Note to Task Teams: The following sections are system generated and can only be edited online in the Portal.

Combined Project Information Documents / Integrated Safeguards Datasheet (PID/ISDS)

Appraisal Stage | Date Prepared/Updated: 12-Apr-2017 | Report No: PIDISDSA19648
**BASIC INFORMATION**

### A. Basic Project Data

<table>
<thead>
<tr>
<th>Country</th>
<th>Project ID</th>
<th>Project Name</th>
<th>Parent Project ID (if any)</th>
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<tbody>
<tr>
<td>Niger</td>
<td>P160170</td>
<td>Niger Solar Electricity Access Project</td>
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<th>Estimated Board Date</th>
<th>Practice Area (Lead)</th>
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<th>Borrower(s)</th>
<th>Implementing Agency</th>
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<td>Investment Project Financing</td>
<td>Ministry of Finance</td>
<td>Société Nigerienne d’Electricité (NIGELEC), Agence Nigérienne pour la Promotion de l'Electrification Rurale (ANPER), Direction Générale des Opérations Financières et des Réformes (DGOFR) - Ministry of Finance</td>
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**Proposed Development Objective(s)**

The Project Development Objective is to increase access to electricity through solar energy in rural and peri-urban areas of Niger.

**Components**

- **Component 1:** Market Development of Stand-alone Solar Systems
- **Component 2:** Rural Electrification through Service-based Solar Hybrid Mini-grids
- **Component 3:** Solar PV Hybridization of Isolated Thermal Mini-grids and Expansion of Access
- **Component 4:** Implementation Support and Technical Assistance

**Financing (in USD Million)**

<table>
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<th>Financing Source</th>
<th>Amount</th>
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<td>IDA Grant</td>
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<td><strong>Total Project Cost</strong></td>
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**Environmental Assessment Category**

B - Partial Assessment
B. Introduction and Context

Country Context

1. **Niger is a large, landlocked, and mostly arid country in Western Africa.** With a total land area of 1,267,000 km², Niger is the sixth biggest country in Africa and the biggest in West Africa. It is divided into 8 regions, 63 departments, and 266 communes. The Sahara Desert, mainly in the north, covers two-thirds of the land area. About three quarters of the population is concentrated along the Niger River in the west and along the southern border with Nigeria, 1,500 km in length. Conversely, some parts of the north are almost uninhabited with the exception of a few smaller cities along the route to Algeria. In 2016, the population was estimated at 20.7 million, of which the majority, about 82 percent, lived in rural areas. The population is growing rapidly, at a rate of 3.9 percent per year, and is expected to reach 36 million inhabitants by 2030.

2. **Niger is rebuilding its democratic governance mechanisms.** Since independence in 1960, there have been seven regimes and four military coups in Niger. The latest coup in 2010 was followed by the restoration of constitutional order in 2011. Since then, the Government of Niger (GoN) has been pursuing measures to combat organized crime and terrorism and to promote the safety and property rights of its citizens, as the country is located at the heart of a turbulent region marked by political and religious violence in northern Nigeria, Tuareg separatist and armed Islamist movements in northern Mali, and state collapse in southern Libya. Military and law enforcement agencies have created new crisis response units, and border security has been strengthened in close coordination with regional and international partners. As a result, unrest in Niger’s tribal areas and the threat posed by the conflict in neighboring Mali have diminished. Nevertheless, the country continues to face significant risks from domestic and regional instability, as well as organized crime and transnational terrorism. The rise of Boko Haram in Nigeria and the recent expansion of its operations to neighboring countries, including Niger, are of particular concern.

3. **Poverty, though declining, remains high.** The incidence of poverty declined from 53.7 percent in 2005 to 44.5 percent in 2014. However, the absolute number of people living in poverty has increased by 1.8 million because the annual population growth rate of 3.9 percent between 2001 and 2012 was four times the annual rate of poverty reduction. In 2014, 8.2 million people were poor, with the majority living in rural areas where food insecurity is high. Human development indicators are also low. The average level of education is 1.4 years; only 52 percent of children have received a complete set of vaccinations, and 44 percent of children under five are stunted. Niger was ranked last out of 188 countries on the 2014 United Nations Human Development Index. The country’s low per capita gross
domestic product (GDP) of US$895 (constant 2011 US$) in 2015 made it one of the poorest nations in the world.

4. **The economy grew over the past decade and half, but sustained growth remains a challenge.** Growth reached 11.1 percent in 2012, 6.9 percent in 2014, and 3.5 percent in 2015. Recent growth occurred under favorable circumstances with respect to weather, commodity prices, and security. The main sectors supporting economic growth have been rain-fed agriculture and animal husbandry, which together account for 40 percent of GDP and employ more than 80 percent of the workforce. Agricultural productivity is expected to remain low due to the limited mechanization in farming techniques. Climate variability and climate change effects are becoming more pronounced. The contribution of extractive industries such as uranium, gold, and coal mining and, recently, crude oil production, has increased (4 percent of GDP in 2007 to 9 percent in 2016). The financial sector, led by banking and microfinance, has grown substantially over the past six years and has supported economic expansion (private credit to GDP is 14.8 percent in 2016). Outstanding loans from commercial banks increased from 18 percent of GDP in 2005 to 31 percent in 2015. External security threats are putting an increasing strain on public finances. Rapid population growth increases the vulnerability of the economy, placing stresses on natural resources (fertile land, water, and forests) that increase with time. Looking ahead, an economic slowdown is avoidable provided there is a concerted effort to diversify the economy and to increase productivity.

5. **Women in Niger face challenges in health, education, and access to economic opportunities.** Social and cultural norms dictate the specific activities women and men can perform, and these norms work to restrict women’s economic opportunities. Niger is a predominantly rural country where the majority of the population engages in subsistence agriculture, pastoralism, or a combination of the two. Consequently, women’s economic opportunities are directly linked to access to land, agricultural production, and commercial activities. Women largely engage in unpaid labor and their restricted mobility is an impediment to their engagement in productive activities, such as selling their products outside the home or taking their animals to pasture or to the market. Moreover, women cannot legally get a job without permission from their husbands.

6. **Electricity access is a critical enabler of economic diversification and growth.** Recent assessments have concluded that electricity access can assist transformative progress in many dimensions of human development (education, health care, access to water, essential communications, and information), as well as in access to financial services and opportunities for income generation (in particular, in the agricultural sector) and productive uses. Estimates suggest that the alleviation of power constraints in Niger could add up to 1.5 percentage points to per capita growth if generation capacity and national access rates—which as of today are among the lowest in the region—were increased. These impacts occur directly or through economic multiplier effects. On the other hand, inadequate electricity access can have adverse effects on the productivity of manufacturing and commerce. In Niger, as described in its Economic and Social Development Plan (2012–2015), one critical element underpinning future sustainable economic growth is the improvement of electricity access to support a competitive and diversified economy. Women in particular can benefit because they are the main managers of energy within the household. Providing access to electricity for public facilities would improve the delivery of basic health and education services, which can contribute to more girls going to school.

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and better reproductive health services for women. Access to modern energy, such as electricity, can improve health in the household by reducing fire hazards and inhalation of smoke from kerosene lamps. Access to electricity for small and micro businesses owned by women could also help increase their productivity and sustainability.

**Sectoral and Institutional Context**

7. **Niger’s electricity access rate of 10 percent is far below Sub-Saharan Africa’s average rate of 31 percent and is one of the lowest in the region.** The overall rate masks significant disparities between urban and rural areas. Electricity access is below 1 percent in rural areas, while urban access rate varies between 20 percent and 40 percent in smaller cities and stands at around 50 percent in Niamey. Nationwide aggregated peak electricity demand is only about 150 MW, excluding mining operations.

8. **The electricity system in Niger is small, fragmented, and dependent on imports from Nigeria.** Niger’s power system comprises four grids that are interconnected with Nigeria which sells electricity at very low cost, one grid supplied by a coal plant operated by Sonichar (a private company), and a number of diesel-based isolated grids. Decentralized mini-grids operated by the national utility supply 82 centers with electricity service levels ranging from continuous power to a few hours of power per day, using small diesel generators, at prohibitive costs.

9. **The GoN has acted to improve the institutional and legal framework in the power sector, but further work is required, specifically for off-grid electrification.** The Ministry of Energy (MoE) is responsible for modern energy access policies and overseeing the implementation of access programs. Société Nigerienne d’Electricité (NIGELEC), the state-owned power utility, is the key driver of on-grid access. It operates most of Niger’s grid systems and provides electricity to 218,000 customers. NIGELEC used to have a monopoly in generation, transmission, and distribution, but the market has been liberalized under the Electricity Act of May 2016 allowing the involvement of the private sector. The Electricity Act also refers to the establishment of (a) a new energy sector regulator, the Autorité de Régulation du Secteur de l’Energie au Niger (Energy Sector Regulatory Authority of Niger), created in December 2015; and (b) a rural electrification agency, the Agence Nigérienne pour la Promotion de l’Electrification Rural (Nigerien Agency for the Promotion of Rural Electrification, ANPER), set up in January 2015, for which a number of decrees regarding its implementation have already been issued. In addition to these institutions, the Centre National d’Energie Solaire (National Center for Solar Energy, CNES) plays an important role in manufacturing and disseminating solar technologies. The enabling policy and regulatory frameworks for rural off-grid electrification in Niger are yet to be developed. These are required to specify aspects of the operation of rural electricity systems and the participation of the private sector, such as tariffs/prices, licensing, quality standards, and a bidding strategy that could attract private sector investments for larger infrastructure such as mini-grids.

10. **To address fast-growing electricity demand and heavy reliance on electricity imports from Nigeria, the GoN and NIGELEC have embarked on major power generation investments to enable expansion in well-populated areas.** Imports of cheap electricity from Nigeria have enabled strong growth in electricity consumption during the last decade. Imports from Nigeria reached 86.5 percent of total supply in 2010, but declined to 76.4 percent in 2015 because demand growth exceeded the capacity of the transmission line from Nigeria. Over the period 2001–2015, electricity consumption grew at 16 percent per year, much faster than
GDP growth of about 4 percent, and it is expected to grow more than 10 percent during the period 2015–2020,² albeit from a very low consumption base. To meet this increase, an ambitious generation plan for 2016–2027 has been developed. This plan includes the following four major projects: (a) Gorou Banda dual thermal power plant (100 MW, 2017); (b) Kandadjı hydroelectric plant (130 MW, 2023); (c) Salkadamna coal power plant (200 MW up to 600 MW, 2023); and (d) a new interconnection line with the West African Power Pool (WAPP) system to increase imports from Nigeria (400 MW, 2021), which is referred to as the Northcore Project. The Gorou Banda plant has been commissioned in 2017 and will provide enough power to meet the demand increase for the next five years, although at a high generation cost. In the following five years, until cheaper options are available (hydro, coal, or WAPP imports), all the additional demand will be covered by diesel/heavy fuel oil based power generation. In this context, up to 100 MW solar photovoltaic (PV) generation is considered to complement thermal generation. Two grid-connected solar PV projects, 30 MW in Gorou Banda and 30 MW in Guessel Bodi, have been identified and are under preparation.

11. **Off-grid electricity access in Niger has been limited, based mostly on unsustainable delivery models.** While the total installed capacity of solar PV soared from 416 kW in 2000 to about 5.2 MW (located in 2,311 sites) by 2014, the CNES has estimated that the largest share of installed capacity, at 39 percent, is dedicated to telecommunications, while 15 percent is for households. Most off-grid initiatives have focused on stand-alone solar PV systems that meet the lowest tiers of electricity service, providing up to 4 hours of electricity per day but have not included adequate measures to build the technical and commercial capacity of markets (availability of technicians and spare parts and product quality guarantee) nor a sustainable revenue stream to ensure maintenance and/or renewal of the systems.

12. **The GoN plans to accelerate on- and off-grid electrification to provide a spectrum of service levels.** The GoN is developing a National Electrification Strategy (NES) that will ramp up access in urban, peri-urban, and rural areas to provide a spectrum of levels of electricity services. The NES, supported by the Niger Electricity Access Expansion Project (NELACEP, P153743) funded by IDA, is expected to be finalized in June 2017 and will outline the technical, financial, and institutional requirements to achieve the ambitious target of 60 percent access by 2027. The NES will define the ‘rules of the game’ for expanding electricity access from the highest level of service using extension of the main grids to the middle level using isolated mini-grids, and the most basic level for dispersed populations using individual solar systems (pico-PV and solar home systems [SHS]). The NES will include quality standards and cost-recovery tariffs that will be compatible with people’s ability to pay (possibly considering subsidy mechanisms to assist the poorest with affordability).

13. **The NES will include a planned, systematic approach to effective geo-spatial implementation of electrification, aiming to realize the GoN’s ambitious goal of 60 percent coverage by 2027.** A prioritized, geo-spatial electrification plan will be prepared for investments needed in five-year phases over the next 20 years. The plan will define investments needed to provide electricity through parallel efforts involving three major technology approaches: (a) densification and extension of the existing national grid to provide the highest level of service, (b) establishment of new isolated mini-grids powered by renewable energy and/or diesel generation to provide the next level of service to populations with sufficient density and demand, and (c) provision of off-grid electrification using independent renewable energy systems, mainly solar systems, for dispersed populations or those who cannot afford electricity connections or live in areas where electricity service is

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² Plan d’Affaires, NIGELEC, 2016–2027.
unreliable. In geo-spatial terms, these three types of service areas will radiate outward from densely populated areas served by the national grid. Technical geo-spatial planning will encompass defining electricity demand, service quality levels, and technology options to reach populations in various areas on a least-cost basis. Preliminary analysis indicates that 70 percent of the population, living mainly in the south, could be served with grid extension and densification, while 15 percent would have access to electricity through isolated mini-grids (including solar–diesel hybrid mini-grids), and the remaining 15 percent, dispersed through the country, would have basic service for light and cell phone charging through stand-alone solar systems (including solar home and pico-PV systems). When demand grows, the geospatial analysis will provide guidance on whether capital investments need to be made for grid-based solutions.

14. **Private sector companies in Niger dedicated to distributing and installing independent solar systems have not yet reached scale.** To date, supply-side activities have consisted almost entirely of around 20 engineering, procurement, and construction (EPC) firms installing and maintaining solar installations in response to tenders by large institutional clients, such as nongovernmental organizations (NGOs), development finance institutions, and the Government. These tenders cover a broad range of activities, from solar irrigation to solar street lighting, to community electrification projects, but to date few businesses have attempted to supply solar products directly to end-consumers (for example, households, farmers, communities) in a scalable, market-driven way. A few companies have been successful either in the solar business or in the provision of basic services in rural areas. Most retailers sell low-quality solar systems. Today, approximately 121,500 units of solar multiroom lighting systems are sold annually in Niger, with focus groups revealing a strong preference for products with phone charging capabilities.

15. **The solar retail market is beginning to expand and become more professional as a function of demand and opportunity.** In 2013, an association of solar companies was established in Niger (APE-Solaire) that brings together eight importers/installers of solar lanterns/pico-PV/home systems; a major microfinance institution (MFI), ASUSU; and an NGO. Besides APE-Solaire, other electricity companies provide installation services for PV systems, but not as a primary line of business. In addition, more than 10 companies have expertise in managing water systems and have shown a willingness to expand their business not only to solar water systems, but also to solar electricity services.

16. **There is a significant demand for access to modern, off-grid electricity services in the agriculture sector, where solar pumps for irrigation could increase agricultural productivity of key food crops and livestock.** Where water is available, sustainable irrigation can make a critical difference. It reduces dependence on the weather, as multiple harvests are possible during the year, and may reduce under-employment and land pressure. Solar water pumping (SWP) is poised to grow tremendously over the next decade due to declining costs, high reliability, and increased commercial availability in rural areas of less developed countries. SWP systems are reliable and have become much more affordable due to decreases in costs of PV modules—system costs have dropped by 80 percent since 2009 and many systems installed 20 or more years ago are still operational. The off-grid water pumping market in Niger consists mainly of farms and water providers that could use water pumps for crop irrigation. Irrigation is by far the largest market and needs to be broken down into medium to large commercial farms and smallholder farms. Overall, the annual market size, if consumer financing is made available, is estimated at around US$30 million for smallholder farmers, US$10 million for commercial farms, and around US$10 million for public irrigation plots. Without consumer financing, the
current integrated solar pumping kits are not affordable to Nigerien smallholder farmers, and consequently, current distribution of such kits is mainly through development programs.

17. With respect to the most basic level of off-grid electricity access for lighting and phone charging (Tiers 1 and 2), pico-PV systems and solar lanterns have been introduced recently in Niger, but barriers impede their market development. Some key market players exist, but penetration of these systems is very modest. In general, the systems sold by retailers are generic and of poor quality. The adoption of these stand-alone solar systems is impeded by several barriers including (a) an import tax of 52 percent that significantly increases the final retail price, (b) limited access by solar companies and retailers to credit from commercial banks that charge high interest rates and require high collateral/guarantees, (c) a lack of quality assurance mechanisms and technical standards for solar systems leading to the proliferation of poor quality systems and consumer mistrust, (d) weak distribution links all along the solar system supply chain, from the importer to the distributor and retailer, and (e) a lack of familiarity of consumers with the technologies leading to an inability to differentiate product quality. While the potential for wider adoption of such technologies needs to be fully assessed, removing market barriers may significantly contribute to increasing access to the lowest tier of electricity.

18. Niger's potential household electricity demand that can be served through the solar off-grid market is a function of the ability of households to pay for the systems. Given the low-income levels in Niger, the private household market depends on the ability of households to obtain consumer finance from solar providers or banks and MFIs. Without consumer financing, the annual market for sales of solar lanterns and SHS is estimated at around US$9 million, representing sales of around 600,000 systems, mainly basic solar lanterns. Consumer financing would unlock an additional US$34 million of sales, reach an additional 350,000 households, and raise levels of energy access to include higher capacity SHS that provide more services including TV. Assumptions used to calculate the annual demand include: (a) consumers, by income deciles, will purchase the most expensive product they can afford based on current expenditures for lighting; (b) average monthly household expenditure for traditional lighting equates to willingness-to-pay for solar products; and (c) 50 percent of grid-connected households are also prospective buyers of solar systems as grid backup options.

19. While the banking sector is generally considered well-regulated and stable, it is developing rapidly and there are moderate signs of stress. In its most recent article IV consultation assessment published in March 2017, the International Monetary Fund notes the banking sector is adequately capitalized and efficient relative to other countries in the region. At end September 2016, prudential indicators suggest that capital adequacy ratios for most banks remain above the regulatory threshold of 8 percent. Although gross non-performing loans are at reasonable levels (18.5 percent of total loans at end-September 2016), they have risen slightly and are a source of concern for two banks. The sector has experienced deteriorating systemic liquidity (from four billion FCFA in 2014 to -83 billion FCFA in 2015). Refinancing arrangements with the Central Bank, la Banque Centrale des Etats de l’Afrique de l’Ouest (BCEAO), assists in providing liquidity to banks. Impending

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3 The Multi-tier Framework (MTF), developed by the Global Tracking Framework of Sustainable Energy for All (http://trackingenergy4all.worldbank.org), moves beyond the traditional binary way of defining electrification to adopt a tiered definition (Tier 1 to Tier 5) based on attributes of energy service such as affordability, reliability, legality etc. Tier 1 is defined to have access to basic applications such as task lighting, radio, and phone charging.

4 Assumptions used to calculate the annual demand include: (a) consumers, by income deciles, will purchase the most expensive product they can afford based on current expenditures for lighting; (b) average monthly household expenditure for traditional lighting equates to willingness-to-pay for solar products; and (c) 50 percent of grid-connected households are also prospective buyers of solar systems as grid backup options.

5 Based on 2015 Banking Commission report.
regulatory changes are also placing pressure on liquidity positions. The minimum capital for banks is set to increase from five million FCFA to 10 million FCFA in June 2017. Rising non-performing loans are in part due to deteriorating macroeconomic conditions related to declining commodity (oil and uranium) prices and economic stress in neighboring Nigeria, Niger’s largest export partner. Similarly, payment delays of large government-contracts are common and put further stress on on-time repayment of enterprise loans. Given this context, banks expressed interest in medium-term financing mechanisms, particularly to serve target segments, such as SMEs and solar companies.

20. **Niger’s financial sector, which needs to finance both solar companies and buyers of stand-alone solar systems for household and farm use, has developed and grown in recent years.** The level of financial depth, as measured by the ratio of broad money to GDP, is among the lowest in the world, at 26 percent in 2015 compared to an average of 37 percent for countries in Sub-Saharan Africa. Financial access and inclusion remain key issues across the continent. According to 2014 Findex data, 6.7 percent of the population in Niger has access to a transactions account. While this is a significant improvement from 2011, when only 1.5 percent of adults had an account, it remains far below the 34 percent average in the Sub-Saharan Africa region. According to the World Bank Investment Climate Assessment data, 70 percent of companies in Niger consider access to financing as one of their major constraints to growth. According to the survey results, the cost of credit is 2.2 percent higher for SMEs than for large companies and just under 30 percent of firms have a loan or drawdown a line of credit. Loans to SMEs are constrained by an insistence on physical collateral (usually land and representing over 100% of the value of the loan), underdeveloped procedures related to credit risk quantification and asset-liability management, nascent credit information systems, and the dominance of short-term capital (12 months).

21. **Banks and MFIs have played a limited role in financing the solar energy market in Niger, except for providing trade finance to existing clients for import of solar energy products.** Key barriers to financing for the small-scale, independent solar system businesses include credit risks given the nascent market conditions as well as limited long-term financing (over 12 months) required for MFIs or solar companies to provide consumer financing for solar energy products. The limited availability of long-term finance presents a particular challenge given long inventory periods for solar lanterns and SHS. Challenges to commercial financing of solar technology include the poor quality of systems on the market, maintenance issues, and the nascent regulatory and legal framework underpinning the sector.

22. **The financial sector in Niger and the region has experience in directed credit to the solar energy market and other small-scale energy and rural technologies.** ASUSU, the leading MFI in Niger, has provided microcredit to small importers of Lighting Africa-certified solar systems. It has also worked with international donors on providing subsidized household financing for solar kits. At the regional level, a commercial bank, ORABANK, has set up a credit line from the Agence Francaise de Developpement (AFD) for renewable and energy efficiency investments of US$30 million in a fund available to all commercial banks in the West African Economic and Monetary Union (WAEMU) zone. The United States Agency for International Development (USAID) is providing a US$2 million partial credit guarantee to Ecobank for energy efficiency financing. Banks have existing relationships with larger importers and distributors of solar energy products. Several bilateral

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6 Client base of over 500,000 with gross loan portfolio of US$36,500,000, and US$470,000 in total deposits (Source: Mix Market).
donors have put in place concessional financing schemes that combine grants with credit to promote agricultural and rural finance, working mainly through MFIs and state-linked financial institutions, such as BAGRI, Niger’s state-owned agricultural bank. Early results from these programs are largely encouraging, although strong oversight and technical assistance (TA) are necessary.

C. Proposed Development Objective(s)

Development Objective(s) (From PAD)

23. The Project Development Objective is to increase access to electricity through solar energy in rural and peri-urban areas of Niger.

Key Results

24. The PDO level indicators are the following:

- People provided with new or improved electricity service (number) (Corporate Results Indicator)
- Generation capacity of energy constructed or rehabilitated (MW constructed)

D. Project Description

25. The proposed project will assist in scaling up access to solar-based electricity services in rural and peri-urban areas. The scope of the proposed project is nationwide, with a particular focus on rural areas in the agricultural belt (for hybrid solar-diesel mini-grids) and peri-urban areas where electricity services are deficient or absent (for individual solar systems). The project will be both a pilot for off-grid approaches and a financing instrument to scale-up the implementation of the off-grid component of the NES. The project is designed based on three principles: (a) reaching diverse beneficiaries with varied needs, including households and community facilities; (b) maximizing private sector participation in the delivery of off-grid energy services to reach a larger number of beneficiaries, maximize impact, and support sustainability of service; and (c) retaining flexibility with respect to market approaches, from fully market-delivered approaches to more regulated ones where the Government maintains a leading role in service provision, thereby, using a mix of approaches that leverage the comparative advantages of both public and private sectors.

26. Based on consultations with Government authorities and lessons learned from other Sub-Saharan African countries, the project components described in the following paragraphs will support the increase of electricity access in rural and peri-urban areas based on different electricity service levels and applying different business and delivery models. The project proposes a comprehensive suite of investments to provide modern energy services to households, enterprises, community facilities, with pragmatic business models to attract private sector investment, sustainable services, know-how and efficiencies. A substantial technical assistance component is proposed to support a widespread consumer education campaign to inform and engage with citizens, private sector and financing institutions; reinforce capacities of the key public institutions of the sector (namely Ministry of Energy, ANPER, CNES and NIGELEC) and create an implementing unit at ANPER to implement rural electrification projects. For dispersed populations without service, Component 1 will help (a) develop the commercial market for high quality stand-alone solar systems to provide a basic level of
service for at least 4 hours of lighting and cell phone charging per day; (b) support commercial and technical services; and (c) facilitate product quality assurance to ensure good maintenance. For concentrated populations with higher demand that are too far from the grid to be served by grid extension, Component 2 will support public-private partnership (PPP) arrangements to install, operate, and maintain new hybrid solar-diesel mini-grids that will provide at least 16 hours of service per day. For NIGELEC clients of diesel mini-grids, Component 3 will improve the quality of service through PV hybridization of existing isolated diesel mini-grids to provide at least 16 hours of service per day and expand the number of clients connected to the grids. Component 4 will provide TA to address market, institutional, and regulatory barriers and strengthen the capacity of all project participants to implement in a sustainable manner the rural electrification approaches supported by the project.

27. **The proposed project will complement other WB-financed projects targeting increased productivity of agriculture.** The outcomes of the proposed project would leverage investments from WB-financed projects focusing on agriculture. Access to electricity will complement investments in irrigation and productive uses increasing their productivity. Private sector and electricity operators will provide the electricity service to farmers, cooperatives and local business. These operators will benefit of having productive and commercial clients as anchor customers of their service.

Component 1: Market Development of Stand-alone Solar Systems (US$8 million equivalent IDA Credit)

28. **The objective of this component is to develop a sustainable market for high quality stand-alone solar systems by increasing access to commercial financing to solar energy companies and their clients, namely households and farmers.** The component will (a) set up and operate a local-currency line of credit to provide access to finance in the solar energy market and (b) provide TA to improve the capacity of solar companies to obtain commercial financing. The individual solar systems to be supported will provide electricity at the lowest tiers of electricity service, including pico-PV systems for basic lighting and cell phone charging; SHS to provide a higher level of service for lighting, TV, and phone charging; and SWP systems. The market will determine the distribution of system types, but the minimum level of service would be 3 W for 4 hours per day. Sustainability of electricity provision will be supported by financing only high quality-certified solar systems and fostering financial and commercial relations between solar service providers and financing institutions.

29. **The direct beneficiaries of this component would be households and farmers that are either outside the grid area or in the grid area but unable to connect or with unsatisfactory service.** Other intermediary beneficiaries will be the distributors and solar companies who will benefit from increased access to finance through the line of credit and TA program. The location of these beneficiaries will be market-determined; the households or businesses that purchase such systems will be those that cannot afford electricity connection or those that are in areas where grid-based electricity service is not available or inadequate.

30. **The line of credit, to be managed by the Ministry of Finance (MoF),** will consist of two windows:

- **Enterprise financing.** The first window will provide working capital or direct investment capital to solar system importers, wholesalers, retailers, installers, and solar electricity service providers. The

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7 Niger lacks a development bank or apex institution typically used as a wholesaler. The MoF was chosen to manage the line of credit because of its technical knowledge of the financial sector and its fiduciary capacity to manage effectively a liquidity support program. See annex 2 for full fiduciary analysis of the MoF.
financing will enable them to import high-quality solar equipment, develop distribution networks, provide services, and make investments to expand their activities. One and up to two commercial banks will be selected to act as the PFI for this window.

- **Microfinance.** The component will leverage Niger’s well-developed microfinance sector by providing a second window that will support MFIs to provide credit to households, micro-firms, and farmers for purchase of pico-PV systems and SHS. One and up to two MFIs will be selected as the PFI for this window.

31. **The component will benefit from the TA provided by Component 4 (see below) to strengthen the capacity of solar companies,** working through existing SME support platforms provided by the *Société Sahélienne de Financement* (SAHFI), Niger’s national credit guarantee agency,\(^8\) and other incubators, as well as consumer education programs to promote knowledge of solar products.

32. **The MoF will lead the selection of both the commercial bank and the MFI based on a competitive tender process that assesses the quality and capacity of short-listed institutions.** Criteria used to select both the PFIs include financial performance, business practices, operational capacity, governance, and sectoral experience, in accordance with World Bank Policy on Financial Intermediary Lending (OP 10.00). The GoN will bear the foreign exchange and credit risk of lending to the PFIs.

33. **Given the nascent market conditions, the technical design is simple, involving direct contracts with selected PFIs.** The component is intended as a pilot program that can be scaled up upon successful demonstration of the line of credit. The program is coupled with TA to promote capacity, bankability, and market access for SMEs. Access to financing for both windows will be on a first-come-first-served basis between the two windows to allow for flexibility during project implementation. In accordance with the World Bank operational guidelines, pricing to PFIs and final borrowers will be competitive according to market conditions, and at a minimum, will incorporate the financial costs of mobilizing resources, administrative costs of monitoring the loan and collecting repayments, and risks inherent in lending to the market (including credit risk, liquidity mismatch, and sector-related risks). The PFIs will competitively determine rates to enterprises and households, following standard pricing practices and within ranges to be outlined in the Operations Manual (OM) for this component.

34. **The CNES will provide market development and TA support for the component** through national communication and sensitization campaigns as well as activities related to quality control of solar products. The CNES will also provide TA to support building capacity to private companies through incubators.

Component 2: Rural Electrification through Service-based Solar Hybrid Mini-grids (US$5 million equivalent IDA Credit, and US$10 million IDA Grant)

35. **This component, to be implemented by ANPER, will subsidize the provision of electricity to rural localities outside the national utility concession area that are not expected to be reached by the national grid**

\(^8\) SAHFI is incorporated in the project through leveraging existing SME support services for early stage companies seeking bank finance. Financing to expand SAHFI’s partial credit guarantee program was considered but it was not deemed a viable option due to capacity constraints. Strengthening SAHFI’s role to promote SME finance may form the basis of the future World Bank Group engagements to support access to finance in Niger.
in the short-term but have large populations, high density, power demand, and considerable economic and social activity. The component is expected to result in the installation of about 1.2 MW of installed PV generation and related mini-grid distribution systems to supply around 13,000 electricity connections to households, community facilities, and productive users, with specific emphasis on agribusinesses and pumping services for irrigation and drinking water supply. The hybrid generation systems will combine solar PV, battery storage, and thermal units as a backup option and will supply energy to small transmission and/or distribution networks extending to service drops for end-users. The selection of locations for implementation of new mini-grids under the project will be consistent with the geo-spatial plans developed under the NES, while considering the specific characteristics required for locations in this component.

36. **Two approaches will be used in this component—top-down and bottom-up.** The top-down approach (similar to that of the Project Programme d'Accès aux Services Energétiques pour la Commune rurale de Safo (PASE-Safo)) will enable ANPER to prioritize the electrification of the biggest population centers outside the national utility concession through a competitive bidding process for the selection of PPPs to invest, construct, operate, maintain, and further expand access. The second bottom-up approach will encourage subproject developers and investors to submit unsolicited proposals to ANPER for electrification via isolated hybrid PV/diesel mini-grids. The PPP arrangements to be used in both approaches will range from licenses to authorizations to mini-concessions, depending on the size of the installed generation capacity and the private sector’s financial ability. In both approaches, investment grants will be provided by the project to private operators to decrease costs of financing and reduce the tariffs ensuring affordability of the end-users and fair profitability for the private company.

37. **The associated principles and policies for rural electrification are to be outlined by the GoN in a strategic framework document to clarify the ‘rules of the game’ for all stakeholders.** The Rural Electrification Strategic Framework (RESF) will be derived from the Electricity Act and constitutes the key policy instrument governing rural electrification through private operators in Niger. It will be developed and adopted by the GoN and it will be a disbursement condition for this component. The RESF will, among others, define the rural electrification perimeter; identify financing means; and spell out regulatory mechanisms, institutional arrangements for oversight (for example, a steering committee ensured by ANPER’s Board) and regulation, and fiscal arrangements. Principles expected to be followed in the RESF are outlined in annex 2.

38. **Unsolicited proposals will be subject to competition and will have to comply with technical and economic standards approved by ANPER.** ANPER will screen and evaluate all subproject proposals that meet a minimum scale to guarantee competition. For the selection of the most appropriate and cost-efficient proposals, a simplified call for proposals will be launched by ANPER allowing institutions and the private sector to submit their proposals. Annex 2 outlines the process of soliciting and selecting proposals. Sponsors to be selected will be responsible for installation, operation, and maintenance, with oversight exercised by ANPER. Subsidies will be disbursed gradually on an output basis, according to the project commissioning schedule. Further, this component will include the connection fee for new customers. The project will connect new customers in bulk and provide a subsidy for new domestic clients that will reduce the connection fee to US$20, covering the administrative costs of the connection.

39. **For both approaches, the TA required by ANPER and the operators will be provided under Component 4.** The TA will, first and foremost, ensure a competitive selection of the investment options and operators, by
elaborating standards and templates for business plans of operators and appropriate appraisal tools for ANPER and providing related training; and, second, support ANPER and private operators to deliver sustainable electrification service to rural population through hands-on training on operation of hybrid mini-grids and application of innovative and cost-efficient customer services and platforms such as smart meters and mobile payments.

Component 3: Solar PV Hybridization of Isolated Thermal Mini-grids and Expansion of Access (US$27 million equivalent IDA Credit and US$3 million IDA Grant)

40. This component, to be implemented by NIGELEC, will finance the hybridization of several existing diesel-based isolated grids with solar PV generation and battery storage in rural areas, and will managed by NIGELEC to increase the hours of operation of the isolated systems and/or to decrease diesel consumption. This component will also expand access to electricity to unserved households and businesses in these localities, and will specifically target agribusinesses and pumping services for irrigation and drinking water supply. More specifically, this component aims to increase the electrification rate of the selected isolated centers from 20 percent to 75 percent and to increase the service level from 8 hours or 12 hours per day to at least 16 hours of electricity service per day by 2023. The hybridization of the selected isolated grids will result in decreased generation costs for NIGELEC and improve the quality of service to existing clients. The component will install around 4 MW of solar capacity, together with the connection equipment and meters, and will connect around 8,000 new customers and increase the hours of service for 3,200 existing customers. The selection of locations for implementation of solar hybridization of diesel mini-grids under the project will be consistent with the geospatial plans developed under the NES, while considering the specific characteristics required for locations in this component.

41. This component will target selected diesel-based isolated grids that have an average electrification rate below 20 percent. Technical, economic, and financial feasibility analyses will enable the selection of the most suitable diesel-based isolated grids for hybridization with PV technology out of the 115 existing grids spread throughout the country. Technically, three options were considered: (a) expand capacity through diesel generators, (b) expand capacity with PV and batteries, and (c) expand capacity through a mix of diesel generators and PV with batteries. The economic analysis showed that the best alternative is the mix of diesel and PV with batteries. The technology and design specifications are expected to allow a share of solar generation between 50 percent and 75 percent in the selected isolated grids. The investments required will include installation of PV power plants and storage systems; adding, replacing, or upgrading distribution lines and substations; installation of meters; and purchase of spare parts and tools. The component will also finance the connection of the new clients.

42. The Government will on-lend the financing to NIGELEC. The on-lending arrangements will be governed by a Subsidiary Agreement to be signed between the MoF and NIGELEC on IDA terms. NIGELEC will be responsible for commercial operations, allowing customers to choose between post and pre-payment of charges according to their needs. The technical and commercial capacities of NIGELEC will need to be reinforced. Further, investments under this component will include a US$3 million IDA Grant that will serve to subsidize the connection fee of 8,000 customers. Currently, the electricity connection fee to cover NIGELEC’s full cost of connection is around US$200, which is a significant amount for households in isolated areas. The
project will connect new customers in bulk and provide a subsidy for new domestic clients that will reduce the connection fee to US$20, covering the administrative costs of the connection.

43. **The component will also finance the services of an Owner’s Engineer to assist NIGELEC** with (a) overall component management and supervision of the design, procurement, construction, commissioning, and management of the EPC contracts and (b) coordination of the implementation of the Environmental and Social Management Plans (ESMPs) and Resettlement Action Plans (RAPs). **TA to support NIGELEC will be included in Component 4 as described in the next paragraphs.**

**Component 4: Implementation Support and Technical Assistance (US$2.5 million equivalent IDA Credit and US$7 million IDA Grant)**

44. **This component will support project management and implementation, capacity building, and TA to key off-grid electrification sector stakeholders, as well as monitoring and evaluation (M&E).** Targeted stakeholders will be key Government institutions (ANPER, CNES, MoE, NIGELEC, and local authorities), solar service providers, importers/installers, wholesalers and retailers, farmers, general public, and financial sector actors. The component will assist them to fulfill their functions efficiently and develop the solar market.

45. **Subcomponent 4.1. Project Management and Implementation Support (US$3 million).** This subcomponent will finance the support required for project management and implementation of the Project Implementation Units (PIUs) at ANPER and DGOFR, as well as at CNES, including technical, fiduciary, auditing, and M&E, gender mainstreaming, and operational costs. This subcomponent will also finance project preparatory activities such as feasibility studies, safeguards, and other required analytical work.

46. **Subcomponent 4.2. Project Management and Implementation Support to NIGELEC (US$0.75 million).** This subcomponent will finance the support required for project management and implementation of the PIU at NIGELEC, including technical, fiduciary, auditing, and M&E, gender mainstreaming, and operational costs. This subcomponent will also finance project preparatory activities such as feasibility studies, safeguards, and other required analytical work.

47. **Subcomponent 4.3. Capacity Building and Technical Assistance (US$4 million).** This subcomponent will finance activities associated with strengthening the capacity of key stakeholders to support the implementation of the three project investment components, namely (a) for Government agencies; (b) for financial sector actors participating in the project, in particular SAHFI and the PFIs; and (c) TA to private distributors and operators to develop their businesses and reach out to rural households and famers.

48. **Subcomponent 4.4. Information, Education, and Communication (US$1.75 million).** This subcomponent will finance campaigns to raise consumer awareness and increase knowledge about the systems and services offered and the available financing options and warranties, through information and promotional campaigns using media in rural areas. For solar pumping, a specific campaign will be implemented targeting farmers.

**E. Implementation**
Institutional and Implementation Arrangements

49. **ANPER, a Government agency of the MoE, will be responsible for overall coordination of the project, which will involve three project implementation entities:**

- Component 1: The MoF, with support from the CNES for TA activities;
- Components 2 and 4: ANPER (which will coordinate with the CNES, MoE, PFI, and NIGELEC, in particular for the implementation of TA under Component 4); and
- Component 3: NIGELEC.

50. **A Project Steering Committee (PSC), chaired by the MoE and including representatives of ANPER, the CNES, NIGELEC, and other ministries (that is, finance, planning, interior), will oversee the project.** The primary responsibility of the PSC will be to provide high-level policy guidance and strategic directions, ensure coordination with other sectors during implementation, resolve issues and challenges requiring high-level intervention, and monitor progress of the project.

51. **A PIU will be established at ANPER, headed by a Project Coordinator (PC) responsible for overall project coordination as well as the components carried out by ANPER.** ANPER will report to the PSC on a regular basis to ensure communication with all pertinent ministries and to obtain decisions on issues pertaining to multiple Government stakeholders. The PC will report to the Executive Director of ANPER, who will be ultimately responsible for the fiduciary and safeguards aspects of the project. The PC will also receive support from two of ANPER’s field offices located in different regions of the country, which will liaise with rural operators and private sector entities as well as local authorities and final beneficiaries of the project. ANPER has no experience with World Bank-financed projects. The PIU will be staffed to ensure that project fiduciary responsibilities are adequately fulfilled. Experienced project consultants will be retained to assist ANPER with project implementation in key areas such as planning, social, and environment safeguards, procurement, and financial management (FM). In addition, an experienced project design and supervision consultant (Owner’s Engineer) will be competitively recruited as part of the project to assist with project implementation and will report directly to ANPER’s PC.

52. **NIGELEC has a unit (Cellule des Grands Projets, CGP) that manages large projects, which will lead the implementation of Component 3.** This unit already has experience with World Bank-financed projects, such as NELACEP. A PC who reports to NIGELEC’s Deputy Chief Executive Officer (Sécretaire Générale) leads the unit, which is at the same level as other operational departments, thus ensuring coordination through the management board. The PC will be supported by a team that includes specialists in procurement, FM, technical, and environmental and social safeguards. Major investments will be contracted out to experienced contractors secured through competitive bidding. In addition, an experienced project design and supervision consultant (Owner’s Engineer) will be competitively recruited as part of the project to assist NIGELEC with project implementation and will report directly to NIGELEC’s PC.

53. **Under Component 1, the MoF will provide lines of credit to a commercial bank and an MFI according to the World Bank’s Policy for Financial Intermediary Lending (OP 10.00).** The MoF will receive TA to enhance its capacity to manage the line of credits, the extent needed as identified in the assessment. The CNES will provide market development and TA support. The CNES will also use the TA to support building capacity to
private companies through incubators. The commercial bank and the MFI that will benefit from the lines of credit will also have to pass the OP 10.00 assessment before disbursing any funds from the lines of credit.

54. Each implementing agency (ANPER, NIGELEC, and the MoF) will have responsibility for the day-to-day management and coordination of their respective project-related activities, including (a) ensuring timely implementation in accordance with the Project Implementation Manual (PIM); (b) preparing annual work plans and budgets and annual Procurement Plans (PPs); and (c) assuming overall responsibility for, among others, procurement, FM, M&E, communications, and environmental and social safeguards (ensuring compliance with the safeguard documents of all entities involved in the project’s implementation).

55. A technical group, comprising the institutions responsible for the implementation of the proposed project (MoE, ANPER, CNES, NIGELEC, and MoF) will meet monthly to discuss the progress of the project and coordinate the activities to be implemented.

56. Project implementation arrangements, including fiduciary responsibilities, are described in annex 2. A PIM will be prepared and adopted by the three implementing agencies as well as the CNES and the MoE before project effectiveness.

F. Project location and Salient physical characteristics relevant to the safeguard analysis (if known)

Rural areas and small towns throughout Niger. Exact location not yet known, will be selected during implementation.

G. Environmental and Social Safeguards Specialists on the Team

Paivi Koskinen-Lewis, Bougadare Kone

SAFEGUARD POLICIES THAT MIGHT APPLY

<table>
<thead>
<tr>
<th>Safeguard Policies</th>
<th>Triggered?</th>
<th>Explanation (Optional)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Assessment OP/BP 4.01</td>
<td>Yes</td>
<td>The project if successfully implemented will have significant environment benefits (including greenhouse gas emission reductions) mainly derived from the switch of power generation from a fossil fuel source (isolated grids running with diesel generators) including fuel-run lighting devices like kerosene lamps, oil lamps, gas lamps, and candles mostly used in rural areas to a renewable source (solar energy).</td>
</tr>
</tbody>
</table>
However, the project interventions bear some environmental and health safety risks but no significant and/or irreversible adverse environmental and social issues are expected. The potential impacts on local environment of the Niger Solar Access Project (NESAP) would be very small and limited to the disposal of lead acid or nickel-cadmium batteries used those are expected to be local, site-specific, and easily manageable. Therefore, in compliance with OP4.01, the team proposes to assign an EA Category of "B" to the project and that will apply both to the selected Financial Intermediaries as well as NIGELEC.

As a result, and in accordance with OP4.01 Environmental Assessment, an Environmental and Social Management Framework (ESMF) will be developed as part of the Operational Manual. As the specific subprojects are not yet clearly defined and the exact sites of the proposed investments are not yet known, the ESMF has been prepared, consulted upon and disclosed in-country and by the Bank on April 8, 2017 and April 10, 2017, respectively.

This ESMF has been designed to provide guidance on procedures to be followed both by the selected Financial Intermediaries and by NIGELEC. The preparation of the ESMF also takes into account relevant World Bank Group (WBG) Environmental, Health and Safety (EHS) Guidelines.

The ESMF outlines key steps for subproject evaluation and implementation, including screening, due diligence, environmental documentation, public consultation and disclosure, review and approval, legal/contractual obligation, and monitoring and reporting. A variety of checklists and an Environmental Management Plan (EMP) are presented in the ESMF in order to support the NIGELEC, ANPER, the selected Financial Intermediaries, and sub-borrowers to carry out each key step of subproject appraisal and implementation.

<table>
<thead>
<tr>
<th>Natural Habitats OP/BP 4.04</th>
<th>No</th>
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<tbody>
<tr>
<td></td>
<td>The project will not cause any degradation of natural habitats as defined under this Bank policy. The</td>
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<tr>
<td>Environmental and Social Issues</td>
<td>Compliance</td>
</tr>
<tr>
<td>-------------------------------</td>
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<tr>
<td>Forests OP/BP 4.36</td>
<td>No</td>
</tr>
<tr>
<td>Pest Management OP 4.09</td>
<td>No</td>
</tr>
<tr>
<td>Physical Cultural Resources OP/BP 4.11</td>
<td>Yes</td>
</tr>
<tr>
<td>Indigenous Peoples OP/BP 4.10</td>
<td>No</td>
</tr>
<tr>
<td>Involuntary Resettlement OP/BP 4.12</td>
<td>Yes</td>
</tr>
<tr>
<td>Safety of Dams OP/BP 4.37</td>
<td>No</td>
</tr>
<tr>
<td>Projects on International Waterways OP/BP 7.50</td>
<td>No</td>
</tr>
<tr>
<td>Projects in Disputed Areas OP/BP 7.60</td>
<td>No</td>
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</tbody>
</table>
A. Summary of Key Safeguard Issues

1. Describe any safeguard issues and impacts associated with the proposed project. Identify and describe any potential large scale, significant and/or irreversible impacts:

   Overall, the potential impacts of the project are expected to be localized, site-specific, and easily manageable. No large-scale, irreversible impacts are foreseen.

   No physical displacement is anticipated due to the nature of the project. However, components 2 and 3 may require small amounts of land acquisition and OP/BP 4.12 is therefore triggered to address any adverse impacts. In terms of positive impacts, the Project will reduce differences in electricity services available to urban, peri-urban and rural households some of whom have never had electricity services, to improve opportunities for rural socio-economic development. Productive uses will be encouraged through power from mini-grid, solar pumps, and individual solar systems.

2. Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area:
   n/a

3. Describe any project alternatives (if relevant) considered to help avoid or minimize adverse impacts.
   n/a

4. Describe measures taken by the borrower to address safeguard policy issues. Provide an assessment of borrower capacity to plan and implement the measures described.

   The Borrower has prepared an Environmental and Social Management Framework (ESMF) and a Resettlement Policy Framework (RPF) to address any negative impacts. Subsequent Resettlement Action Plans will be prepared during project implementation as and when necessary. Nigelec has some experience implementing a Bank financed project, but the capacity of its staff will need improving, which will be done through hiring designated environmental and social specialists to manage the day-to-day safeguards work in implementation and supervision. ANPER, which will implement component 3 has very limited capacity on safeguards. to improve the capacity, a designated staff member will be hired to oversee safeguards aspects, The staff at both Nigelec and ANPER will also be trained in WBG’s safeguards policies. World Bank supervision missions will include environmental and social specialists.

5. Identify the key stakeholders and describe the mechanisms for consultation and disclosure on safeguard policies, with an emphasis on potentially affected people.

   Key stakeholders are on the micro level households, businesses, community and public facilities, and farmers located in rural and peri-urban areas of Niger and on the macro level the key government institutions (ANPER, CNES, MOE, NIGELEC, and local authorities), solar service providers, importers/installers, wholesalers and retailers, farmers, general public, and financial sector actors. Consultations with the beneficiaries have been held in the context of preparing the safeguards documentation, and that consultation process will be on-going during implementation as the sub-project sites are identified. Regarding the institutional stakeholders, an inter-ministerial PSC and technical working groups will be set up to provide an adequate platform for leveraging potential synergies and addressing cross-sectoral issues that may emerge.
### B. Disclosure Requirements

<table>
<thead>
<tr>
<th>Environmental Assessment/Audit/Management Plan/Other</th>
<th>Date of receipt by the Bank</th>
<th>Date of submission to InfoShop</th>
<th>For category A projects, date of distributing the Executive Summary of the EA to the Executive Directors</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>09-Apr-2017</td>
<td>10-Apr-2017</td>
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**"In country" Disclosure**

**Resettlement Action Plan/Framework/Policy Process**

<table>
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<tr>
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<td>09-Apr-2017</td>
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**"In country" Disclosure**

Niger  
08-Apr-2017

**Comments**

### C. Compliance Monitoring Indicators at the Corporate Level (to be filled in when the ISDS is finalized by the project decision meeting)

**OP/BP/GP 4.01 - Environment Assessment**

Does the project require a stand-alone EA (including EMP) report?  
Yes

If yes, then did the Regional Environment Unit or Practice Manager (PM) review and approve the EA report?  
Yes

Are the cost and the accountabilities for the EMP incorporated in the credit/loan?  
Yes

**OP/BP 4.11 - Physical Cultural Resources**

Does the EA include adequate measures related to cultural property?  
Yes

Does the credit/loan incorporate mechanisms to mitigate the potential adverse impacts on cultural property?
Yes

OP/BP 4.12 - Involuntary Resettlement

Has a resettlement plan/abbreviated plan/policy framework/process framework (as appropriate) been prepared?
Yes
If yes, then did the Regional unit responsible for safeguards or Practice Manager review the plan?
Yes

The World Bank Policy on Disclosure of Information

Have relevant safeguard policies documents been sent to the World Bank's Infoshop?
Yes
Have relevant documents been disclosed in-country in a public place in a form and language that are understandable and accessible to project-affected groups and local NGOs?
Yes

All Safeguard Policies

Have satisfactory calendar, budget and clear institutional responsibilities been prepared for the implementation of measures related to safeguard policies?
Yes
Have costs related to safeguard policy measures been included in the project cost?
Yes
Does the Monitoring and Evaluation system of the project include the monitoring of safeguard impacts and measures related to safeguard policies?
Yes
Have satisfactory implementation arrangements been agreed with the borrower and the same been adequately reflected in the project legal documents?
Yes

CONTACT POINT

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Energy Specialist

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Ministry of Finance

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Maman Laouali  ABDOU RAFA
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**APPROVAL**

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<thead>
<tr>
<th>Task Team Leader(s):</th>
<th>David Vilar Ferrenbach</th>
</tr>
</thead>
</table>

**Approved By**

<table>
<thead>
<tr>
<th>Safeguards Advisor:</th>
<th>Maman-Sani Issa</th>
<th>11-Apr-2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practice Manager/Manager:</td>
<td>Charles Joseph Cormier</td>
<td>11-Apr-2017</td>
</tr>
<tr>
<td>Country Director:</td>
<td>Paola Ridolfi</td>
<td>12-Apr-2017</td>
</tr>
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