (SPV) set-up.

In addition, it is highly recommended to mobilize technical and financial resources to support the newly established ADPI-DRC as well as capacity building on hydropower plant planning, operation and management. It is also necessary to undertake elaboration of a Communication Strategy to support and enhance the promotion of this Grand Inga hydropower project, which is of regional and continental impact through AUC, AfDB and NEPAD Agency advocacy towards development partners and private sector. RECs and Regional Power Pools should also play a critical role.