

## PROJECT INFORMATION DOCUMENT (PID) CONCEPT STAGE

Report No.: PIDC19008

<b>Project Name</b>	Niger - Electricity Access Expansion Project (NELACEP) (P153743)
<b>Region</b>	AFRICA
<b>Country</b>	Niger
<b>Sector(s)</b>	Transmission and Distribution of Electricity (70%), General energy sector (30%)
<b>Theme(s)</b>	City-wide Infrastructure and Service Delivery (60%), Infrastructure services for private sector development (20%), State-owned enter prise restructuring and privatization (20%)
<b>Lending Instrument</b>	Investment Project Financing
<b>Project ID</b>	P153743
<b>Borrower(s)</b>	Government of the Republic of Niger
<b>Implementing Agency</b>	Ministry of Energy and Petrol, Nigelec
<b>Environmental Category</b>	B-Partial Assessment
<b>Date PID Prepared/ Updated</b>	08-Jan-2015
<b>Date PID Approved/ Disclosed</b>	03-Feb-2015
<b>Estimated Date of Appraisal Completion</b>	30-Nov-2015
<b>Estimated Date of Board Approval</b>	29-Jan-2016
<b>Concept Review Decision</b>	Track II - The review did authorize the preparation to continue

### I. Introduction and Context

#### Country Context

1. Niger is a large, landlocked country in the arid Sahel-Saharan region with a population of about 17 million people growing rapidly at about 3.3% per year, the majority of whom are engaged in semi-subsistence agriculture. The country's total land area is 1.27 million square kilometers, out of which 2/3 is desert. More than 84% of the population is concentrated in rural areas in the areas around River Niger in the southwestern corner 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% of the population derives its livelihood from agriculture and livestock. Uranium mining and, more recently, oil production play an increasingly important role in the Niger economy.

2. Poverty incidence is declining, but Niger remains among the poorest countries in Africa with \$650 GNI (PPP) in 2012, well below the average GNI in constant prices of \$1,387 for low income countries. Niger is ranked the latest out of 187 countries in the Human Development Index. In 2010 the poverty headcount rate (\$ 2.5 a day (PPP)) stood at 85% of the population, down from 95% in 1990. Growth hit 11.1% in 2012 and is expected to average 7% for the 2012-2015 period, with natural resources playing a key role in GDP growth. International Aid finances about 40% 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 the strengthening of 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. Taking advantage of these opportunities will require to mobilize greater private-sector participation in the provision of infrastructure as well as continued engagement by Niger's development partners in order to ensure adequate financing and technical support to reinforce good governance and build institutional capacity.

4. Poor governance remains a challenge for the country due among other to the poor Public Finance Management (PFM) environment. The final report of the 2012 repeater PEFA highlighted limited progress in comparison with the situation reflected in the 2008 PEFA report, in particular in the areas of policy-based budgeting, multiyear perspective in fiscal planning and public expenditure policy, public access to key fiscal information, predictability in the availability of funds for commitment of expenditures and timeliness of submission of audit reports to legislature. The reports identified a number of critical shortcomings in budget credibility and execution processes as well as accounting, financial reporting and internal and external controls. The Government is committed to improve the PFM environment through appropriate reforms which implementation is being followed up by the Ministry of Finance.

5. Improving access to electricity is critical for Niger's economic and social growth in the medium term. As described in its Economic and Social Development Plan (2012-2015), one critical element underpinning the sustainable economic growth the country needs is the improvement of the electricity access to develop a competitive and diversified economy.

### **Sectoral and Institutional Context**

6. Country wide access to electricity services remains low at about 10%, with large disparities between urban and rural areas (<1%). In addition, in urban areas, access to electricity varies substantially; it is estimated to be about 40 % in the capital Niamey, while in some smaller cities, access is in the order of 10-20 %. To address this challenge, the GoN has defined a distribution investment program with the objective of increasing access to 60% in 2027.

7. Imports of cheap electricity from Nigeria, Niger's main supply source, have enabled a strong growth in electricity consumption during the last decade. Over the period 2001-2010, electricity consumption in Niger grew at an average 8.5% per year, much faster than the GDP growth of about 4%. One of the main drivers has been access to a preferential tariff from the Power

Holding Company of Nigeria (PHCN) (USc3.2/kWh in 2011). These imports reached 86.5% of total supply in 2010, but have declined recently, as the Nigerian electricity market has undergone significant reforms. This decline in the relative share of electricity supply is expected to continue as the demand for electricity increases in Niger, and the expectation that import tariffs will increase when they are renegotiated.

8. This heavy reliance on Nigeria's imports and fast growing demand have led the Government of Niger (GoN) and Nigelec to embark on large investments in domestic power generation. In its 2010 business plan, Nigelec assumes that electricity demand will increase by about 10% per year for the next 10 years. In order to meet this expected increase and mitigate the risks of high dependency on imports from Nigeria, an ambitious generation plan has been developed (additional 430 MW by 2020 for an existing peak demand of 130MW in 2012). Implementation of this plan, however, has proceeded at a slower pace than originally envisaged. The Government and Nigelec are building a 80 MW diesel plant, which is expected to enter into operation by 2015. There are 30 MW of additional thermal generation from diesel rentals. The Kandadji multipurpose project (hydro and irrigation) is also under preparation and is expected to enter into operation in 2019-2020 with financing from African Development Bank (AfDB), the World Bank and the Islamic Development Bank (IDB). The Kandadji project will provide 130MW during 5 months of the year and 30MW during the dry season. Other possible projects under consideration include a 20MW grid connected solar generation plant, and the development of the 200 MW coal based electricity generation from the Salkadamna coal mine at least.

9. Nigelec has had a good financial performance but this will be challenged by the increase in generation costs, which are not reflected in the tariff setting methodology. Over the last 10 years, Nigelec has shown a positive net operating profit, albeit deteriorating as retail tariffs have not been adjusted since 1994. Nigelec's good financial performance may however be difficult to sustain in the short and medium terms as generation and import costs will increase substantially and large investments enter into Nigelec's balance sheet. The investment plan foresees the entry into the generation mix of expensive thermal generation, which will have an impact on the costs of service and on Nigelec's finances. Nigelec's 2010 business plan concluded that generation costs will increase substantially from about USc5.9 in 2011 to USc7.2 by 2015 and 2020 based on Nigelec's forecast. In the event that Nigeria's supply is curtailed, the increase in generation costs would even be more substantial, at least in the period prior to the commissioning of Kandadji and the coal units.

10. Urgent investment in the distribution network is needed. While investment in generation is already ongoing and additional electricity capacity will be available after the construction of the Kandadji Hydro and the Gorou Banda diesel power station, there is an urgent need to invest in the reinforcement and extension of the distribution network. Thus, Nigelec has developed a pipeline of investments in distribution of urban and peri-urban areas, and isolated grids to serve spread-out customers.

11. In parallel to the investment program, the GoN has identified a series of policy reforms and efficiency improvement measures to support the sustainable development of the electricity sector. These reforms include the adoption of a sound legal and regulatory framework for the electricity sector and the strengthening of the sector institutions with the creation of an electricity regulator. Other measures seek the strengthening of the Government's planning capacity with the elaboration of a least cost power development plan (LCDP) for transmission and distribution, and a study to identify the most cost efficient options to expand supply of electricity at an affordable cost. Finally,

the Government is interested in achieving an economic and financial equilibrium for the sector and for the utility, through the adoption of tariffs that are more cost reflective and through measures that will improve the operational and financial performance of Nigelec. To this end, the Government has just completed an organizational, legal and technical audit of Nigelec.

12. The Government has shown a strong commitment to adopt a forward looking strategy for the development of the electricity sector but implementation has been uneven. This is due in part to the limited capacity within the Government and the difficulties in coordination among the various agencies and ministries that are involved in the implementation of these measures. The adoption of the LCDP, currently under development, should facilitate coordination and help the Government to mobilize the support of the international development community around a clear and consistent road map.

### **Relationship to CAS**

13. The proposed Project is fully aligned with the FY13-16 Niger Country Partnership Strategy (CPS), which focuses on achieving resilient growth, reducing vulnerability and strengthening capacity for service delivery. The WBG's support to the electricity sector is a critical part of the CPS, which is based on three pillars: (1) promote resilient growth, (2) reduce vulnerability, and (3) strengthen governance and capacity for public service delivery across the board. In particular, the proposed project would support increased access to energy services, which supports the first pillar on promoting resilient growth.

14. The CPS is fully aligned with the 2012 Government Plan for Social and Economic Development (PDES) and the World Bank Strategy for Africa. In particular, the project is consistent with the PDES objective of creating a competitive and diversified economy for accelerated, inclusive growth. Sustainable expansion of basic services to the general population, including access to energy services, plays a key role in that national development strategy.

15. The proposed Project will be implemented in coordination with other donors supporting the sector. This includes an investment and technical assistance project from the Agence Française du Développement (AfD) to improve electricity access by expanding Nigelec's grid.

## **II. Proposed Development Objective(s)**

### **Proposed Development Objective(s) (From PCN)**

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

### **Key Results (From PCN)**

17. Progress toward achieving the PDO Outcomes will be measured by the following Project Outcome Indicators:

- People provided with access to electricity under the project by household connections (number);
- Direct project beneficiaries (number), of which female (percentage)

## **III. Preliminary Description**

### **Concept Description**

18. The proposed Niger Electricity Access Expansion Project (NELACEP) will finance a

strategic portion of Nigelec's Investment Program, focusing on the priority to address existing network bottlenecks and pending connection requests in seven major urban areas, including the capital Niamey.

19. The project will also finance capacity building activities to the Ministry of Energy and Petroleum (MEP) in the context of the current sector reform. In addition, it will provide financing to Nigelec to improve its performance and to cover project implementation costs.

20. The proposed project components are the following:

Component 1. Extension and reinforcement of the distribution system in urban areas. (estimated cost \$53 million)

21. This component will support extension of the distribution system to allow the connection of 60,000 new clients in seven major urban areas (Niamey, Dosso, Maradi, Zinder, Agadez, Tahaoua and Tillabéry). In addition, it will finance the reinforcement of the existing grid to improve the capacity of existing networks, thus improving the service quality for existing customers and allowing new customers to connect to the grid. Furthermore, power system performance will be improved allowing the reduction of system losses, frequent outages due to overloaded transformers and old equipment, low and fluctuating voltage conditions and poor system power factors. The investments will include adding, replacing or upgrading distribution lines and substations and medium and low voltage equipment, meters, spare parts, and tools. The new customers will be connected by prepayment meter and the connection charges will be subsidized through IDA financing. The adequate subsidy will be determined based on the existing practices of the utility.

Component 2. Strengthening institutional capacity in the electricity sector (estimated cost \$7 million)

22. This component will finance capacity building activities for Nigelec as well as MEP. In addition, it will support Nigelec in project implementation. The component will be divided into three sub-components:

- Sub-component 2-A: Technical assistance to MEP. Activities under this component will include strengthening MEP capacity to develop sector policies, articulate a strategic vision for the sector, and plan the efficient expansion of the sectors using the results of the LCDP financed with IDA resources under the Kandadji project, which is currently in preparation. Other activities will comprise the support to the Electricity Regulator once it has been created and put into place, including the preparation of a tariff review, and the strengthening the policy making and planning capacities of the MEP. Finally, this component would support Government's efforts to attract private sector for electricity generation, with technical assistance to the Government on efficient evaluations of proposals received, and legal, technical and commercial structuring of selected transactions.
- Sub-component 2-B: Technical assistance to Nigelec. Upon review of Nigelec's requirements for technical assistance, this component will support the implementing agency through consultancy contracts related to: (i) Capacity strengthening in distribution system planning (acquisition of new distribution planning software which will be linked to the GIS system to be developed and training), and (ii) other key activities to be identified during project preparation based on Nigelec key priorities.

- Sub-component 2-C: Project Management. This will include the cost of managing the project, including the audit and the hiring of experts such as a senior financial management specialist and a senior procurement specialist.

Project readiness.

23. Technical aspects. A feasibility study, financed by a World Bank trust fund (AFREA), is being carried out in order to define the technical specifications, cost estimates, and bidding documents. Preliminary results are expected in January 2015 and the final bidding documents by March 2015.

24. Safeguards. Nigelec will finance the safeguard-related studies. An ESIA will be carried out when the preliminary results of the technical studies provide an indication of the project footprint. It will identify potential environmental and social impacts and devise mitigation and monitoring measures. In addition, a Resettlement Action Plan (RAP) will also need to be prepared once the physical area has been preliminarily identified, as for the ESIA, to address any adverse social impacts such as land acquisition and related resettlement and/or losses of assets or access to resources. The safeguard-related studies will be approved by the Ministry in charge of Environment and by the World Bank, and disclosed in the country and at the Bank InfoShop prior to appraisal.

#### 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. Financing (in USD Million)

Total Project Cost:	60.00	Total Bank Financing:	60.00
Financing Gap:	0.00		
Financing Source		Amount	
BORROWER/RECIPIENT		0.00	
International Development Association (IDA)		60.00	
Total		60.00	

#### VI. Contact point

**World Bank**

Contact: Manuel Luengo  
Title: Senior Energy Specialist  
Tel: 473-3984  
Email: mluengo@worldbank.org

Contact: Pedro E. Sanchez  
Title: Lead Energy Specialist  
Tel: 458-5711  
Email: psanchez2@worldbank.org

**Borrower/Client/Recipient**

Name: Government of the Republic of Niger  
Contact: Alio Touné  
Title: Chief of Staff  
Tel: 22790645556  
Email: as.toune@live.fr

**Implementing Agencies**

Name: Ministry of Energy and Petrol  
Contact: Alio Touné  
Title: Chief of Staff  
Tel: 22790645556  
Email: as.toune@live.fr

Name: Nigelec  
Contact: Mahamadou Arzika  
Title: Secrétaire Général  
Tel: 22720722461  
Email: arzikam@yahoo.fr

**VII. For more information contact:**

The InfoShop  
The World Bank  
1818 H Street, NW  
Washington, D.C. 20433  
Telephone: (202) 458-4500  
Fax: (202) 522-1500  
Web: <http://www.worldbank.org/infoshop>