I. Project Context

Country Context

1. Burkina Faso is a low-income, landlocked, Sub-Saharan country with 16 million inhabitants and limited natural resources. During February and June 2011, the country experienced episodes of civil unrest unprecedented in the last 23 years. Burkina Faso also faced significant economic vulnerability and twin food and refugee crises in 2012.

2. Burkina Faso has maintained economic stability in the face of many structural obstacles and economic shocks, including recurring droughts. Strong reserves of gold and a vibrant cotton sector have supported a respectable economic growth rate, despite vulnerability to commodity price movements and terms of trade shocks. Burkina has also received significant aid flows in the last decade. It is recognized for being one of the best performers in West Africa as measured by the 3.78 CPIA score that it has maintained since 2010. Yet, partly because of a high population growth rate and a non-inclusive pattern of growth, poverty incidence has registered only a moderate decline since the 1990s and remained at 46.7 percent in 2009 (compared with 51 percent in 2003).
3. An inflow of Malian refugees in 2012 has put fiscal pressure on Burkina’s budget. Government has responded by allocating close to US$30 million to pay for food and schools for the Malian refugees. Latest estimates from October 2012 suggest that there are 107,000 Malian refugees who have crossed over into Burkina in the aftermath of the Malian political unrest.

4. Growth is expected to reach 7 percent in 2013, but will continue to be reliant on commodity prices and therefore subject to downside risk. Reasonable agricultural production and a mining sector boom will help boost growth in the medium-term. Through 2015, economic growth is projected to remain strong and average 7 percent, mostly driven by agriculture, cotton, mining, and services sectors, as well as higher public investment in infrastructure. Medium-term forecasts assume that agricultural production will benefit from continued implementation of measures supporting higher productivity and that the cotton sector, despite volatility in international prices, will continue to increase productivity, in part through the extended use of genetically modified seeds. Strong gold prices and increasing domestic gold production are also expected to contribute to growth, as is higher value added in the manganese sector.

5. The Strategy for Accelerated Growth and Sustainable Development (SCADD) covering the 2011-2015 period is the Government’s main strategic document. It identifies four strategic axes that the Government will pursue to meet its development challenges. They are: (i) development of the pillars of accelerated growth; (ii) strengthening human capital and promoting social protection, (iii) strengthening good governance, and (iv) taking into account cross-cutting priorities in development policies and programs. These various axes are complementary and interact to achieve the objectives of accelerated growth and sustainable development.

6. The first axis identifies energy as an important element of growth and the second axes highlights the need to increase access to modern energy services. To promote access to energy services for the greatest number of people and improve their productive capacity, the Government will pay particular attention to rural areas where rates of access to energy are generally very low. To address energy service access, the Government plans to: (i) connect most of the population to the electricity network, (ii) install power stations in major centers outside the network, (iii) develop multifunctional platforms with small networks providing access to energy for sparsely populated communities, and (iv) use photo-voltaic systems for people in low-density areas. The SCADD pays particular attention to the development of renewable energies, in particular solar energy, and the development of interconnection with countries of the sub-region.

Sector Development Strategy

7. Burkina Faso faces limited access to modern energy sources. The electrification rate is about 14 percent (about 40 percent in urban areas and no more than 5 percent in rural areas). Per capita consumption of electricity by total population is only 50 kWh per year. About 90 percent of the population still relies on firewood and charcoal for the bulk of their energy needs. Total generation capacity in Burkina Faso is 256MW, which is insufficient to meet peak demand. Power demand is growing at close to 10 percent per annum.

8. Burkina Faso depends on thermal generation with imported fuel. The country has limited hydropower potential. Electricity imports from Cote d'Ivoire and Ghana (via small cities at the
The combination of these various factors has hindered Burkina Faso’s ability to diversify its energy mix and expand access to electricity.

9. The country faces six main challenges in the electricity sector: (i) expanding generation capacity to meet an increasing demand for energy services; (ii) providing security of supply in case of interruption of imports from neighboring countries; (iii) achieving sustainable supply of low cost electricity from neighboring countries; (iv) improving the efficiency and equity in energy services provision by reforming tariff and subsidy policy in a context of high supply costs, and by a sound demand side management strategy; (v) expanding access of energy services to rural and peri-urban populations; and (vi) increasing the share of renewables in the electricity generation mix.

10. Additional capacity is required to meet the increasing demand for electricity services. The demand for electricity continues to grow at an average close to 10 percent a year in the Bobo-Dioulasso Regional Network (CRCB) and in the Ouagadougou Regional Network (CRCO). Additional power generation capacity is not following at the same pace, creating serious capacity constraints. The transmission interconnection from Ferkessedougou (Cote d’Ivoire) to Bobo-Dioulasso (Burkina Faso) in 2001 alleviated this situation to a certain extent, but shortages continued to be significant in the CRCO. When the Bobo Dioulasso-Ouagadougou transmission line was commissioned in December 2009 (with a planned transit capacity of 121MW), the provision of substantially cheaper hydro and gas-based electricity from Cote d’Ivoire helped reduce the production costs and supply gap in Burkina Faso.

11. Electricity tariffs in Burkina Faso are amongst the highest in sub-Saharan Africa, averaging 26 US cents per kWh. High electricity supply costs that stem in part from its complete dependency on imports for its large fuel needs for thermal electricity generation. Yet, even these high tariffs do not reflect full costs of service delivery and the national utility, SONABEL, has relied on public subsidies and on-lending from the Government for its operations and equipment needs.

12. To lower the cost of electricity, the Government plans to: (i) establish an institutional framework and regulatory and tax measures that can mobilize actors and raise resources, (ii) secure the country’s supply and reduce energy costs, (iii) open up rural areas by expanding networks and pre-electrification and attain a national electrification rate of 60 percent by 2015, (iv) mobilize and develop the national energy potential, and (v) improve energy efficiency.

13. To diversify the energy mix and reduce cost, SONABEL must resort to developing interconnection with neighboring countries and import cheaper bulk supply electricity. The completion of these interconnection lines will secure capacity for the medium term. The pursuit of regional integration goals, in the wider framework of the West Africa Power Pool (WAPP), is further developed in the sectoral strategy (Vision 2020 De l’Acces aux Services Energetiques Modernes). The WAPP, sponsored by the Member States of the Economic Community of West African States (ECOWAS) is designed to bring about economic benefits through the strengthening of the transmission network and other actions to facilitate electricity trade between member states and to strengthen energy security and efficiency. Other economic benefits include a reduction in
energy prices and possibly the deferment of the need for new power generation.

14. Against this background, the extension of the existing Cote d’Ivoire-Bobo Dioulasso transmission line to Ouagodougou financed under the Power Sector Development Project serves as a stepping stone towards a better integrated regional power market. To diversify and improve the reliability of supply for the CRCO, the interconnection with Ghana through the above-mentioned transmission line between Bolgatanga (Ghana) and Ouagadougou, is expected to be operational in 2015. To increase access to, and use of energy services to improve living conditions in selected rural, peri-urban, and urban areas, the Energy Access Project supports Burkina Faso’s efforts in expanding energy access. Other donors such as the African Development Bank, the West Africa Development Bank, the Indian Government through EXIM Bank and the French Development Agency (AFD) are also assisting the GoBF with investments that will help increase electricity access.

15. While the country’s future demand will be mainly met through imports from neighboring countries such as Cote d’Ivoire, Ghana and Nigeria, Burkina Faso has to plan for back-up thermal power generation in view of the delays in the implementation of the interconnection projects and an increasing demand (close to 10%), and to account for the seasonality of hydropower generation in the sub-region. Moreover, minimum generation capacity is needed for stability both for network technical requirements. Kossodo, Ouaga 2, Bobo 2 and Komsilga are power plants that will help fill the demand gap while the share of gas and hydropower will gradually increase in the energy mix.

16. Improving energy efficiency and demand side management would help reduce pressure for increased generation capacity. Until recently, the response to capacity shortages on the CRCO was on the supply side, i.e. by increasing power generation capacity. Very limited demand-side management (DSM) options were considered. An aggressive DSM program on the CRCO would result in the more efficient use of electricity and a reduction in peak loads, which would in turn reduce pressure for more generation capacity in the short and medium term, and contribute to the financial sustainability of the utility. The Power Sector Development Project approved in 2008, initiated important demand side management activities by financing training, workshops, seminars audits and studies as well as the acquisition of software to better manage and monitor energy consumption in public buildings. In that context, 345 beneficiaries optimized their power. Moreover, the software system made possible the cancellation of 250 inactive accounts, the replacement of obsolete meters, and identification of private meters within public buildings. Total savings are estimated at about US$2.0 million). Twenty five public buildings have been equipped with energy saving equipment.

17. Expanding access of energy services to rural and peri-urban populations is crucial in the country’s development. For Burkina Faso to reduce significantly the incidence of poverty, there is a crucial need to expand access to modern energy services. Only about 13 percent of the total population has access to electricity. This prevailing low level of access constitutes a severe handicap for the development of small- and medium-size productive enterprises and limits the impact of existing social programs.

**Sectoral and institutional Context**
18. Several donors support the development of the electricity sector. In addition to the Energy Access Project and IDA operations supporting the WAPP Program, the World Bank is assisting the Government in its effort to ensure the efficiency and equity in energy services provision on the overall tariff reform and subsidy policy in a context of high supply costs.

19. As demand for electricity continues to grow, a number of donors are also helping the Government improve power generation capacity, extend the transmission and distribution network and expanding access of energy services. Donors such as AFD, EIB, EU and the Bank Group (with IFC and MIGA) are also exploring ways to increase the share of renewables (in particular solar) in the generation mix. The EU is financing the construction of a solar energy plant in Zagtouli, a town located about 20km from Ouagadougou.

20. The Government and the donor community have an intensive dialogue on the financial situation of the sector. In addition to the number of economic and sector work being financed, both the Power Sector Development Project and the first phase of the inter-zonal transmission hub project of the WAPP (APL3) include legal covenants on SONABEL’s financial situation.

Institutional Setting

21. The Ministry of Energy and Mines (MEM) is responsible for policy development on the generation and distribution of electricity, the control of energy infrastructure, and the promotion of sustainable energy systems. The Direction Générale de l’énergie (General Department of Energy - DGE) was created within the MEM to ensure the development and the implementation of energy policies and strategy design.

22. In 2004, the electricity distribution segment was unbundled into two segments. The first sub-segment covers the current perimeter of SONABEL and the second segment covers all the areas outside SONABEL’s perimeter. Operations in the second segment are eligible for financing through the Electrification Development Fund (Fonds de Développement de l’Electrification - FDE).

23. SONABEL is the state-owned electric utility created in 1954. It is a vertically integrated utility which has a monopoly on electricity import/exports but not on generation or distribution. After the disruptions that followed the political crisis in Côte d’Ivoire in 2010, SONABEL’s financial situation deteriorated due to the use of expensive rental power plants. SONABEL initiated measures aimed at putting in place a more aggressive collection policy, an increase in sales by a reduction of energy losses, and a reduction of other internal costs. Over the past two years, these measures have been insufficient to improve the financial situation of SONABEL. The Government and SONABEL are reviewing options aimed at increasing SONABEL’s revenues during the second half of 2013 through a combination of revenue, subsidy and debt restructuring measures. Without additional measures, analysis shows thatSONABEL may not reach financial equilibrium before 2015-2016.

24. The Rural Electrification Agency (FDE) was created by decree in 2003 to promote an equitable energy access in rural areas; contribute to the implementation of the National Electrification Plan; and develop, appraise, and tender the rural electrification projects identified by the central government, local governments, and by private investors or operators. The FDE gets its resources from state subsidies, taxes on kWh sold (2 FCFA francs), and bilateral and multilateral
donors (representing about US$ 70 million in 2011). The FDE also acts as a technical quality regulator in the rural energy subsector particularly with the COOPELs which are cooperative associations, formed under Burkina laws by future payers, either at village or municipal level.

25. Cooperative association (COOPELs) formed under Burkina laws at village or municipal level, play a significant role in rural electrification but some of them face financial challenges due to their very small size. A COOPEL is the guarantor and owner of the rural electrification assets. It is responsible for: the administration, operation, and management of the assets; the management of finances; competitively selecting and recruiting the Supplier/ Constructor/ Operator; ensuring the maintenance and durability of the assets; determining electricity tariffs; and collecting the proceeds from the sale of electricity.

26. The Regulatory Authority for the Electricity Sector (ARSE) was formed in 2007. Even after the decision to reverse the privatization process in the electricity sector in 2010, the Government maintained the ARSE which operates under the authority of the Prime Ministry with a mandate to control the operators of the sector, arbitrate disputes between operators and to ensure the preservation of economic conditions necessary for the sustainability of the sector while ensuring fair competition.

Higher-level objectives to which the project contributes

27. A new Country Assistance Strategy has recently been prepared with the government and other stakeholders. The new CAS for 2013-16 is aligned with the government’s Strategy for Accelerated Growth and Sustained Development (SCADD) and aims to selectively support the achievement of accelerated growth and sustainable development in Burkina Faso. Specifically the CAS will intensify its focus on poverty reduction given the lack of progress in reducing poverty despite high economic growth rates. Shared growth will be promoted by improving income opportunities and increased abilities of poor households to participate in markets, through strengthened human capital, reduced vulnerability to shocks and increased economic empowerment. The World Bank Group will contribute towards achieving these development outcomes by providing a results-focused package of activities grouped under the following three mutually reinforcing strategic objectives notably (a) accelerated, inclusive and sustained economic growth; (b) improved public sector performance for service delivery and contained population growth; and (c) increased resilience and reduced vulnerability.

28. The project is consistent with the CAS’s objective to help improve competitiveness and to support broad-based growth. By improving energy supply, expanding energy services access, and improving demand side management, the project will allow the Government to reach out to remote and poor populations, thus allowing them to increase their productivity and to improve their overall livelihoods.

29. Moreover, the project is also fully in line with the first objective of the World Bank Group Energy Strategy aimed at “improving access to and reliability of modern energy services”; as well as the specific objective defined under the Africa Region’s Energy Strategy to scale-up energy supply/security and expand access to modern energy. As recognized in the World Bank Strategy for Africa, addressing energy deficits will be critical to transformational growth.
Project Development Objectives (PDO)

30. The project development objectives are to: (i) increase access to electricity (ii) improve the reliability of electricity supply, and (iii) improve efficient use of energy in target areas.

31. The direct project beneficiaries are: (i) SONABEL’s existing residential, commercial and industrial customers, who will benefit from improved quality of electricity services in Fada Ngourma and Ouahigouya; (ii) households living in target rural areas who will have access to electricity or benefit from solar lanterns (iii) the State and the population who will benefit from the installation of economic lamps and more efficient public lighting; and (iv) public and private participants in capacity building and training activities.

PDO Level Results Indicators

32. In line with the focused objectives of the project, the following key PDO indicators are proposed:

a) PDO 1: Direct Project Beneficiaries of which, Female project beneficiaries (%)
b) PDO 2: Peak demand met in selected cities when standing alone (islanding)
c) PDO 3: People provided with access to electricity under the project by household connection
d) PDO 4: Total capacity (kW) of installed equipment replaced by more efficient equipment

Project Description

Project Components

The proposed project, whose cost is estimated at about US$50 million, will include the following components:

33. Component 1: Improve the reliability of energy supply (US$15.40 million). This component comprises: (i) the construction of two turnkey diesel power stations of at least 7.5 MW (15MW) convertible to heavy fuel oil in two regional growth poles; and (ii) services for construction supervision.

34. The objective of this component is to help SONABEL secure electricity supply in areas with fast-growing economic development. The plants will serve as a back-up during the planned (for maintenance) or unplanned unavailability of the interconnection lines. SONABEL intends to mitigate such risk, with particular emphasis on fast-growing economic development in regional growth poles. Fada N’ selected from a sample of five pre-selected cities: Ouahigouya, Dedougou, Fada N’gourma, Dori and Gaoua cities.

35. Component 2: Increase electricity access in target areas (US$25.59 million). This component comprises grid expansion and connections in about 40 communities, through existing and new 33kV distribution lines. Those lines include the existing Bobo-Ouaga line which provides 33 kV on its shield wire (cable de garde), and the 33 kV distribution lines under construction from
Pa and Kaya. In line with FDE’s current practice, the component could also finance connection charge subsidies as a way to improve access in poor rural areas. Households, schools, clinics, local administration facilities, recreational centers and other units in these areas will also be connected. The Government is expected to finance the environmental and social studies, compensation, and awareness campaigns before and during works.

36. Component 3: Improve efficient use of energy in target areas (US$4.60 million). This component comprises: (a) strengthening the institutional, legal and regulatory framework to support demand-side management and energy efficiency initiatives (including the acquisition of testing and certification equipment, the recruitment of consultant to support legal review and capacity building initiatives such as experience sharing and south-south collaboration, consumer and distributors awareness campaigns); (b) investing in energy efficient equipment (including the installation of energy saving lamps in selected households and public lighting); and (c) promoting the efficient and rationale use of electricity through the dissemination of information and training.

37. To complement these activities, a set of Lighting Africa interventions will be implemented. The objective of incorporating Lighting Africa under this component is to catalyze the market for solar lanterns, thus providing consumer with cheap and efficient access to lighting where grid access will not extend. Specific activities include: (i) capacity building on off-grid lighting in rural electrification strategies; (ii) public service announcements and awareness campaigns to inform consumers of the benefits of solar lanterns and other good quality products; (iii) market research for Lighting Africa products; (iv) private and public sector engagement activities to raise awareness among actors from both sectors about existing solar market opportunities and connect these actors to have them work together and catalyze the solar lantern’s market; and (v) the deployment of approximately 25,000 lanterns in public schools targeting persons in off-grid communities.

38. Component 4: Institutional Strengthening and Capacity Development (US$4.60 million equivalent). This component includes four subcomponents aimed at financing (a) institutional strengthening of public sector energy agencies to support scaling up of energy service expansion; (b) capacity development of energy service providers; (c) outreach and partnership initiatives; and (d) specific studies to improve the energy mix (notably in renewable energy) in the medium term and a communication strategy. Under this component, the Government will finance institutional support (such as new offices for the FDE and administrative expenses) and project coordination.

39. The institutional strengthening subcomponent comprises provision of training, consultancies and equipment to support the FDE, SONABEL and DGE. The sub-component aimed at developing capacity of energy service providers comprises capacity development (including training, workshops and seminars) of energy services cooperatives, local communities, NGOs, and private sector small- and medium-size enterprises (SMEs). The outreach and partnerships subcomponent comprises outreach and partnership initiatives (including training, workshops and seminars) at the national, regional, and global levels to attract financing for scaling up energy access expansion in Burkina Faso.

40. Finally, the studies aimed at improving the medium to long-term energy mix (notably in renewable energy) including studies to fully exploit the country’s hydro capacity in Bon, Bontioli, Folozon and Gongourou, and communication strategy.

II. Project Development Objectives
The project development objectives are to: (i) increase access to electricity, (ii) improve the reliability of electricity supply, and (iii) improve the efficient use of energy in targeted areas.

III. Project Description

Component Name
Component 1: Improve the reliability of energy supply (US$15.40 million).
Component 2: Increase electricity access in target areas (US$25.59 million).
Component 3: Improve efficient use of energy in target areas (US$4.60 million).

IV. Financing (in USD Million)

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For Loans/Credits/Others

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V. Implementation

VI. Safeguard Policies (including public consultation)

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VII. Contact point

World Bank
Contact: Fatouma Toure Ibrahima Wa
Title: Senior Financial Specialist
Tel: 5352+4195
Email: fibrahima@worldbank.org

Borrower/Client/Recipient
Name: Ministry of Finance
Contact:
VIII. 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

Implementing Agencies
Name: FDE
Contact: Jean Baptiste Kabore
Title: Director General
Tel:
Email: kaborejb@yahoo.fr

Name: DIRECTION GENERALE DE L’ENERGIE
Contact: Sawadogo Narcisse
Title: Director, Energy Department, Ministry of Energy
Tel: 226-70200628
Email: sawadogo_nar@yahoo.fr

Name: SONABEL
Contact: Ki Siengui
Title: Director General
Tel: 226-50306100
Email: siengui.ki@sonabel.bf