PROJECT INFORMATION DOCUMENT (PID)
CONCEPT STAGE

Report No.: PIDC390

Project Name	Inga 3 Development TA (P131027)
Region	AFRICA
Country	Africa
Sector(s)	Large Hydropower (100%)
Lending Instrument	Technical Assistance Loan
Project ID	P131027
Borrower(s)	Minitry of Energy, Minitry of Energy
Implementing Agency	Ministry of Energy, Ministry of Energy, Ministry of Energy
Environmental Category	A-Full Assessment
Date PID Prepared	09-May-2012
Estimated Date of Appraisal Completion	12-Dec-2012
Estimated Date of Board Approval	09-Apr-2013
Concept Review Decision	

I. Introduction and Context

Country Context

The DRC is a fundamental player in the region and given its size, natural resources and location. With an estimated population of about 71 million, vast natural resources, and massive agricultural potential, DRC is the largest country in Sub-Saharan Africa and can potentially be a major player in Africa's future. DRC's development trajectory can have a significant impact on the economic growth and political stability of the continent. DRC borders nine countries in Central and Southern Africa, and has complex economic, migration, and political relations with each of them. With its vast, untapped hydropower resources, DRC holds the key to the continent's energy solutions in the form of clean, renewable and affordable power.

The civil war from 1997 to 2003 led to a rapid descent from the relative prosperity of the period 1960–70. Infrastructure collapsed, and today only four provincial capital cities can be reached by road from the national capital, Kinshasa. Furthermore, the conflict affected existing assets through a lack of maintenance and investment thereby creating even more serious service failures.

During the post civil war period, DRC saw a resumption of growth. The end of the war coincided with a recovery in mining prices on the international market. DRC experienced an average annual GDP growth of 6.6 percent during the 2002 – 2008 period, compared to -5.2 percent over the 1991-2001 period. This period of growth was interrupted in late 2008 as a consequence of the changing international environment resulting from the financial crisis, but growth has now resumed at a solid pace.

However, poverty remains pervasive and poverty indicators are high even by regional standards. In 2010, annual GDP per capita was about $300. About 75 percent of the population lives on less than a dollar a day. Widespread poverty exists as a result of conflict, poor governance, weak policies and insufficient investments.

Improved governance is essential for DRC to address persistent poverty and reduce threats to sustainable economic growth. Some governance issues were addressed in the context of HIPC debt relief in July 2010, including appropriate macroeconomic policies supported by an IMF program and the adoption and implementation of a new Public Procurement Code, together with an series of measures an economic governance matrix and action plan, , which should help increase State benefits from natural resource exploitation, and improve legal certainty of the business environment. The matrix focuses on: (i) strengthening accountability and transparency in concession and contract management in the mining, forestry, and oil sectors; (ii) ensuring that divestiture of assets of public enterprises is done in compliance with international best practices; and (iii) ensuring transparent and efficient use of public resources.

Sectoral and Institutional Context

The lack of sufficient power generation, transmission and distribution capacity means that the vast majority of DRC's population and its economy are under-served. At about 10 percent currently, household access to electricity services is particularly low compared to the average of Sub-Saharan countries access rate of 31 percent. Power outages averaging more than three hours in length are experienced more than 180 days per year. As a result, firms are frequently forced to rely on expensive back-up generators. The economic cost of these outages can be conservatively estimated at 1.7 percent of GDP (AICD study, 2009). Under the current condition of its energy sector, DRC is neither able to benefit its citizens with low-cost reliable power access, nor export electricity in a region where demand far outstrips supply. One of the country's most immediate infrastructure challenges therefore is to reform the power sector, restore the financial health and operational efficiency of the power utility, rehabilitate and invest in its power assets and improve electricity access.

However, unleashing DRC transformational potential will require progress on the institutional front to provide incentives for enhancing operational performance as well as corporate governance of SNEL (the national utility). SNEL faces major operational and financial challenges. Due to very high technical and commercial losses and low collection rates, SNEL recovers revenue for slightly over 1 kWh out of every 2 kWh produced. Together with tariff that is below marginal cost, these inefficiencies absorb as much as about 4 percent of GDP.

In recent years SNEL has improved its operational and financial performance but it still has a long way to go. Between 2006 and 2010, SNEL managed to improve its revenue collected by 88%. This improvement was driven in part by higher average electricity tariff, and in part by an improvement in the collection rate, particularly significant for exports (from 40-70% to 93% in 2010). Despite these improvements, collection from the government remains a major problem. The ratio of customers per employee (which was just over 60 in 2010) is still very low by utility standards, and as a result of overstaffing and low collection ratios, salary costs currently represent almost one third of total SNEL revenues.

In 2011, the Government designed a comprehensive five-year program for the financial and operational recovery of SNEL and to enhance SNEL's corporate governance. The program includes five main components: (i) a five year performance contract between the State and SNEL stipulating their respective roles and obligations, with audited performance targets, signed in February 2012; (ii) a corporate governance plan; (iii) institutional and financial restructuring of SNEL; (iv) a three year technical services agreement to be entered into with an international firm by end 2012; and (v) institutional and financing arrangements for appropriate operations and maintenance (O&M) of SNEL's transmission and hydropower facilities.

Electricity demand/supply projections that were prepared for the PMEDE additional financing approved by IDA in 2011, indicated that the DRC would require an additional firm capacity of 4,000 MW by 2020, on top of hydropower projects which construction is ongoing or expected to start by 2020. While the Government intends to promote) the development of additional small hydropower, the bulk of the required 4,000 MW additional capacity will have to come from the next phase of development at the Inga site.

The institutional arrangement must be set up in such a way that it will allow a smooth development of Inga 3 and prepare for the next stages of the project. It is also important that the institutional framework be sufficiently reassuring to attract potential investors and anchor customers. The Government currently considers the development of the project through a Public Private Structure possibly under an "Inga Authority". The Inga 3 project will be composed of a power station, common facilities (intake, canal, Bundi dam) and transmission lines. It is necessary to design the best ownership structure possible based on the risks and on the interests of public and private partners (Annex 6). The role of SNEL in the public private partnership should be assessed.

This scheme would allow public investments for common infrastructure (canal, dam and transmission line) and private financing for the power plant under a PPP – which could also result in lower production cost compared to a pure IPP.

In order to coordinate the development of the site and to better integrate the long term interests of the GoDRC, the following appear to be necessary: (i) set up of a specific legal and regulatory framework for the development of the Inga site; (ii) creation of a dedicated development structure in charge of managing the feasibility studies, awarding the licenses for development, construction and operation (concession agreements), and collecting the royalties. This structure could possibly be placed under external governance.

IDA participation would also ensure adequate procedures and considerations are set up for developing the project, so as not to preclude possible IDA financing toward the Inga 3 project, in form of guarantees and/or IDA or enclave financing for Government investments or equity in the Inga 3 project (by the SPV and/or by the public common infrastructure company). This will require at the minimum legal/fiscal/institutional arrangements that demonstrate the economy and efficiency of the Inga 3 project.

While the SPV should take the lead on developing the Inga 3 project, IDA support will be necessary for four main purposes: i/ providing legal and financial advice and expertise to the Government so as to forge a balanced partnership within the SPV; ii/ finance key complementary studies (ToR to be prepared together with the SPV) for which independent advice is important and that will also constitute part of GoDRC equity into the SPV (as grant); iii/ finance the activities of a GoDRC engineer that will review the overall design produced by the SPV and the private developers in a view to secure the long term interests of the GoDRC.

Relationship to CAS

The proposed TA Project is consistent with the Current Country Assistance Strategy (CAS) for DRC, the Bank's Africa Strategy, the World Development Reports (WDR) 2010 and 2011 and the Africa Regional Integration Assistance Strategy (RIAS), approved by the Board in April 2011. One of the strategic elements of the CAS is that the Bank will help efforts to achieve high, sustained and shared economic growth by several avenues including d supporting DRC's central role within the development of regional power networks. The first pillar of the Africa Strategy on competitiveness and employment comprises targeted interventions to address the infrastructure constraints with a focus on regional projects. The project focus on ensuring appropriate institutional arraignments under a balanced PPP for the development, financing and peration of Inga 3, together with SNEL’s corporate governance enhancement under separate ongoing World Bank-financed projects (PMEDE and SAPMP), is fully in line with the governance foundation of the Africa Strategy. According to the WDR 2010, climate change must be urgently addressed with means such as regional power trade which can provide the least cost energy supply with reduced carbon emissions.

II. Proposed Development Objective(s)

Proposed Development Objective(s) (From PCN)

The proposed Project Development Objective (PDO) is to contribute to the cost-effective development of Inga 3 and mid-size hydropower projects under balanced public-private partnerships. This will be achieved through: (i) strategic advice and expertise to the GoDRC; (ii) key complementary studies (including feasibility studies and safeguards assessments); and (iii) capacity building and institutional development.

Key Results (From PCN)

The proposed PDO Level Results Indicators are:

a) an operational Inga Site Development Structure (licensing authority) with proper governance structure is established;
b) comprehensive project documentation for the implementation of the Inga 3 projectand associated transmission network;
c) private developer-investor for Inga 3 is selected and financing plan is closed;
d) prefeasibility studies for four mid size hydropower sites across the country;
e) capacity building in carbon financing applied to mid size hydro (domestic and to Inga (domestic/export).

Although the proposed Project has a strong regional dimension, it will also produce considerable domestic benefits for the DRC, summarized below.

Domestic Benefits associated with the Technical Assistance Project

- The set up of a dedicated entity to handle the development of the Inga site with a proper and transparent governance will reassure private developers and investors and pave the way for the future development of the site;
- The Inga 3 project will provide between 1,000 and 2,000 MW of firm and reliable power supplied to mines, and other household consumers in the Katanga Province, as well as also to the transmission and distribution networks within DRC;
- The prefeasibility studies of mid-size hydropower projects will prepare the development of the electrification of local communities and small industries;
- Lower CO2 emissions by substituting thermal self generation in Katanga with renewable hydropower and development of carbon trading financing options applied to mid size hydropower projects and to the Inga developments;
- Exports are an important and reliable source of revenues to help SNEL meet its operating costs and improve shortcomings in the sector, also fostering the development of SMEs and small businesses. Full development of DRC's hydropower potential at Inga would guarantee to the country a more stable and significant stream of income than the exports of physical resources, with large effects on the country overall macro-economic situation;
- The catalytic effect of the Technical Assistance in attracting private investments into the development of Inga 3 will be instrumental in attracting private investments for the further developments of the site up to its nominal potential and to other private or public/private projects in DRC.

The ongoing PMEDE project already has US$3 million available to finance urgent development activities until the proposed Inga TA project is approved and becomes effective (tentatively in July 2013). The proposed list of actions that need to be completed before negotiations of this TA project is shown in Annex 8.

Preparatory work for this proposed TA project includes: i) a review of the outcome of the feasibility study by an independent panel of experts, with a special focus on geological geotechnical and sedimentation issues, and the preparation of the terms of reference for the review of the ESIA of the hydropower scheme and for the performance of the ESIA for the selected transmission lines routes.; (ii) the participation in the discussions with potential domestic and regional anchor customers, inventory of transmission routes options associated with different anchor customers and a reflection on the way to adapt the institutional framework in order to better attract anchor customer.: (iii) discussions with GoDRC on the way to adjust the selection process in order to ensure proper transparency and provision of consultancy activities to help in the process.; (iv) capacity building and support to the Inga Dedicated Development Structure, identification and hiring of a full time international consultant specialized in mega projects and possibly creation and capacity building of the public company that might be created to own and operate the common infrastructure for Inga 3 (intake, canal and Bundi dam).; (v) the desk top inventory of the hydropower potential sites falling in the 10-100 MW category, the set up of site selection criteria, the visit to the most promising sites, the selection of 3-5 sites eligible for a prefeasibility study and the drafting of the TOR for the prefeasibility studies.

III. Preliminary Description

Concept Description

The project will consist in two main parts. Part A will be divided in 3 components: (i) strategic advice and institutional support to the GoDRC; (ii) complementary technical, economic, social and environmental studies for Inga 3 power plant, dam and canal, and associated transmission lines in DRC and SAPP countries; (iii) capacity building, communication, and institutional development. Part B will be divided in 3 components: (i) analysis of the institutional, regulatory and legal framework for the development of mid-size hydro projects; (ii) prefeasibility studies of selected mid-size hydropower projects; and (iii) carbon finance studies for hydropower projects (Inga 3 and mid-size projects).

PART A. Support the development of Inga 3

Component A.1: Strategic advice and institutional support to the GoDRC (estimated cost: US$11 million).

21. This component aims at creating the framework for a sound and sustainable development of Inga 3 and of the subsequent stages of the scheme up to the full Grand Inga. It may be composed of three subcomponents:

(i) Review and finalize the regulatory, institutional and legal framework in liaison with the work currently undertaken by GoDRC, AECOM/EDF and Orrick/Lazard/Tractebel (see Annex 4);

(ii) Execute the necessary actions to actually implement this framework;

(iii) Strategic advice and expertise to the GoDRC for; a/ finalizing the selection of the private developer/investor; b/ the financial/institutional structuring of the Inga 3 project; and c/ mobilization of new anchor customers in replacement of BHP Billiton.

22. Some activities of the above component may be implemented immediately using the financing available under the PMEDE. It would basically look at the conditions establishment and governance of an Inga Dedicated Development Structure. This entity, independent from SNEL, would become the licensing authority for the Inga 3 and for the subsequent Inga stages. It would hold the long term vision of the Inga complex.

Component A.2: Key complementary technical, environmental and social activities studies (estimated cost: US$ 34 million)
Detailed design activities for Inga 3 will be conducted by the developers/investors for the parts of the project that will fall under the PPP.

However, during the competitive dialogue phase, additional investigations and studies such as geotechnical investigations, topographical surveys, bathymetry, physical scale modeling, hydrology, and sediment management will be managed directly by the public implementation agency and provided to the candidates.

In addition to that, GoDRC will manage the following studies:

(i) Detailed engineering for Inga 3 for the parts of the project that will remain in the public domain (intake, cofferdam, canal, dam;

(ii) Bidding documents for construction and O&M for the parts of the project that will remain in the public domain (intake, canal, dam, transmission lines);

(iii) HV transmission lines : feasibility studies for the HV transmission lines (new/reinforced);

(iv) ESIAs, ESMPs and RAPs for the selected transmission lines routes;

(v) Integration of the various technical studies performed by the developer/investor with those developed by GoDRC;

(vi) Review and supervision of the activities performed by the developer/investor and subsequently by the SPV, including the review of the environmental and social mitigation plans;

(vii) In preparation for the further developments of the Inga site and namely of the construction of a dam on the Congo River, data gathering on the biodiversity in the river in the vicinity of the rapids.

Component A.3: Capacity building and communication (estimated cost: US$ 9 million)
Support to establishment and operations of (i) the Inga Dedicated Development Structure, and (ii) the public common infrastructure company, (i ii) support to the project implementation unit (GoDRC engineering type of activity), preparation of the IDA support for the implementation phase of the project.

Part B. Promote the development of mid size hydropower projects in DRC & carbon finance (estimated cost: US$9 million)
The goal of this component is to promote the development of mid size hydropower projects in DRC by selecting potential projects, performing the prefeasibility studies and evaluating the possibilities for carbon finance. This Part will comprise 3 components:

Component B.1: Analysis of the institutional, lehal and regulatory framework in the energy sector for mid-size hydro projects
This component aims at determining the best candidate for a Coordinating and Managing Entity in charge of development of mid size projects, identification of the potential capacity gaps. The component will also identify necessary changes in the sector legal and regulatory framework to allow public private partnerships in the development of mid-size hydropower projects

Component B.2: Prefeasibility and environmental/social studies of selected mid size hydropower projects.
This component will aim at: (i) completing a desk top inventory of the hydropower potential sites falling in the 10-100 MW category, set up of site selection criteria, visit to the most promising sites, (ii) selection of 3-5 sites eligible for a prefeasibility study and the drafting of the TOR for the prefeasibility studies, (iii) prefeasibility studies and environmental and social studies of the selected mid-size hydropower projects,

Component B.3: Carbon Finance
This component will: (i) assess the eligibility for carbon finance for Inga 3 and mid-size hydropower projects; and (ii) develop of a CDM Program of Activities (PoA). Under this component, advice will be provided to the government on how carbon finance operations work in general and an assessment of prospects, options and requisites for carbon finance, and the implications on project design.

IV. Safeguard Policies that might apply

Safeguard Policies Triggered by the Project	Yes	No	TBD
Environmental Assessment OP/BP 4.01	X		
Natural Habitats OP/BP 4.04	X		
Forests OP/BP 4.36			X
Pest Management OP 4.09		X	
Physical Cultural Resources OP/BP 4.11			X
Indigenous Peoples OP/BP 4.10			X
Involuntary Resettlement OP/BP 4.12	X		
Safety of Dams OP/BP 4.37	X		
Projects on International Waterways OP/BP 7.50	X		
Projects in Disputed Areas OP/BP 7.60		X	

V. Tentative financing

Financing Source	Amount
BORROWER/RECIPIENT	0.00
IDA Grant	43.00
African Development Bank	20.00
Total	63.00

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