

PROJECT INFORMATION DOCUMENT (PID) APPRAISAL STAGE

Report No.: PIDA34373

Project Name	Electricity Access Expansion Project (P153743)
Region	AFRICA
Country	Niger
Sector(s)	Transmission and Distribution of Electricity (70%), General energy sector (30%)
Theme(s)	City-wide Infrastructure and Service Delivery (60%), Infrastructure services for private sector development (20%), State-owned enterprise restructuring and privatization (20%)
Lending Instrument	Investment Project Financing
Project ID	P153743
Borrower(s)	Government of the Republic of Niger
Implementing Agency	Ministry of Energy and Petrol, Nigelec
Environmental Category	B-Partial Assessment
Date PID Prepared/Updated	16-Oct-2015
Date PID Approved/Disclosed	16-Oct-2015
Estimated Date of Appraisal Completion	16-Oct-2015
Estimated Date of Board Approval	29-Jan-2016
Appraisal Review Decision (from Decision Note)	The team was authorized to appraise subject to the disclosure of the relevant safeguards documentation. The team informed the meeting that it plans for the safeguard documents to be disclosed by October 9, 2015. The appraisal mission is planned for October 13-15, 2015, to be followed by negotiations October 29-30, 2015. If appraisal and negotiations are completed as planned, the team indicated that the Board date could be advanced from end-January 2016 to December 2015.

I. Project Context

Country Context

1. Niger is a large, landlocked country in the arid Sahel region with a population of about 17 million people growing rapidly at about 3.3 percent per year. The country's total land area is 1.27 million square kilometers, out of which two-thirds is desert. More than 84 percent of the population is concentrated in rural areas along the Niger River in the southwestern part of the country and along its long southern border with Nigeria. The central and northeastern regions are arid and sparsely populated, with the exception of a few smaller cities along the northern route to Algeria. Though droughts are frequent, about 80 percent of the population derives its livelihood from

agriculture and livestock. Uranium mining and, more recently, oil production play an increasingly important role in Niger's economy.

2. Poverty incidence is declining, however Niger remains among the poorest countries in Africa with an average US\$890 per capita GNI (PPP) in 2013, well below the average GNI in constant prices of US\$1,959 for low income countries. Niger is ranked the last out of 187 countries in the 2014 Human Development Index. In 2012 the poverty headcount rate (US\$2.5 a day (PPP)) stood at 90 percent of the population, down from 95 percent in 1990. Over the last five-years economic growth was about 7 percent, with natural resources playing a key role in GDP growth. International aid finances about 40 percent of Niger's budget while much of the Government's revenues comes from trade (especially uranium and oil), investment (especially in the mining and hydrocarbon sectors), and remittances.

3. Niger has an unprecedented opportunity to accelerate economic development, reduce poverty and boost shared prosperity. Since 2000 only modest progress has been observed in social and economic indicators, due in large part to recurrent droughts, regional conflict, and political instability. The successful political stabilization in April 2011, however, provided the basis for a stronger policy focus on broad-based growth and poverty reduction as well as for strengthening the political institutions. The start of oil production in November 2011 and large-scale investments in the uranium sector promise to boost growth over the medium term while providing critical resources for the Government's development agenda. However, taking advantage of these opportunities will require other important changes to occur. As described in Niger's Economic and Social Development Plan (2012-2015), one critical element underpinning sustainable economic growth is the improvement and expansion of modern services, such as electricity and telecommunications, to develop a competitive and diversified economy. Attention will also be paid to the Plan's strategic pillar on the promotion of social development, which aims to build with all stakeholders a non-discriminatory society where men and women, boys and girls, have the same opportunities to participate in development and enjoy the benefits of growth. There is also the need to reinforce good governance and build institutional capacity to create an enabling environment for investment and economic growth.

Sectoral and institutional Context

4. Access to electricity services remains one of the lowest in the subregion at about 10 percent. There are very large disparities in access between urban and rural areas, and between the capital Niamey and the other urban centers. Electricity access is below 1 percent in rural areas, access varies in smaller cities between 20 and 40 percent, and stands at around 50 percent in Niamey. Furthermore, electricity consumption levels are relatively low. Nationwide aggregated peak electricity demand is only about 150 MW (excluding mining operations). The state-owned utility, Nigelec, serves about 218,000 customers. The Government of Niger (GoN) has defined an ambitious distribution investment program with the objective of increasing the overall national access to 60 percent of the population by 2027.

5. Imports of cheap electricity from Nigeria, Niger's main supply source, have supported a strong growth in electricity consumption during the last decade. Over the period 2001-2014 electricity consumption in Niger grew at an average 8.5 percent per year, much faster than the GDP growth of about 4 percent. Electricity imports from Nigeria under a preferential tariff (about US¢4/kWh) account for about three-fourths of consumption. Import is lagging behind the fast growing

demand and is constrained by generation availability in Nigeria and transmission capacity between the two countries.

6. The high dependence on energy imported from Nigeria, the fast growth in electricity demand, and the low access levels have led the GoN and Nigelec to embark on large investments in domestic power generation. In its 2011 business plan, Nigelec assumed that electricity demand will increase by about 10 percent per year over the next 10 years. Nigelec has signed a two-year rental contract for 30 MW of small diesel units whose generation costs are close to US\$30/kWh to overcome transmission unreliability and frequent power cuts and meet its fast growing demand. Nigelec is currently building an 80 MW diesel plant expected to become operational in early 2016 and developing the Kandadji multipurpose hydropower project on the Niger River, which is expected to enter into operation in 2020-2021. The Kandadji project will provide a maximum of 120 MW during five months of the year and 30 MW during the dry season. Other generation projects under consideration include a 20 MW grid connected solar PV generation plant, a 200 MW (first phase of a 600 MW project) coal-based electricity generation plant fed by the Sakaldamna deposits, expected to be commissioned around 2022, as well as other fossil-fuel generating units to supply the urban centers of Agadez, Zinder, Maradi, and Tahoua. Significant transmission investments to build new lines and to improve existing infrastructure are also proposed in order to strengthen the transmission links with Nigeria, to interconnect with Benin, and Burkina-Faso as part of the West Africa Power Pool (WAPP) program, and to interconnect Niger's five small power sub-systems. Niger imports electricity from Nigeria through 2 transmission lines: The transmission line Birnin Kebbi - Niamey 132kV (line capacity approx 85-90MW) and Katsina-Maradi line also 132 kV (line capacity: about 20-25MW). The 132kV line Birnin Kebbi - Niamey is at the limit of saturation and it is subject to multiple disturbances. To increase capacity and stabilize the import from Nigeria, it is planned the construction of a double circuits North backbone linking Nigeria to Burkina Faso through Niger and Benin. The capacity of the line is estimated at 480 MW. The bulk of the supply of electricity from this line will be provided by Kaindji and Jebba of hydropower plants that are managed by concession granted to Mainstream, a company in which Nigelec is a shareholder. The Kaindji HPP is under rehabilitation with an IDA financing and Mainstream is planning in the coming years other renovations to increase production capacity.

7. Over the past years, Nigelec has had relatively good technical, commercial, and financial performance, but its financial health is challenged by increasing generation costs, which are not reflected in tariffs. Total technical and commercial losses are about 20 percent and bill collection stands at about 87 percent (including government and state-owned enterprises' accounts). In order to improve its liquidity, Nigelec has initiated the installation of prepaid and smart meters. Over the last 10 years, Nigelec has shown a positive net operating profit, albeit deteriorating as retail tariffs have not reflected cost increases and were reduced for irrigation and social tranche consumers. The good financial performance will however be difficult to sustain in the short and medium term as generation and import costs will likely increase substantially and as large investments enter Nigelec's balance sheet. The company's investment plan foresees the growth into the generation mix of relatively expensive thermal liquid fuel based generation, which will have an impact on the costs of service and on Nigelec's finances. Nigelec's 2011 business plan concluded that generation costs will increase substantially from about US\$5.9/kWh in 2011 to US\$7.2/kWh by 2015, maintaining that level until 2020. In the event that Nigeria's supply is curtailed or export tariffs are adjusted, or that domestic generation becomes more costly than envisaged by Nigelec, the cost increase would create significant financial stress on Niger's power sector.

8. Urgent and significant investments in the distribution networks are also needed to improve access. Nigelec has developed at a conceptual level a pipeline of distribution investments for urban and peri-urban areas and isolated systems, a subset of which are included in the proposed project. The Nigelec investment program to improve access to electricity services rests on two pillars. One pillar consists of the rehabilitation, strengthening, and expansion of the distribution networks in the main urban centers, in particular the seven urban centers included in the project. The second pillar consists of increasing access to electricity to communities that do not yet have electricity services either through national grid extension or through new isolated grids.

9. The GoN is committed to carry out policy reforms and implement efficiency improvement measures in order to support the sustained development of the electricity sector. As part of the three-year Public Investment Reform Support Program, supported by the World Bank in the context of a Development Policy Operation (DPO) series, the GoN has agreed to implement policy reforms to enhance the institutional framework for the electricity sector. Those reforms include the adoption of a sound legal and regulatory framework for the sector and the strengthening of its operating framework, particularly with the creation of a regulatory authority for both the electricity and downstream petroleum sectors. A new Electricity Code and a law setting-up a new regulatory authority are currently being reviewed by the Parliament. The key objectives of the new regulatory framework include promoting private participation in energy generation, integrating Niger into the regional electricity market, creating an independent regulator, and ensuring the economic and financial sustainability of the power sector. In addition, the GoN intends to maintain the economic and financial equilibrium of the sector and the utility through the adoption of cost reflective tariffs over the medium term and other measures that are expected to improve Nigelec's operational and financial performance based on a comprehensive audit of Nigelec completed in 2014.

10. Looking forward, the GoN is committed to put in place measures to expand access in the rural areas. The Government has decided to develop a National Electrification Strategy, which will provide a road map to develop access in urban and peri-urban areas and in rural areas in an equitable manner. In addition, it will implement additional measures to develop access in the rural areas, which is an integral component of the Government's overall policy and program to promote national economic and social development and integration.

II. Proposed Development Objectives

The Project Development Objective (PDO) is to increase access to electricity.

III. Project Description

Component Name

Extension and reinforcement of the distribution system

Comments (optional)

Component Name

Strengthening institutional capacity in the electricity sector

Comments (optional)

IV. Financing (*in USD Million*)

Total Project Cost:	65.00	Total Bank Financing:	65.00
Financing Gap:	0.00		
For Loans/Credits/Others			Amount
BORROWER/RECIPIENT			0.00
International Development Association (IDA)			54.50
IDA Grant			10.50
Total			65.00

V. Implementation

11. Nigelec will be the sole implementing agency for the project. The MEP will nominate a focal point for its technical assistance subcomponent who will be responsible for providing the technical inputs and necessary technical clearances during the procurement process as well as for monitoring all activities included in the subcomponent. The role and responsibilities of both entities will be described in detail in the Project Implementation Manual (PIM), which will be prepared by Nigelec prior to effectiveness. In addition, both Nigelec and the MEP agreed to sign a MoU to make it clear their engagement on this arrangement.

12. Nigelec created a unit to manage its large projects (Cellule des grands projets-CGP), including the NELACEP, and as such this will be the Project Implementation Unit (PIU). This will ensure a very close coordination with the implementation of the complementary project financed by AfD, as it will be supervised by the same unit. It is led by a project coordinator who reports to Nigelec's Deputy CEO (Secrétaire Générale). The PIU has been created at the same level of the other operational departments in Nigelec, thus ensuring adequate coordination through the management board. The PIU is headed by a project coordinator who is responsible for overall implementation. The project team includes specialists who are responsible for the following areas: procurement, financial management, technical, environmental and social safeguards. The owner's engineer, who will be competitively recruited as part of the project, will report directly to the project coordinator.

VI. Safeguard Policies (including public consultation)

Safeguard Policies Triggered by the Project	Yes	No
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

Comments (optional)

VII. Contact point**World Bank**

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