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The World Bank Group

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Report No: 83025 - MR

PROJECT APPRAISAL DOCUMENT

ON

A PROPOSED IDA PARTIAL RISK GUARANTEE
IN THE AMOUNT UP TO US$ 130 MILLION
IN SUPPORT OF THE ISLAMIC REPUBLIC OF MAURITANIA

A PROPOSED IDA PARTIAL RISK GUARANTEE
IN THE AMOUNT UP TO US$ 99 MILLION
IN SUPPORT OF THE REPUBLIC OF SENEGAL

A PROPOSED IDA PARTIAL RISK GUARANTEE
IN THE AMOUNT UP TO US$ 32 MILLION
IN SUPPORT OF THE REPUBLIC OF MALI

AND

A PROPOSED MIGA GUARANTEE

IN THE AMOUNT OF US$ 585 MILLION IN THE ISLAMIC REPUBLIC OF MAURITANIA COVERING INVESTMENTS BY TULLOW PETROLEUM (MAURITANIA) PTY LTD, TULLOW OIL (MAURITANIA) LTD, MAURITANIA HOLDINGS B.V., PC MAURITANIA 1 PTY LTD, PC MAURITANIA II B.V., PREMIER OIL EXPLORATION (MAURITANIA) LTD, AND FP MAURITANIA A B.V.

FOR

THE BANDA GAS TO POWER PROJECT

May 9, 2014

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CURRENCY EQUIVALENTS

(Exchange Rate Effective April 30, 2014)

Currency Unit	=	Mauritania Ouguiya & Francs CFA
1 USD	=	295 UMA
1 USD	=	473 FCFA

FISCAL YEAR

January 1 – December 31

ABBREVIATIONS AND ACRONYMS

AFD	*Agence Française de Développement* (French Agency for Development)
AfDB	African Development Bank
AFESD	Arab Fund for Economic and Social Development
ARE	*Autorité de Régulation* (Regulation Authority in Mauritania)
bpd	barrels per day
Btu	British thermal units
BBtu	Billion British thermal units
BoC	Breach of Contract
CAPEX	Capital Expenditures
CCGT	Combined cycle gas turbines
CPS	Country Partnership Strategy
CREE	*Commission de Régulation de l'Electricité et de l'Eau* (Regulatory Commission for Electricity and Water in Mali)
CRSE	*Commission de Régulation du Secteur de l'Electricité* (Electricity Regulatory Commission in Senegal)
EDM	*Energie du Mali* (Power Utility of Mali)
EEM	Eskom Energy Manantali
EHS	Environment, Health and Safety Plans
EIB	European Investment Bank
EIRR	Economic Internal Rate of Return
EITI	Extractive Industries Transparency Initiative
EMP	Environmental Management Plans
EPC	Engineering Procurement and Construction
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESRS	Environmental and Social Review Summary
FCFA	*Francs Communauté Financière Africaine* (West African Currency)
FDI	Foreign Direct Investment
FID	Final Investment Decision
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GoML	Government of Mali
GoMR	Government of Mauritania
GoSN	Government of Senegal
GSA	Gas Sales Agreement
GWh	Gigawatt hour

HFO	Heavy Fuel Oil
HV	High Voltage
ICSID	International Center for the Settlement of Investment Disputes
IDA	International Development Association
IFC	International Finance Corporation
IMF	International Monetary Fund
IPP	Independent Power Producer
IRR	Internal Rate of Return
IsDB	Islamic Development Bank
JV	Joint Venture
kWh	Kilowatt hour
L/C	Letter of credit
LNG	Liquefied Natural Gas
LoS	Letter of Support
M	Millions
mmBtu	Million British thermal units
mmscf	Million standard cubic feet
mmscfd	Million standard cubic feet per day
MIGA	Multilateral Investment Guarantee Agency
MW	Megawatt
NPV	Net Present Value
O&M	Operation & Maintenance
OMVS	*Organisation pour la Mise en Valeur du Fleuve Sénégal* (Senegal River Basin Organization)
O.P.	Operational Policy
OPEX	Operational expenditures
ORAF	Operational Risk Assessment Framework
PAD	Project Appraisal Document
PDO	Project Development Objective
PPA	Power Purchase Agreement
PPIAF	Public Private Infrastructure Advisory Facility
PRG	Partial Risk Guarantee
PRI	Political Risk Insurance
PSC	Production Sharing Contract
RFP	Request For Proposals
RPF	Resettlement Policy Framework
SMH	*Société Mauritanienne des Hydrocarbures* (Mauritanian Utility for Hydrocarbons)
SNDE	*Société Nationale des Eaux* (National Water Utility in Mauritania)
SNIM	*Société Nationale Industrielle et Minière* (National Company of Industries and Mines in Mauritania)
SPEG	*Société de Production d'Electricité à partir du Gaz* (Gas-Fired Electricity Production Company in Mauritania)
SENELEC	*Société Nationale d'Electricité du Sénégal* (National Power Utility in Senegal)
SOGEM	*Société de Gestion de l'Energie de Manantali (Manantali Energy Management Company)*
SOMELEC	*Société Mauritanienne d'Electricité* (National Power Utility in Mauritania)
TOP	Take or Pay
Tullow	Tullow Petroleum (Mauritania) Pty Ltd., a private company incorporated under the laws of Australia

UMA	Mauritanian Ouguiya (Mauritanian currency)
US¢	US cents
US$	United States dollars
WB	World Bank
WBG	World Bank Group
WTP	Willingness to pay

World Bank (IDA)

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**ISLAMIC REPUBLIC OF MAURITANIA /
REPUBLIC OF SENEGAL / REPUBLIC OF MALI
Banda Gas to Power Project**

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IBRD 40920

ISLAMIC REPUBLIC OF MAURITANIA /
REPUBLIC OF SENEGAL / REPUBLIC OF MALI

BANDA GAS TO POWER PROJECT

PROJECT APPRAISAL DOCUMENT

AFRICA
AFTG2

Date: May 9, 2014	Team Leader: Moez Cherif / Abir Burgul
Country Directors: Vera Songwe / Paul Noumba Um	Environmental category: Full Assessment (A)
Sector Manager: Meike van Ginneken / Pankaj Gupta / Antonio Barbalho	Joint IFC/MIGA:
Project ID: P107940, P145657 and P145664 (IDA) and 13101-01 (MIGA)	Joint Level:
Lending Instrument: IDA and MIGA Guarantees	

Project Financing Data

[ ] Loan [ ] Credit [ ] Grant [X] Guarantee [X] Other: MIGA Guarantee

For Loans/Credits/Others (US$ M): 261.00 IDA PRGs, 585.00 MIGA Guarantee
Total Bank Group financing (US$ M): 846.00
Proposed terms: PRG for a maximum period of 20 years against defined risk coverage.
MIGA Guarantee for a maximum period of 20 years against defined risk coverage.

Financing Plan (US$ M)

Source	**Local**	**Foreign**	**Total**
Banda Gas Joint-Venture Partners equity	0.00	650.00	650.00
Islamic Development Bank, Arab Fund for Economic & Social Development (Dual Fuel Plant)	0.00	221.1	221.1
Saudi Fund For Development (North HV line)	0.00	170.00	170.00
Agence Française pour le Développement, Islamic Development Bank (South HV line)	0.00	170.00	170.00
Kinross, SNIM (CCGT, Administrative Costs, Working Capital)	0.00	245.60	245.60
SOMELEC (Line extension to OMVS substation)	0.00	7.00	7.00
Total	0.00	1463.70	1463.70

Borrowers:
Islamic Republic of Mauritania (SOMELEC), Republic of Senegal (SENELEC), Republic of Mali (EdM)

Guarantors: IDA & MIGA

Project Sponsor: (i) Banda Gas Joint-Venture Partners: Tullow, Petronas, Kufpec, Premier Oil, SMH, Islamic Republic of Mauritania through their various subsidiaries with the following legal names: (1) Tullow Petroleum (Mauritania) Pty Ltd; (2) Mauritania Holdings B.V.; (3) PC Mauritania 1 Pty Ltd; (4) PC Mauritania II B.V.; (5) Premier Oil Exploration (Mauritania) Ltd; (6) Tullow Oil (Mauritania) Limited; and (7) FP Mauritania A.B.V. (ii) SPEG shareholders: SOMELEC, Kinross, SNIM; & (iii) SOMELEC **Project Beneficiaries:** (i) Banda Gas Joint-Venture Partners: Tullow, Petronas, Kufpec and Premier Oil (of IDA and MIGA Guarantees) (ii) Power exporter: SOMELEC (of IDA Guarantees)

Content		
For Guarantees:	**[ ] Partial Credit [x] Partial Risk [ ] Both Partial Credit & Risk**	
Proposed Coverage:	Guarantee of SPEG gas payments to the JV Partners as detailed in the GSA and SENELEC/EDM power payments to SOMELEC as detailed in the PPAs	
Nature of Underlying Financing:	Shareholder Equity	
Terms of Financing for IBRD/IDA Guarantee:	**Principal Amount (US$ M):**	Up to 261.00
	Final Maturity:	20 years (defined as GSA and PPA durations)
	Amortization Profile:	N/A
	Grace Period:	N/A
Financing available without Guarantee:	**[ ] Yes [X] No**	
If Yes, estimated Cost or Maturity:	N/A	
Estimated Financing Cost or Maturity with Guarantee:	N/A	
Bank Group Participation:	**[] IFC [X] MIGA**	

Estimated disbursements (Bank FY/US$ M)									
FY	14	15	16	17	18	19	20	21	22
Annual	N/A								
Cumulative	N/A								

Expected effectiveness date: September 30, 2014
Expected closing date: December 31, 2018
Expected IDA Guarantee(s) Expiry Date: March 31, 2035

Does the Project depart from the CPS in content or other significant respects?	[ ]Yes [x] No
Does the Project require any exceptions from Bank policies? Have these been approved by Bank management?	[ ]Yes [x] No [ ]Yes [ ] No

Is approval for any policy exception sought from the Board?	[ ]Yes [x] No
Does the Project include any critical risks rated "substantial" or "high"?	[x]Yes [ ] No
Does the Project meet the Regional criteria for readiness for implementation?	[x]Yes [ ] No

Project development objective

The Project's Development Objective (PDO) is to enable production of natural gas for generation of electricity to reduce the cost and increase the supply for Mauritanian households and industry, and enable regional integration through exports of electric power from Mauritania to Senegal and Mali.

Project description

The World Bank Group's proposed intervention in support of the 300 MW Banda Gas-to-Power Project includes support from both IDA and MIGA through:

(i) Three IDA Partial Risk Guarantees (PRGs) backstopping:

- a) the creditworthiness of SPEG (of Mauritania) for the payment of gas under the Gas Sales Agreement (GSA), and
- b) the credit worthiness of two public utilities, SENELEC (of Senegal), and
- c) EDM (of Mali), for the payment of electricity exports received under their respective Power Purchase Agreements (PPAs); and

(ii) MIGA guarantees covering:

- a) termination payment under Breach of Contract (BoC) of the GSA backstopped by GoMR;
- b) BoC coverage of the Production Sharing Agreement; and
- c) the risks of Transfer Restriction, Expropriation, War and Civil Disturbance.

Which safeguard policies are triggered, if any? Bank Performance Standards – OP4.03 applied:

PS1: Assessment and Management of Environmental and Social Risks and Impacts
PS2: Labor and Working Conditions
PS3: Resource Efficiency and Pollution Prevention
PS4: Community Health, Safety & Security
PS5: Land Acquisition and Involuntary Resettlement
PS6: Biodiversity Conservation & Sustainable Management of Living Natural Resources
PS8: Cultural Heritage

Usual and customary representations and warranties, covenants and conditions precedent (all in form and substance acceptable to IDA) for operations of this type would be included in the PRG legal documents.

Sector Board
Sector Board: Energy and Mining

Sectors / Climate Change

Sector (Maximum 5 and total % must equal 100)

Major Sector	Sector	%	Adaptation Co-benefits %	Mitigation Co-benefits %
Energy and mining	Oil and gas	40	N/A	N/A
Energy and mining	General energy sector	60	N/A	N/A

Themes		
Theme (Maximum 5 and total % must equal 100)		
Major Theme	Theme	%
Financial and private sector development	Infrastructure services for private sector development	100

I. STRATEGIC CONTEXT AND RATIONALE

1. Mali, Mauritania and Senegal all face daunting energy challenges. Poor infrastructure and low access to energy have constrained GDP growth in all three countries. With a growing population, energy demand is expected to increase requiring additional generation capacity for the region. Mali, Mauritania and Senegal increasingly rely on oil-based power generation to complement hydropower to meet their base-load electricity needs. As a result of this evolving generation mix, coupled with high technical and commercial losses, the national power utilities of all three countries have been incurring financial deficits and relying on government support. The power grids of the three countries are interconnected and countries exchange power through a central dispatching center.

2. Gas finds in Mauritania are a game changer for the sub-region as they can be used to generate affordable and cleaner power compared to other thermal alternatives. However, private investors are reluctant to invest in gas development because of the lack of creditworthy off-takers in the region and due to the perceived high political risks in the sub-region. There is also the absence of a track record for maintaining long term foreign direct investment in the oil, gas and power sub-sectors.

A. Country issues

3. A significant percentage of the population in the three countries lives below the respective national poverty line (42% in Mauritania, 46.7% in Senegal, and 43.6% in Mali). While Senegal and Mali have respective populations of 13.7 million and 14.8 million, Mauritania is less populated with 3.8 million people. In Mauritania, about 42% of the population lives in urban areas and the two major cities - Nouakchott and Nouadhibou - account for almost 800,000 people and 100,000 people, respectively. About 43% of the population lives in urban areas in Senegal, with the capital, Dakar, accounting for about 1.1 million people. In Mali, approximately 36% of the population lives in urban areas with the capital, Bamako, being the largest city with 1.9 million people. In terms of GDP per capita, Mauritania and Senegal are close with US$1,106 and US$1,032 per capita respectively, while Mali is at a significantly lower level of US$694 per capita (2012 figures).

4. Mauritania’s economy is divided between traditional sectors and a modern extractive industry. Crops and livestock provide for the livelihood of about half of the population. Poor infrastructure and low access to energy hinders efficiency and in times of drought, food production levels can drop dangerously low. Export revenue from fishing licenses and fish processing rank second after iron (44% of total exports). But competitiveness of the port based processing facilities is hampered by poor services, and the high cost of electrical power for processing and cold storage. This is particularly true for fishing grounds along the Senegal River. Extractive industries are by far the largest contributor to Mauritania’s economy. The country is endowed with abundant mineral deposits of iron, copper, gold, gypsum and salt (resources also include cobalt, diamond, phosphate rock, sulfur and uranium). Since 2006, Mauritania has been a small oil producer.

5. Mauritania’s GDP growth is strongly correlated to mining revenues. Real GDP registered a 4% increase in 2011 and an impressive 7.6% in 2012; the latest figures estimate a GDP growth of 5.6% in 2013 to be replicated in 2014/2015. Despite this slight slow-down in growth, partly on the back of a general decline in the prices of iron and gold since 2012, the forecast is still high

by historical standards. The overall improvements of the macro-economic situation are in large part attributable to: higher iron ore sales by the national iron ore company, Société Nationale Industrielle et Minière (SNIM), large foreign investments in the mining industry (both for iron and gold), and increased fish exports. The mining sector's contribution to the country's economy has been steadily increasing over the past 10 years, and so has energy consumption. In order to diversify the economy, Mauritania needs to increase its energy supply and reliability, and lower its cost.

6. Senegal's economy is dominated by a few strategic sectors, including groundnuts, fisheries and services. The role of the agricultural sector, and especially of groundnuts, has declined over time, as Senegal experiences frequent droughts due to its geographic position bordering the Sahel. High rural poverty and limited access to rural infrastructure and basic services have fuelled migration to urban areas. After a slowdown due to lack of electricity supply and poor performance of the services sector, Senegal's economic growth rebounded to 3.9% in 2012, primarily due to a recovery in agricultural output. Growth should continue to accelerate, driven by government investment in agriculture and infrastructure. Industrial production should also rise as power reliability improves and cement and phosphates output continues to recover. Services growth will be led by banking and telecommunications, as well as by the expanded air and sea logistics capacity of the capital, Dakar, all helping to improve net exports. Private consumption, restrained by higher consumer prices in 2013, will pick up, contributing to an acceleration of real GDP growth from an estimated 3.8% in 2013 to 5.1% in 2017. Poor physical and human infrastructure and weak institutions continue to weigh on Senegal's business environment, which is also hindered by one of the highest average electricity generation costs in Africa.

7. Mali is a vast landlocked country with a relatively limited natural resource and human capital base, and a highly dispersed population. It is located in the heart of Sahel, a region threatened by drought and desertification. The vast majority of the people are directly dependent on their environment for their livelihoods (herding, farming or fishing). After the upheaval of 2012, Mali's GDP is estimated to have rebounded in 2013, growing by 5%, supported by a good harvest. The vastly improved political and security situation will see growth accelerate in 2014-15 on the back of significant, largely donor-funded government investment and reconstruction spending, which will in turn help to restore the confidence of foreign investors, even if tourism is slow to recover. Growth expectations for Mali for 2014 and 2015 are 6.8% and 6.5% respectively, on the assumption that both the security situation and agricultural output will show an improvement. The agricultural sector (accounting for more than one-third of GDP) will improve in 2014-15, provided that more favorable weather conditions and the improved security situation encourage the return of displaced people and greater planting.

B. Sectoral and institutional context

a. Power sector regional and national institutional framework

<u>Regional Framework</u>

8. Mauritania, Mali and Senegal have a long track record in regional integration. In 1972, the three countries established OMVS[1] (the Senegal River Basin Development Organization)

[1] Guinea is a member of OMVS since 2006.

with the mandate of managing water resources in order to promote irrigation and hence make member countries less vulnerable to rainfall deficits. Over time, OMVS also took on an important role in regional power trade, given the region's dependency on hydropower. The power infrastructure of OMVS consists of the Manantali hydropower plant (200 MW), the Félou hydropower plant (60 MW), the transmission system interconnecting the power grids of Bamako, Dakar and Nouakchott, and a central dispatching center. Going forward, it will also include the Gouina hydropower project (95 MW) that will be commissioned in 2017/2018. All hydropower plants are located in Mali and their generation is split between the three countries on a quota basis[2]. The infrastructure is managed by Société de Gestion de l'Energie de Manantali (SOGEM) on behalf of OMVS. In the OMVS network, Mali and Guinea have substantial hydropower resources that are expected to be developed in order to meet future demand, but these projects will take several years to come on-stream.

9. Problems faced in the past by SOGEM related to payments of electricity have been solved. By 2008, SOGEM faced important arrears and a low collection rate from the three countries. To solve these issues, SOGEM and the three national utilities agreed in 2009 to a payment mechanism that included: (i) enforcement of resolution N° 470 of OMVS' Council which requires that electricity supply be reduced and then cut if bills are not paid on time; (ii) payment of new bills by bank draft within fifteen days after reception of the bill; and (iii) penalties for an electricity company which has not paid its bill within 15 days. Since this payment mechanism was applied in 2009, bills have been paid on time: all arrears have been settled and average collection period is below 90 days.

National Institutional Framework

10. In Mauritania, the Ministry of Petroleum, Energy and Mining (MPEM) is responsible for overseeing activities upstream in oil and gas, electricity and mining sectors. This institutional arrangement has been instrumental in the design of energy sector reforms leveraging the demand of anchor industrial activities in the extractive sector. The Regulatory Authority (ARE) is responsible for regulating activities in the areas of electricity, water, telecommunications and postal services. In 2001, SONELEC (Société Nationale d'Electricité) was split into two entities: the power utility, SOMELEC (Société Mauritanienne d'électricité), and the water utility, SNDE (Société Nationale des Eaux). Privatization of SOMELEC was planned but never implemented. In anticipation of the privatization, the state under invested in the power sector.

11. The state-owned Société Mauritanienne des Hydrocarbures (SMH) is mandated to represent the interests of the state in the petroleum sector through direct participation in development and production activities, oversight of private investors, and promotion of investment. Oil production in Mauritania has been steadily declining; however there have been recent oil and gas discoveries. Petroleum was first discovered in 2001 in the Chinguetti field off the coast of Nouakchott. Oil production started in 2006 at about 75,000 barrels per day (bpd) but, due to the complex geology of the field, rapidly declined to approximately 6,300 bpd in 2012. Nonetheless Mauritania continues to attract interest from reputable international exploration companies.

[2] For instance, Manantali's capacity is shared with the following quota: 52% for Mali, 33% for Senegal and 15% for Mauritania.

12. In Senegal, responsibility for the sector lies with the Ministry of Mines and Energy, which is assisted by the Permanent Secretariat for Energy (an entity set up in 2010 to follow-up the implementation of the electricity sector emergency recovery plan). Electricity production, transmission, distribution and client commercialization is dominated by the state-owned, vertically integrated, electricity company, Société Nationale d'Electricité du Sénégal (SENELEC). Senegal has introduced a number of Independent Power Producers (IPP) that sell electricity exclusively to SENELEC. Fifty-one percent of overall production in 2012 was provided by IPPs. The Electricity Regulatory Commission (CRSE) regulates tariffs for a defined period; this period was recently reduced from five to three years, so that revenue requirements can respond faster to a fluctuating cost environment.

13. In Mali, the Ministry for Energy and Water is responsible for technical regulation, defining the overall national investment planning and proposing the national energy strategy. Key regulatory functions, in particular electricity tariff setting, are under the responsibility of the Regulatory Commission for Electricity and Water (CREE). Energie du Mali (EDM) is the national utility company which is in charge of providing electricity services nationally in urban areas under a national concession agreement. It is owned by the Government of Mali (66%) and by Industrial Promotions Services (34%), a subsidiary of the Agha Khan Development Network. EDM is operated as a private company by Industrial Promotion Services.

b. Power sector performance

14. The power sectors in all three countries suffer to various degrees from similar issues, including low access rates to electricity, relatively high technical and commercial losses, and high generation costs due to a dependence on oil-based thermal generation capacity. Tariffs are high but still insufficient to cover costs, resulting in reliance on government subsidies. The table below summarizes some key sector indicators:

Table 1: Key power sector indicators

	Mauritania	Senegal	Mali
Access to electricity (% of population)	20% (40% urban and 5% rural)	50% (100% urban and 25% rural)	30% (55% urban and 18% rural)
Public grid peak demand (MW)	110 MW	466 MW	199 MW
System losses (technical and commercial)	24%	20%	19%
Average electricity tariff (US¢/kWh)	22	24	22
Percentage of firms reporting that electricity is the biggest obstacle facing businesses (%)	14%	41%	8%

<u>Mauritania's electricity sector</u>

15. Mauritania's electricity sector is characterized by a fragmented power system, low rates of electricity access and demand/supply imbalances. Because of the low population density and the scattered nature of settlements over a vast territory, the Mauritanian power system is fragmented into several isolated grids supplied mostly by oil-fired generating units. Only 20% of the population has access to electricity. Generated power at peak time reached 86 MW in 2012

against an estimated demand of 110 MW. SOMELEC's installed capacity[3] in 2012 was estimated at 171 MW of which 100 MW was deemed available. Meanwhile, mining sector peak demand reached about 100 MW in 2012.

16. Domestic demand, excluding mining demand, is expected to grow at about 9% per annum until 2020, then at 6% per annum after 2020, driven by progressive connection of load centers to the OMVS grid and economic growth. Installed capacity in 2017 will remain predominantly thermal, with a noticeable shift from diesel/heavy fuel oil (HFO) to gas generation, amounting to 530 MW in total: 380 MW of thermal power (of which 300 MW provided by SPEG), 75 MW hydropower provided by OMVS grid, 40 MW solar power and 35 MW wind power. Demand is expected to increase up to 1,050 MW by 2025. However these projections are based on ambitious new mining projects that are likely to be delayed with the recent drop in commodity prices. All mining projects, with the noteworthy exception of Tasiast/Kinross gold mine, are likely to be provided electricity by power plants built close to the mines and not connected to the OMVS grid.

17. The cornerstone of the Government of Mauritania's (GoMR) power sector development strategy is to achieve high levels of electrification, backed by affordable and reliable power supply. GoMR's electricity sector goals include increasing the urban electrification rate up to 80% by 2016 (40% currently); and the rural electrification rate up to 40% by 2016 (5% currently). GoMR is seeking to achieve these goals by diversifying the energy mix, including the integration of more renewable energy and the development of an integrated national grid. The GoMR has set ambitious targets of the share of renewables in the generation mix: 15% by 2015, 20% by 2020 and 35% by 2035. The proposed Banda Gas-to-Power Project is a key component to achieve the goals of the GoMR as it will help to meet power demand while reducing the cost of generation. Coupled with investments in transmission, distribution and renewable energies, it is expected to enable further electrification of Mauritania.

18. The GoMR's policy framework for the energy sector is deemed adequate and the use of a PRG is appropriate and meets the requirements of O.P. 14.25. In 2010, a power sector diagnostic and reform study was completed and adopted by the government. Some of the measures recommended by the study, particularly those pertaining to SOMELEC financial management, are being implemented with Agence Française de Développement (AFD) support. In addition, IDA has financed two important studies: a least cost investment plan and a tariff study for the power sector. Both of these studies concluded that the gas-to-power project is an integral part of the least cost investment plan and forms a key component in restoring SOMELEC's financial health.

19. The Government has put in place a sector recovery plan to improve the financial situation of the utility. The sector recovery plan has five medium term components for SOMELEC: (i) reinforce sector oversight by the line ministry, including through an updated performance agreement between the government and SOMELEC; (ii) recapitalize the company through financial restructuring; (iii) urgently invest and rehabilitate generation and distribution infrastructure; (iv) improve commercial performance, including through introduction of pre-payment meters; and (v) restructure human resources and increase training. The recovery plan is

[3] Including the share of SOMELEC in Manantali (30 MW).

under implementation with support from AFD, and has included a consolidation of cross debts between the government and SOMELEC, and a recapitalization of the latter.

20. Despite important efforts to improve SOMELEC´s financial situation, additional measures need to be put in place to restore its financial equilibrium. SOMELEC suffered from financial losses in 2012 and 2013, despite improving its operational efficiency. Efforts made since 2010 to reduce technical and commercial losses are bearing results as there has been a 5% decrease in overall losses since 2010 (from 29% end of 2010 to 23% in late 2013). However, the strong reliance on heavy fuel oil, coupled with the increase of fuel price, and a reduction of subsidy allowance from the government, has resulted in a deficit that almost doubled between 2011 and 2012, reaching US$15.7 million. Moreover, the consecutive years of negative earnings have significantly reduced the equity portion of SOMELEC: total equity is expected to have reached -US$24 million at the end of 2013 compared to +US$10 million at the end of 2011. This testifies to the urgency of its recapitalization and tariff adjustment.

Senegal’s electricity sector

21. Senegal has steadily increased electrification rates (connections and installed capacity have doubled since 2000) reaching a national average of 50%, with almost fully electrified urban areas, but only covering about 25% of the rural population.

22. Senegal experienced a rapid electricity demand increase in the past decade due to economic growth, but electricity supply has not kept up with demand. During 2012, peak electricity demand reached 466 MW, almost double the 234 MW of 2000. Total installed generation capacity connected to the grid is 587 MW. Overall production in 2012 reached about 2,800 GWh, of which about 51% was provided by IPPs. The majority of this is based on diesel and HFO power plants. Senegal imports approximately one tenth of its electricity from the hydro power plants in Mali through the OMVS regional network. Additionally, 47MW of non-grid connected installed capacity serves isolated centers in areas away from the main grid.

23. Senegal remains heavily dependent on imported oil products for its energy supply affecting SENELEC´s financial and operational situation. About 90% of electricity is generated using oil products. Investments to diversify the energy mix away from oil products were planned as early as the mid-2000s, but are only now being implemented. The sharp increase in oil prices in 2010 led to a deepening of financial deficits that hindered SENELEC’s investments and affected its operations and maintenance. This resulted in deteriorating quality of service, increased system losses, more frequent power outages, and a spiral of increasing short term costs that could not be met through sector revenues.

24. The Government of Senegal’s (GoSN) policy framework for the energy sector is deemed adequate and the use of a PRG is appropriate and meets the requirements of World Bank O.P. 14.25. In October 2012, the GoSN adopted a Letter of Development Policy for the Energy Sector that outlines the sector policy objectives to improve the sector’s performance in the medium term. The GoSN’s energy sector policy framework focuses on three main areas: i) increasing generation and diversifying the energy mix to reduce costs; ii) increasing revenues by reducing system losses and increasing collection rates; and iii) improving SENELEC’s efficiency. Continued consistent implementation of the policy framework will help decrease subsidies over time with the aim of ending them by 2018.

25. Power demand in Senegal is expected to grow at 7% per annum over the period 2013-2020. Total installed generation capacity, including IPPs, is expected to double over the next seven years from 587 MW in 2013 up to 1,097 MW in 2020. With this doubling in generation assets, the generation mix is expected to shift from expensive heavy fuel oil to less expensive coal, hydropower, and gas-powered electricity.

26. The GoSN's policy to improve revenues includes a focus on reducing non-technical losses and improving bill collection as well as tariff adjustments. The GoSN's policy recognizes that much can be done through decreasing losses and improving collections, a less politically sensitive solution than increasing tariffs – which are already amongst the highest on the African continent. In May 2013, the GoSN and SENELEC signed a Performance Contract which sets specific targets for revenue improvements in SENELEC for the period 2013 to 2015. The Performance Contract calls for a reduction in distribution losses accompanied by increased recovery of bills. These two immediate measures can produce financial improvements in the short term. As part of its strategy to revamp the financial fundamentals of the sector, the GoSN has launched a process to revise the tariff setting mechanism, including: (i) reducing the validity period of tariff conditions from five to three years; (ii) paying subsidies on a quarterly basis; (iii) evaluating SENELEC's revenue needs annually; and (iv) reviewing SENELEC's revenues quarterly (to take into account the impact of inflation and fuel market changes to reflect price fluctuations of SENELEC's cost base).

27. In addition to increasing revenues, the GoSN's policy to improve SENELEC's operational and financial turnaround focuses on decreasing operational costs (e.g. maintenance and fuel), improving access to working capital, and reducing administrative costs. In 2012, the GoSN agreed to a settlement of all cross-debt owed to, and due from, SENELEC, as well as defining SENELEC's financial restructuring plan, including debt restructuring, treatment of arrears, recapitalization, and clearing of other financial items in SENELEC's books. The Performance Contract between the GoSN and SENELEC stipulates specific targets to improve the governance of SENELEC. These include tangible results for financial management system enhancements and financial reporting as well as the separation of accounts between SENELEC's key segments of generation, transmission, distribution and retail/commercial operations.

28. The 2013 annual report of the Performance Contract notes progress in several areas, mainly on the supply side thanks to the recent addition of more efficient HFO generation units. Further efforts are required on the commercial front as collection of public sector bills is yet to improve.

<u>Mali's electricity sector</u>

29. In spite of significant progress over the last decade, access to electricity in Mali remains low, especially in rural areas. Over the last ten years, the Malian authorities have implemented policies to increase access to modern energy services, in particular to electricity, but face significant challenges to continue this expansion. Current rate of access to electricity in Mali is estimated at 30% on average; 55% in urban areas and 18% in rural areas. The national public utility EDM is responsible for providing electricity service provision in urban areas. Over the last decade, EDM has been able to expand access to electricity at a sustained pace in major urban centers and some peri-urban areas. At the end of 2013, EDM had a client base of about 303,000 connections, against 120,000 ten years earlier. However, Mali is faced with structural barriers impeding its efforts to increase access to electricity. This includes the high cost of new

generation and the dependence on petroleum product imports. Thermal generation is entirely based on imported petroleum products (diesel, Heavy Fuel Oil) which are especially costly in Mali a landlocked country located far from the importing ports in the region (Dakar, Abidjan, Lomé) and connected to them through poor transport infrastructure.

30. With power consumption growing at 9% per year, new generation needs to be brought online to meet demand. Current installed capacity is 327 MW on interconnected grid versus 67 MW for isolated centers. The Félou hydropower plant, which has been developed as a regional project under the OMVS, has recently been commissioned and will, from 2014 onwards, bring annually about 135 GWh of additional generation for Mali. Other small and medium sized hydropower and solar plants are planned or under consideration. While these sites are least-cost developments, they will not be sufficient to meet the growing demand for electricity, so Mali will need the firm power capacity provided by the Project, whose cost is lower than other thermal options. A recently completed interconnector with Côte d'Ivoire has not resulted in the expected increase in available electricity given the generation deficit in Côte d'Ivoire. Demand contracted in 2012 as a result of the political upheaval in the country. On the assumption that the security situation will improve and that economic growth will resume, peak demand is expected to increase up to 457 MW by 2020. Lower cost energy imports from OMVS to meet increasing demand represent a least-cost solution for the country.

31. The Malian electricity sector is in a difficult financial position. The Malian electricity sector is facing serious short-term operational and financial challenges, related to high oil prices, high system losses, and the tariffs that are not cost-reflective. Between 2004 and 2012, the Malian authorities implemented one tariff adjustment, a 3% increase in 2009. The national utility company was therefore faced with increases in operating costs which it could not pass on to consumers, resulting in an increasingly distressed financial situation. This contributed to a deterioration of the utility's technical and operational performance, characterized by illiquidity and the accumulation of short term debts (with local Banks and suppliers). Faced with structural, negative cash-flows, EDM reduced capital and maintenance expenditure to a bare minimum, contributing to a situation of imbalance between supply and demand, and reduced reliability. The Government of Mali (GoML) took a first step towards cost-reflective electricity tariffs through an average tariff increase of 7% in February 2013. The level of subsidy to EDM has been temporarily increased to FCFA 57 billion for 2013 (equivalent to US$120 million) in order to put the company in a position to reduce its stock of arrears.

32. The GoML's policy framework for the energy sector is deemed adequate and the use of a PRG is appropriate and meets the requirements of World Bank O.P. 14.25. The authorities have recently taken steps to put in place a comprehensive recovery plan. In February 2013, the interim government implemented the first significant tariff adjustment for more than 10 years. In addition, the level of subsidy to EDM-SA was temporarily increased to allow the company to resorb the arrears incurred with suppliers and reduce its short term borrowing with local banks. In the wake of the December 2013 legislative election, the GoML has put in place a task force composed by key stakeholders (EDM-SA, Ministry of Energy, Ministry of Budget, Sector regulator) and associating development partners (IDA, AFD) to propose a comprehensive plan for sector recovery. An action plan has been prepared and communicated by the GoML in March 2014. The report recommended inter alia an acceleration of generation investments (including power imports) as well as critical transmission investments in order to expand supply and reduce generation costs, measures to improve efficiency and accelerate revenue collection. The report

also assessed the financing gap until 2018 proposing to bridge this gap through a combination of further tariff adjustments and annual subsidies (progressively phasing out).

c. *Gas development as a catalyst for regional development*

33. Recent discoveries of natural gas reserves in Mauritania represent a unique opportunity not only for the country but also for its OMVS neighbors, Senegal and Mali. Increasing the availability and efficient use of natural gas could significantly contribute to reducing power generation constraints and lower the cost of electricity in each of the three countries. Development of its natural gas resources can be a game changer for Mauritania and in the region, by providing an opportunity for a significant increase in electrification.

34. Gas utilization for domestic power generation and exports is part of GoMR's strategy to maximize the development impact of resource extraction and reduce its environmental impact. The switch to natural gas from imported heavy fuel oil is part of a wider climate change strategy involving the diversification of energy sources towards cleaner fossil fuel and renewable energy. Development of a gas field is only financially feasible at a certain scale. Power demand in Mauritania alone does not allow for sufficient guaranteed power – and thus gas off take. It is in this context that the GoMR has planned the construction of a gas-fired power plant in the country's capital both for domestic use and for export of power to Senegal and Mali.

35. Senegal and Mali are looking towards the Mauritania gas fields as a potential energy source for affordable, reliable, and clean power generation. In contrast to Mauritania, neither Senegal nor Mali has any significant commercial gas reserves. Over 140 wells were drilled in Senegal in 1980-2000, resulting in limited commercial oil and gas production. A new phase of offshore exploration is underway but no discoveries have yet been made. Senegal is also exploring the option of importing liquefied natural gas (LNG) for power generation, but this option will take several years to be developed if considered to be viable. Early estimates show that importing LNG may be more costly than producing gas in the sub-region. While the landlocked state of Mali has considerable mineral resources, it has no proven oil or gas reserves. Mali's Taoudeni basin in the north has seen increased oil exploration activity since 2004. However, given the recent instability and security threat in the north, it is still in the realm of speculation whether the country will be able to produce oil and gas for commercial exploitation.

C. Higher level objectives to which the Project contributes

36. The Project is in line with the World Bank Group (WBG) Country Partnership Strategies of Mauritania and Senegal, and Mali's Interim Strategy Note, and is an example of collaboration among WBG institutions (IDA, MIGA and probably IFC) to provide comprehensive financial solutions to a challenging project that facilitates regional integration. The Project is included in the FY2012-15 WBG Mauritania Country Partnership Strategy (CPS) and has the potential to radically transform Mauritania's economy as a result of tapping into Mauritania's available natural gas resources, generating electricity at competitive rates and boosting economic growth. This fits in well with the electricity sector goals set by the GoMR, which include increasing both the urban and the rural electrification rates, while: (i) diversifying the energy mix and integrating more renewable energy; and (ii) developing an integrated transmission and distribution network. The Project is also included in the FY2013-17 WBG Senegal Country Partnership Strategy which articulates that increasing power supply from competitive sources, including through imports, is a key government objective. The Project is also included in the FY2014-15 Mali's Interim Strategy Note and in the Bank Sahel Strategy, which states that the Bank will provide

political risk guarantees in support of a regional Gas-to-Power Project associating Mauritania, Senegal, and Mali.

37. The Project complements ongoing and planned WBG operations in the sub-region, including the approved Félou hydropower project under the OMVS umbrella, the private sector led Senegal Taiba Ndiaye thermal power generation project (approved by the Board in December 2013), the Senegal Electricity Sector Support Project and the Mali Energy Support Project . All these projects aim to support power generation expansion and improved utility management in order to meet growing electricity demand in the sub-region. IDA also has an extensive program on energy access in rural areas in the sub-region, including the ongoing second sustainable and participatory energy management project and the recently closed electricity services for rural areas project in Senegal, and the Mali Rural Electrification Hybrid System Project. IDA support has been instrumental in setting up rural electrification agencies in Senegal and Mali and extending services to unserved rural households.

38. The Project supports the WBG's corporate goals to end extreme poverty and promote shared prosperity by providing the three countries access to additional, less expensive and cleaner electricity and promoting regional integration. The Project is part of a wider GoMR strategy to increase electricity access in the country, by facilitating electricity access to those households that are presently without (invariably the poor) and more reliable energy services to small and medium enterprises, which will in turn lead to economic growth.

39. The Project is in line with the Bank Africa Strategy's two pillars: the first pillar which promotes competitiveness, including through support to infrastructure development and attracting private sector investments; and the second pillar that aims to reduce vulnerability and increase resilience to macroeconomic (i.e. high oil prices) and climate variability shocks (i.e. dependence on hydropower) as well as its foundation that emphasizes improving governance and public sector capacity. Meeting growing electricity demand in a competitive manner is essential in order to promote economic growth, including through mining activities, and employment in West Africa. Moreover, by providing a competitive source of energy to the power utilities of Mauritania, Senegal and Mali, the Project will contribute to their financial recovery and reduced reliance on government subsidies.

40. The proposed operation is also aligned with the guiding principles included in the recently approved WBG paper "*Toward a Sustainable Energy Future for All: Directions for the World Bank Group's Energy Sector*", in particular in seeking market solutions to leverage financial resources and help governments to foster private sector participation and investments. When determining where to deploy resources and capital, project sponsors and private financiers will balance the probability of a project's success against the likelihood of loss from project default and/or government interference. In regions where perceptions of project and political risk are high, WBG collaboration can assist both governments and private sector by providing measurable credit enhancement and risk mitigation tools that reduce the negative risk perceptions that would otherwise restrict developments in high risk markets. Co-investing, lending, guarantees, and political risk insurance (PRI) cover are all mechanisms that can be used to level the risk-reward equation, thereby attracting long term capital to perceived high risk environments.

II. PROJECT DEVELOPMENT OBJECTIVES

A. PDO

41. The Project's Development Objective (PDO) is to enable production of natural gas for generation of electricity to reduce the cost and increase the supply for Mauritanian households and industry, and enable regional integration through exports of electric power from Mauritania to Senegal and Mali.

B. Project Beneficiaries

42. The direct beneficiaries of the proposed Project are (i) the Banda Gas Joint-Venture Partners: Tullow, Petronas, Kufpec, Premier Oil and SMH (the first four parties, through various subsidiaries, are beneficiaries of the MIGA guarantee[4] while all five parties are beneficiaries of IDA upstream guarantee); and (ii) the power exporter SOMELEC (beneficiary of IDA Guarantees).

43. The indirect beneficiaries are (i) SOMELEC, SENELEC, EDM, Kinross and SNIM, who will benefit from competitive electricity pricing in comparison with alternative sources of power; (ii) the GoMR through royalties, tax and other revenues from the Banda gas field and the export of power; and (iii) end-users of electricity in Mauritania, Senegal and Mali, through incremental and more reliable electricity supply, whose tariffs will be lower than they would otherwise be in the absence of the Project, because the most likely alternative to Banda gas is higher cost heavy fuel oil generation at a cost of at least US¢ 20 per kWh. In Senegal, coal fired generation may also become an alternative to gas fired power in the future, at an estimated cost of about US¢ 13 per kWh, but the former has a higher environmental and health cost and faces logistical challenges.

44. End-users of grid-based electricity in the three countries are estimated at a total number of at least 1.4 million households (equivalent to 7 million people). Lowering power generation cost is important for poor customers, whose purchasing power is limited. Further, the air quality in Nouakchott will improve since the air pollutants (nitrogen and sulfur oxides as well as greenhouse gases) released by burning natural gas are significantly lower than from burning heavy fuel oil.

45. Increased supply of electricity to households and small businesses in all three countries will ensure more access to income-generating opportunities leading to improved living standards. Children will be able to study at night more easily. Reliable and expanded electricity supply will support commercial and industrial activities, thus helping with employment creation. In particular, by providing electricity to the fishery sector at reduced cost of supply, Mauritania expects to attract foreign investment in the fish processing sub-sector that requires energy intensive cold storage. By processing the catch in Mauritania, the fishery sector would be further integrated in the economy and would create a significantly higher number of jobs. Increased supply of grid electricity will decrease reliance on polluting and expensive energy alternatives, including kerosene lamps.

[4] Other Joint venture partners may subsequently be included; to the extent such parties request MIGA's coverage, the Board will be notified accordingly, subject to MIGA's due diligence.

C. PDO Level Results Indicators

46. The proposed PDO indicators are:

a) Quantity of gas supplied from the Banda Gas Field to SPEG (BBtu/day);
b) Electricity delivered by SPEG to SOMELEC at delivery point (GWh/annum);
c) Electricity delivered by SOMELEC to SENELEC at delivery point (GWh/annum);
d) Electricity delivered by SOMELEC to EDM at delivery point (GWh/annum);
e) SOMELEC's average cost of power production (USD/kWh); and
f) Number of beneficiaries (number of people).

III. PROJECT DESCRIPTION

47. This section provides an overview of the Project, the risk allocation in the Project and the risks that the proposed IDA and MIGA guarantees will backstop.

A. The Banda Gas-To-Power Project

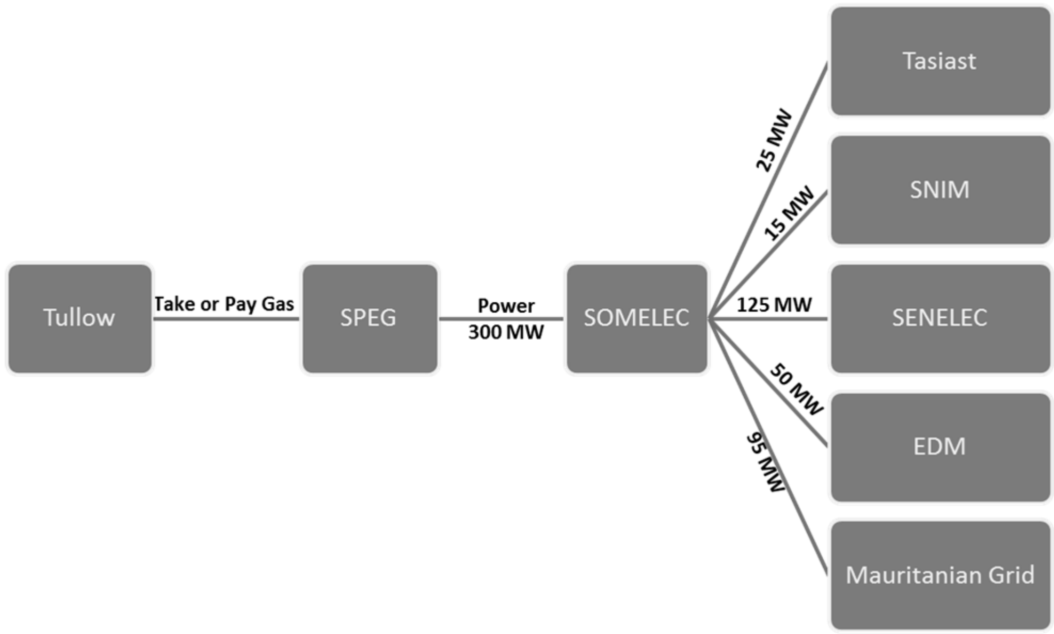
48. The Banda Gas-to-Power Project consists of the following components: (a) the upstream Banda offshore gas field production, transmission and processing infrastructure (the Banda Gas Project); (b) power generation from Banda gas in Mauritania (the SPEG Power Project); and (c) existing and new power transmission lines to evacuate power to the delivery points.

49. SPEG (Société de Production d'Electricité à partir du Gaz) is a special purpose vehicle incorporated for the purpose of power generation, transmission and sales of power using Banda gas. SPEG's shareholders are SOMELEC (40%); KG Power, subsidiary of Kinross, an international gold mining company (34%); and SNIM, the national iron ore mining company (26%).

50. Gas from the Banda offshore gas field developed by private developer Tullow will be sold to SPEG which will transform the gas through a 300 MW[5] power plant. The SPEG electricity will be sold to Mauritania's national utility, SOMELEC, which in turn will sell power to customers in Mauritania and export power to Senegal and Mali (see Figure 1).

[5] Capacity might be increased up to 310 MW to accommodate larger power offtake should it materialize.

Figure 1 – Gas and electricity sales of the Project



The Banda Gas Project: Banda gas field and upstream infrastructure

51. The Banda gas field is located approximately 55 km offshore of Nouakchott. The Banda field shareholders are Tullow (67%), Petronas (15%), Kufpec (13%) and Premier Oil (5%)[6]. Tullow has prepared a field development plan which provides for production of up to 70 mmscfd per day of gas over 20 years. The Banda Gas Project consists of two sub-sea wells tied back to an onshore gas processing plant via a subsea production manifold and a 10-inch sub-sea pipeline. Project cost is estimated to be US$650 million. First gas can be delivered approximately 30 months from the final investment decision, which is expected to occur by mid-2014 (For more details on the upstream project, refer to Annex 2).

The SPEG Power Project: downstream power generation

52. The SPEG Power Project is designed to be implemented in two phases to match the evolution of electricity demand in Mauritania (and the region) and optimize capital allocation. The proposed WBG intervention is focused on the first phase of SPEG Power Project, which consists of construction of a 300 MW power plant located in the north of Nouakchott that will operate using Banda gas. The SPEG plant includes 180 MW dual fuel engines (HFO, natural gas) to be commissioned by March 2015, and 120 MW combined cycle gas turbines (CCGT) to be commissioned by mid-2016. The 300 MW SPEG plant will sell all its generation to SOMELEC, who will, in turn, (a) sell power to Kinross, SNIM and its regular customers in Mauritania, and (b) export power to Senegal (SENELEC) and Mali (EDM).

[6] The GoMR will be a Seller under the GSA and will receive gas revenues. The national oil and gas company SMH also has an option to receive 12% equity interest in the Banda gas field project. AFD has expressed an interest in financing the 12% equity interest should the government exercise its option.

53. SOMELEC has selected an international firm to act as EPC contractor through a competitive bidding process for the construction of the dual fuel plant and is negotiating an operation and maintenance (O&M) agreement for the dual fuel plant for a period of 5 years. Construction of the dual fuel plant started in June 2013 and the plant is expected to be operational in March 2015. SOMELEC owns the facility, and will transfer this asset to SPEG prior to first gas. For the CCGT plant, SPEG has launched an international competitive tender in November 2013, which has prompted many expressions of interest from suppliers and is expected to result in the award of a lump-sum turnkey EPC contract for the CCGT plant by end of May 2014. The O&M contractor for the dual fuel plant is expected to be operating the CCGT as well.

54. SPEG will make all of its capacity available to SOMELEC at the power plant's substation under an "umbrella power purchase agreement (PPA)". SOMELEC will then contract "secondary PPAs" to deliver power at the various purchasers' delivery points. The amounts expected to be sold to various off-takers are: (i) 25 MW with Kinross with delivery point at the Kinross mine in Tasiast; (ii) 15 MW with SNIM with delivery point in Nouadhibou; (iii) 125 MW with SENELEC with delivery points at entry point to the OMVS network in Nouakchott and at the border between Mauritania and Senegal on the new transmission line; and (iv) 50 MW with EDM with delivery point at entry point to the OMVS network in Nouakchott. Up to 95 MW will be sold to SOMELEC's other customers.

55. Under this structure, SOMELEC bears transmission risk between the gates of the SPEG power plant and each of its purchasers' delivery points. In May 2013, SPEG retained the services of a reputable international consultancy firm as a financial advisor, who has been working with SPEG and its legal advisers on structuring a set of coherent and market practice project agreements (including PPAs, the Gas Sales Agreement (GSA) and construction contracts) and finalizing the SPEG financing plan.

Transmission infrastructure for power evacuation

56. Power generated by SPEG to SOMELEC will be evacuated through several routes: (i) a greenfield high voltage transmission line to Nouadhibou with a spur to Tasiast, site of Kinross gold mine (the North HV line) owned and operated by SOMELEC and financed by the Saudi Fund, (ii) the existing OMVS high voltage transmission line that will be connected to the power plant through a short extension (the OMVS HV line and the OMVS HV extension), funded by SOMELEC and (iii) a new high voltage transmission line between Mauritania and Senegal, to be financed by AFD and IsDB[7], with a wheeling capacity of about 170 MW (the South HV line) to be built in one phase. The parts of these lines up to the delivery points specified in the various PPAs form part of the Banda gas-to-power project.

57. Exports to Senegal will occur through the existing OMVS HV line and the South HV line. The South HV line will be built to accommodate future power exchanges between Mauritania and Senegal sourced from a number of projects. The North HV line will be owned by SOMELEC, and the South HV line will be owned by SOMELEC and SENELEC on their respective national territories.

[7] IsDB has approved financing for the Senegal portion of South HV line on March 23, 2014, whereas AFD will submit its project for Board approval on June 19, 2014.

58. Exports to Mali will transit through the OMVS HV line and will not require additional transmission lines. Capacity of the existing transmission network in Mali will be sufficient to absorb the electricity to be imported under the project. While already providing support under the Electricity Sector Support Project to the GoML for the reinforcement and rehabilitation of the country transmission and distribution networks, IDA is also financing a sector investment plan to identify future key investments in generation, transmission and distribution to ensure reliability and accommodate potential scape-up of supply (including investments in the context of the OMVS network).

B. The Banda Gas-to-Power Project Financing Plan

59. **Banda Gas Project.** The estimated investment cost is US$650 million. The Banda Gas JV partners have indicated that they will raise the necessary financing through equity contributions and that no commercial project debt will be raised. The Bank has been informed that it is Tullow (as the major JV partner) intends to seek additional equity investors in the Banda Gas Project. Tullow is well advanced with their plans to secure at least one major investor prior to their investment decision and ultimately will target an equity level of 30% in the Banda Gas Project JV, and intends to remain as operator.

60. **SPEG Power Project.** Total SPEG costs are estimated at US$467.1 million, including US$221.2 million for the 180 MW dual fuel plant, US$217.3 million for the 120 MW CCGT[8] plant, and amounts for administrative, working capital, and financing costs. The total project costs will be financed through shareholder equity. The dual fuel plant is being financed by SOMELEC, with funds already sourced for the dual fuel plant from IsDB and Arab Fund for Economic and Social Development (AFESD). Once the dual fuel plant is completed, SOMELEC will transfer its ownership to SPEG prior to receiving first gas from the Banda field. Although the CCGT financing, and working capital and various administrative costs of SPEG have not yet been secured in full, Kinross and SNIM, as shareholders of SPEG, have confirmed, in writing, that they will stand by their required equity contributions, enabling SPEG to reach a fully secured financing plan. In the longer term, SPEG will seek to raise debt at the project company level. European Investment Bank (EIB) and African Development Bank (AfDB) have each expressed interest in providing such loans to SPEG to refinance some of the equity, preferably before completion of SPEG's power plant.

61. **Transmission Infrastructure.** This includes three sub-components: (i) North HV line (US$170 million); (ii) OMVS line extension (US$7 million[9]) which connects the SPEG power plant to the OMVS substation south of Nouakchott; and (iii) South HV line (US$170 million). SOMELEC has obtained US$100 million financing for the North HV line from the Saudi Fund and has received assurance from the Saudi Fund that they are prepared to bridge the funding gap estimated at US$70 million once procurement is complete. AFD and IsDB are appraising the financing of the South HV line: IsDB for the Senegal portion only and both institutions for the Mauritania portion. IsDB has approved financing for the Senegal portion of South HV line on March 23, 2014, whereas AFD will submit its project for Board approval by the end of May, 2014.

[8] CCGT capacity can be increased to 130 MW in which case SPEG's total capacity is 310 MW.
[9] Funding for this has already been obtained by SOMELEC from IsDB and AFESD.

C. Project Contractual Structure

Gas Sales Agreement

62. Following extensive negotiations on the price and volume of gas under the GSA, Tullow and SPEG have agreed on a price of US$12/mmBTU for a daily consumption up to 60 BBtu/day. These gas volumes are sufficient to power the 300 MW of generation capacity foreseen under the SPEG Power Project. Key provisions, including the final price and termination conditions, are still being negotiated between Tullow and SPEG. A substantially negotiated GSA including those key provisions was received on May 1st 2014. IDA has reviewed the draft GSA and found the key terms and conditions to be acceptable and in line with industry standards.

Power Purchase Agreements

63. The direct off-taker of electricity generated by the SPEG Power Project is SOMELEC who has agreed on an umbrella PPA with SPEG that sets forth the terms and conditions for power purchase and supply. SOMELEC will in turn enter into secondary PPAs to sell power to SNIM and Kinross, and export a portion of its SPEG off-take to SENELEC and EDM. In April 2014, SENELEC and EDM agreed with SOMELEC to purchase 125 MW and 50 MW of power respectively. Key provisions related to the price, delivery points and the payment guarantee mechanism have been agreed by the parties. IDA has reviewed the draft umbrella PPA and found the key terms and conditions to be acceptable in line with industry standards. The SOMELEC-SENELEC and SOMELEC-EDM PPAs will be based on the umbrella PPA.

64. The electricity tariff is composed of a variable component for fuel, operation and maintenance costs, a fixed component mainly covering the investment cost of SPEG power plants and a take-or-pay component in case the purchaser does not offtake the minimum amount of energy. SPEG will deliver power at the gates of its power plant. SOMELEC, which has agreed to take on transmission risk on Mauritanian territory, will deliver power to SENELEC and EDM, at the delivery points described above. Under this structure, self-standing transmission agreements are not required[10] and losses are allocated to the relevant party.

D. Proposed WBG instruments – IDA and MIGA Guarantees

65. The WBG, working closely with GoMR, SPEG, Tullow and the power off-takers in Senegal and Mali, has brought together a comprehensive risk mitigation package that proposes to make available a complement of WBG's risk mitigation and credit enhancement products from IDA and MIGA to address political risk and payment security issues. Each of the institutions' instruments, together with the possibility of IFC equity support to the Banda gas field partners, works in collaboration with the beneficial impacts of the others' to create an enhanced risk profile for the Project that is conducive to private sector participation.

66. The IDA instruments being proposed include: (i) an IDA Partial Risk Guarantee (PRG) for the benefit of Tullow to support SPEG's payment obligations under the GSA; (ii) an IDA PRG for the benefit of SOMELEC to support SENELEC's payment obligations under its PPA

[10] Transmission through the OMVS network is covered under existing agreements between the three utilities and SOGEM.

and (iii) an IDA PRG for the benefit of SOMELEC to support EDM's payment obligations under its PPA[11].

67. The MIGA guarantee will be offered directly to Banda gas field joint venture partners to cover their equity investments in the Project against the risks of transfer restriction, expropriation, breach of contract and war and civil disturbance. Under Breach of Contract coverage, MIGA has been requested to cover the Hydrocarbon Production Sharing Contract for Zone A ("PSC A") in addition to early termination risk under the GSA, to the extent backstopped by GoMR in a Letter of Support ("LoS").

68. The WBG instruments are designed to support the sub-regional strategy for development of the Banda gas resource. The amount of credit enhancement offered under the proposed PRG operation is the minimum amount of credit support necessary to secure private investment capital for the Banda Gas Project component. The amount of MIGA coverage provided is based, in addition to MIGA's own net capacity limits, on the private sector's risk appetite under the Project. Without the WBG's proposed credit enhancements and risk mitigation, it is unlikely the Banda upstream joint venture would invest in developing the Banda gas project.

Proposed IDA Guarantee Structure

69. The proposed IDA PRG package consists of a credit enhancement mechanism to mitigate risks associated with SPEG's lack of credit history as a newly created and majority public-owned entity, and the low creditworthiness of SENELEC and EDM, the two public utility power purchasers. By extending IDA's proposed PRGs to mitigate risks associated with export power sales to Senegal and Mali, IDA is enhancing the creditworthiness of SPEG as well as the two public utility power purchasers from Senegal and Mali, thus assisting GoMR in securing sufficient levels of gas purchase and the required associated power sales, to justify private sector's development of Mauritania's Banda gas field.

Upstream Support to Banda Gas Project

70. The proposed upstream support is an IDA guarantee for SPEG's upstream gas payments obligations under the GSA and seeks to mitigate SPEG's off-taker payment risk, up to a maximum of US$130 million (i.e. the agreed amount of payment security to be provided by SPEG under the GSA, as such security is made available under a standby letter of credit (L/C)). GoMR will enter into an indemnity agreement with IDA with respect to the amount of guarantee provided.

71. The proposed upstream SPEG gas payment PRG will backstop a standby letter of credit (L/C) that SPEG is required to provide as payment security for its gas purchases under the GSA. The standby L/C provided by SPEG, for the benefit of Tullow (as operator, on behalf of the gas JV partners), is expected to cover a pre-agreed capped amount of gas payments corresponding to not more than US$130 million of deliveries under the GSA (equivalent to about 9 months of gas TOP payments), thereby providing necessary certainty of revenues and timeliness of payment to the Banda Gas JV which is making significant investment in the upstream gas infrastructure.

[11] IDA received a request for a guarantee to the project from the GoMR on September 24, 2012, from the GoSN on July 26, 2013 and from the GoML on January 22, 2014.

72. A Request for Proposals (RFP) for L/C issuing Bank was issued on February 14, 2014. The following criteria for evaluation of proposals was used: (i) a strong experience in the field of structured finance and trade finance activities; (ii) creditworthiness acceptable to address the long term drawdown needs over the L/C tenor; and (iii) competitive pricing of the L/C. Reputable and experienced commercial banks have been identified to provide a L/C for the benefit of Tullow and are currently in the negotiations phase with SPEG. IDA expects this process to be completed by end of May 2014.

Support for Export Power Sales under the SENELEC PPA and the EDM PPA

73. IDA is also proposing two additional payment guarantees to ensure timely receipt of: (a) up to US$99 million[12] in PPA payments to SOMELEC, for power exports to Senegal; and (b) up to US$32 million in payments under the PPA arrangement with Mali. IDA will enter into corresponding indemnity agreements with the GoSN and GoML.

74. The proposed downstream export payment PRGs will backstop L/Cs that SENELEC and EDM are required to provide as payment security for power purchases under their respective PPAs[13]. Together, the export payment PRGs provide payment security to SOMELEC up to US$131 million in payment security. The risk of SPEG non-payment under the GSA is covered entirely under the Mauritania indemnity agreement, while the risk of non-payment by each of the two public utilities (SENELEC and EDM) purchasing power from SOMELEC will be covered under the Senegal and Mali indemnity agreements, respectively.

75. The two-pronged, upstream/downstream PRG structure with separate indemnity agreements is designed to eliminate gaps in payment security between upstream and downstream, while also minimizing the amount of overlap and duplication in PRG coverage. There will be some limited instances under which SPEG could theoretically be responsible for the full take or pay amounts due under the GSA with no corresponding claims under either of SOMELEC's PPAs with SENELEC and EDM, but this has been minimized to the fullest extent possible. Annex 6 provides an indicative term sheet for the proposed IDA PRGs.

76. To facilitate the multi-party payment and cash-flow arrangements required under the Project, an Account Agency and Cash Flow Management Agreement among IDA, SPEG, SOMELEC, SNIM, Kinross, the L/C Beneficiary, an Account Agent, and possibly also SENELEC and EDM, will need to be entered into as a condition of PRG effectiveness. The purpose behind this requirement is to provide cash-flow transparency and ensure, in the event of a call under any of the PRGs, that the Project parties are able to clearly identify which of the parties has had a payment default thereby avoiding the Bank from being drawn into a payment dispute between Project parties. The Account Agency and Cash Flow Management Agreement will also address certain cash-flow priorities from PPA payments and appropriate cash flow management mechanisms and notice provisions that need to be established. Such mechanics are standard market practice in multi-party projects such as the proposed Banda Gas-to-Power

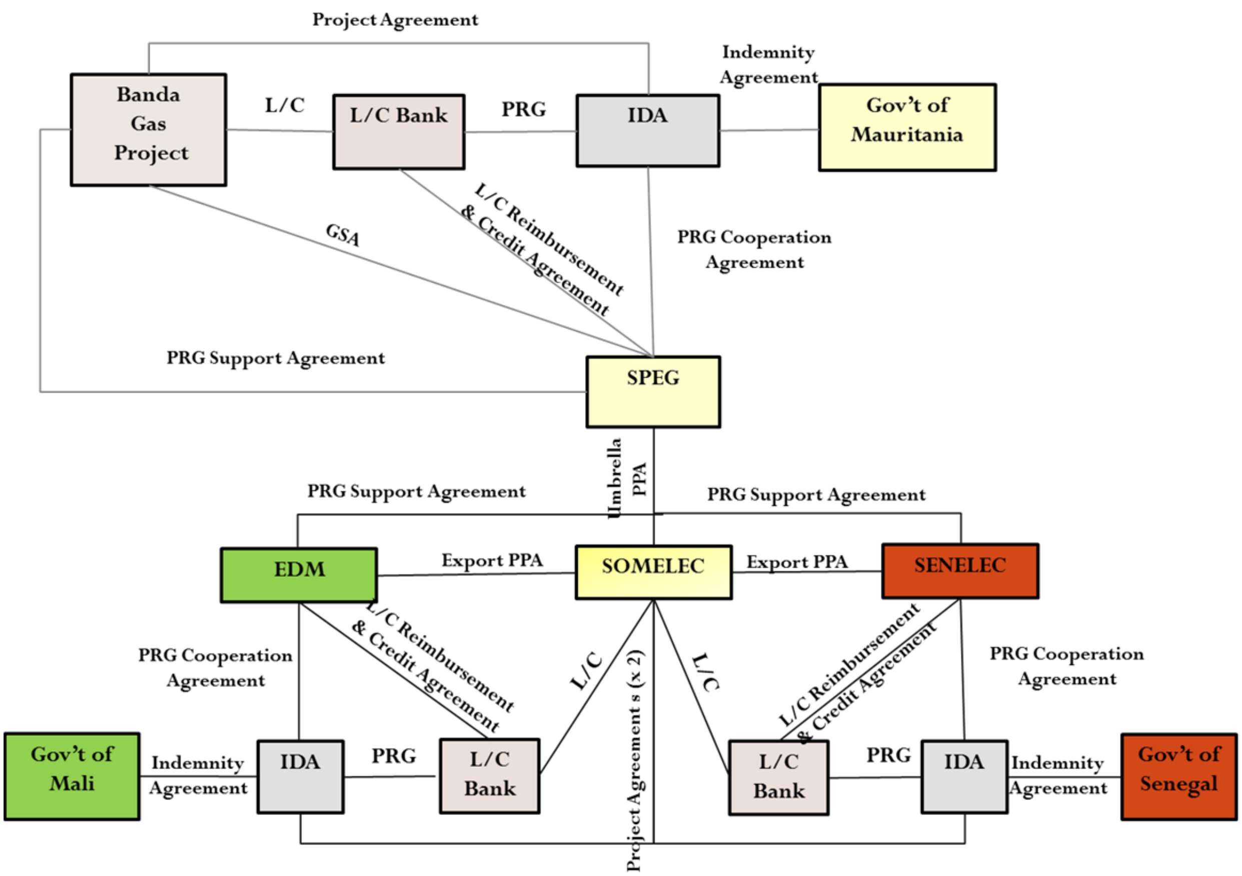
[12] A portion of that amount, namely SDR 4.4 million, was recommitted from the Senegal Electricity Services in Rural Areas Project (Cr. 3981, P085708).

[13] In the event where there is no commercial bank appetite to provide L/Cs for the benefit of SOMELEC at the downstream level, the PRG structure used will be a deemed loan structure whereby the PRG beneficiary is SOMELEC. The risks covered would be exactly the same; the only difference is the absence of the liquidity feature that is provided by the L/C Bank.

Project. To facilitate this requirement, on 14 February 2014, SPEG issued a competitive international tender[14] for an experienced, independent financial party to undertake the duties and obligations of Account Agent / Cash Flow Manager, who will establish and manage a set of lock-box accounts on behalf of the Project parties, into which cash payments will be made and disbursed in accordance with the Project documentation. Subsequent to the competitive tender, a reputable and experienced commercial bank[15] was identified to act as the Account and Cash Flow Management Agent and is currently in the negotiations phase with SPEG. IDA expects the selection of the Account and Cash Flow Management Agent to be completed by end of May 2014.

77. Figure 2 illustrates the PRG related agreements and proposed guarantee structure.

Figure 2: PRG related agreements[16]



78. The total amount of PRG coverage is considered appropriate under the circumstances, taking into consideration: (i) the World Bank's experience with other, similarly situated gas projects in the region and globally; (ii) Kinross's shareholding in SPEG, backed by a relatively

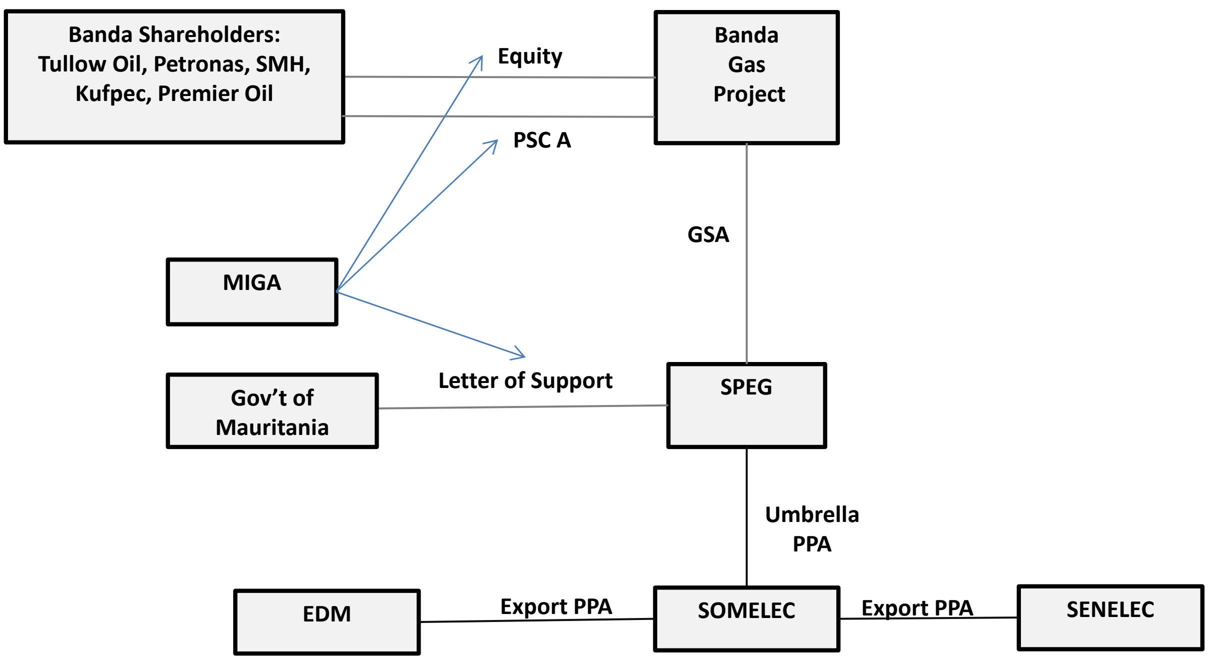
[14] The same RFP for issuing L/C Bank was used for the selection of the Account and Cash Flow Management Agent.
[15] It is one of the two issuing L/C Banks that were identified through the same tender.
[16] The Account Management and Cash Flow Agreement as well as the PPAs with Kinross and SNIM are not included in this diagram.

strong, creditworthy parent company balance sheet[17]; and (iii) the complementarity of the IDA PRG with MIGA's guarantee.

Scope of MIGA Risk Coverage

79. Both the proposed IDA upstream gas PRG and MIGA guarantees are ultimately designed to provide credit enhancement and risk mitigation for SPEG's payment obligations under the GSA. The MIGA guarantee is offered directly to the Joint Venture partners to cover their equity investments in the Banda Gas Project. The upstream developers requested MIGA's guarantees in support of their equity investment in the upstream development as well as to enhance the credit support to the payment obligation, namely the termination payment obligation under the GSA, as backstopped by GoMR.

Figure 3: MIGA is covering the PSC and termination payment owed by GoMR pursuant to the LoS under Breach of Contract



80. The proposed MIGA support includes a guarantee to Tullow, as well as the other members of the upstream consortium (collectively, the "Guarantee Holders"), covering their investments of US$650 million in the Banda gas field. MIGA's coverage will be for a period of up to 20 years. MIGA will guarantee up to 90% of the JV partners' investment, and MIGA's gross exposure will be up to US$585 million. MIGA's net exposure under this Project would be US$220 million after treaty reinsurance. The remaining amount of US$315 million will be facilitated through facultative reinsurance. Please refer to table 2.

81. MIGA's proposed guarantee will cover the risks of Transfer Restriction, Expropriation, Breach of Contract and War and Civil Disturbance. Under Breach of Contract coverage, MIGA has been requested to cover the Hydrocarbon Production Sharing Contract for Zone A ("PSC A")

[17] Kinross is rated Baa3, hence it is still considered investment grade. However, the recent decline in gold prices has had a negative impact on the company's credit rating.

in addition to the GoMR Letter of Support (the "LoS") as backstopping the obligations of SPEG under the GSA. The parties to the PSC A are the Islamic Republic of Mauritania, represented by the Minister for Energy and Petroleum, and the upstream partners. The PSC A is currently operated by Tullow. The parties to the GSA are the upstream partners, the GoMR and SPEG, and the LoS will be issued by GoMR in favor of the upstream partners.

82. MIGA will not cover the GSA agreement directly, but rather will cover the LoS which backstops SPEG's termination payment under the termination clause of the GSA. The termination payment, and therefore MIGA's BoC coverage, would only be triggered after the PRG is triggered. The LoS, which has not been finalized, will cover SPEG's obligations to pay a termination payment in the event of a SPEG default under the GSA. MIGA will in turn provide a guarantee covering the inability to enforce an arbitral award rendered against GoMR under the LoS.

Table 2 : Proposed Guarantees and Underwriting Structure

Types of Investment to be covered	Amount	Guaranteed Percentage	Term of Contract
Equity	US$650 million	90%	Up to 20 years
Estimated Total Amount of Guarantee:	**US$585 million**		
Less: - Syndication (expected amount):	US$315 million		
- Treaty:	US$50 million		
Estimated Net Amount of Guarantee:	**US$220 million**		
Tenor of Guarantee	20 years		

83. A summary of risk sharing arrangements under the Project supported by the proposed PRG and MIGA operations is provided in tables 3 and 4.

Table 3: Risk Sharing Arrangements for the Upstream Gas Project

Phase	***Risk***	***Gas JV***	***SPEG***	***GoMR***	***IDA Mitigation Support***	***MIGA***
Pre-Construction	Project design	✓		✓		
	Equity financing	✓				
Construction of Banda facilities	Cost overrun	✓				
	Construction delay	✓				
	Implementation of ESIA	✓		✓		
	Implementation of RAP	✓		✓		
Construction of SPEG facilities	Cost overrun		✓			
	Construction delay		✓	✓	✓ [18]	✓ [19]
	Implementation of ESIA		✓	✓		
	Implementation of RAP		✓	✓		
Operation	Adequately efficient O&M	✓				
	Output and reliability	✓				
	Payments under GSA	✓	✓	✓	✓	✓
GSA	Currency devaluation		✓			
	Currency convertibility		✓			✓
	Currency transferability		✓			✓
	Political force majeure		✓			✓
	Changes in law		✓			✓
	Natural force majeure	✓	✓			

Table 4: Risk Sharing Arrangements for the Downstream Power Project and related transmission lines

Phase	***Risk***	***SPEG***	***SOMELEC***	***SENELEC/ EDM***	***GoMR/ GoS/ GoML***	***IDA Mitigation Support***
Pre-Construction of Transmission lines	Project design		✓	✓		
	Equity financing		✓	✓		
Construction of transmission lines	Cost overrun		✓	✓		
	Construction delay		✓	✓	✓	✓ [20]
	Implementation of ESIA		✓	✓	✓	
	Implementation of RAP		✓	✓	✓	
Operation of SPEG facilities	Adequately efficient O&M	✓				
	Output and reliability	✓				
	Payments under Umbrella PPA	✓	✓			
	Payments Under Exports PPAs	✓	✓	✓	✓	✓

[18] Only to the extent of "take or pay" obligations under the GSA.
[19] Only if it triggers termination.
[20] To the extent of "take or pay" obligations under the relevant PPA.

Phase	*Risk*	*SPEG*	*SOMELEC*	*SENELEC/ EDM*	*GoMR/ GoS/ GoML*	*IDA Mitigation Support*
Operation of transmission line	Adequately efficient O&M		✓	✓		
	Output and reliability		✓	✓	✓	✓ [21]
Export PPAs to SENELEC and EDM	Currency devaluation			✓		
	Currency convertibility			✓	✓	
	Currency transferability			✓	✓	
	Political force majeure		✓	✓		
	Changes in law		✓	✓	✓	
	Natural force majeure		✓	✓		

E. Lessons learned and reflected in the Project design

84. Lessons learned and incorporated in the project design include the WBG's global experience in providing a combination of instruments (including PRGs and MIGA guarantees) in infrastructure projects.

85. PRGs and MIGA guarantees have favored private investments in the energy sector, mainly IPPs and gas fields and terminals, but are not sufficient by themselves to ensure financial sustainability of a country's power sector. This is particularly true in Mauritania, Senegal and Mali, as the risk mitigation package has to be accompanied by credible power sector reform measures and a sustainable tariff policy. The WBG is particularly well placed to facilitate this discussion, as it is strongly involved in sector dialogue in all three countries and will require indemnity agreements with each of the three governments.

86. Lessons from the WBG's extensive engagement in the energy sector in developing countries have also been taken into account in the project design. One of the lessons is that sole investment in transmission is not enough to spur power trade between countries. Power purchase agreements with determined volumes and price are as important. The World Bank team has identified finalization of the PPAs as a key priority for the Project's success and was able to mobilize parties on that front.

87. One of the global lessons is that energy sector reforms depend on political will. Governments in Mauritania, Mali and Senegal are demonstrating strong political commitment to energy sector reforms, driven by the fiscal burden of extensive energy subsidies. GoMR and GoSN are implementing important reforms to address the financial situation of the utilities and the GoML is in the process of preparing a sector recovery plan. While PRGs do not directly address the financial viability of the energy sector, they can contribute to restoring investors' confidence in a country and a sector.

88. The World Bank Group has supported implementation of the WAPP master plan through more than one dozen projects including IDA financing and technical assistance, IFC investments and advisory services, and MIGA guarantees since 2005. By 2014, there are a series of sub-regional grids but little power trade because of generation deficits. Going forward, support will

[21] Between delivery point and SENELEC/EDM networks.

have increased focus on generation using private sector investment, creating the mechanisms to facilitate regional power trade, and a continued focus on closing the missing transmission links.

IV. IMPLEMENTATION

A. Institutional and implementation arrangements

Banda Field JV and PSC

89. The Banda field shareholders are: Tullow, Petronas, Kufpec, Premier Oil, SMH (if and when GoMR's option to participate through SMH in the Production Sharing Contract (PSC) is exercised), Islamic Republic of Mauritania through their various subsidiaries with the following legal names:

a) Tullow Petroleum (Mauritania) Pty Ltd;
b) Mauritania Holdings B.V.;
c) PC Mauritania 1 Pty Ltd;
d) PC Mauritania II B.V.;
e) Premier Oil Exploration (Mauritania) Ltd;
f) Tullow Oil (Mauritania) Limited; and
g) FP Mauritania A.B.V.

90. As is normal practice in the oil and gas industry, the investor group operates as a non-incorporated joint venture wherein income and costs are directly apportioned pro-rata to the partners. Tullow carries out the petroleum operations on behalf of the partners under the terms of a joint operating agreement.

91. The Production Sharing Contract for offshore blocks 3, 4, and 5, Zone A (also known as "PSC A") was entered into on June 6, 2006 and approved by ordinance N^{o} 2006-011 dated June 16, 2006. PSC A was amended in 2012 to cover a portion of the Banda field that was previously covered by a separate production sharing agreement. In addition, the 2012 amendment improved the fiscal terms applicable to the Banda field in order to improve the economic conditions for development of the field to the point where commercial development could be considered.

SPEG Structure

92. SPEG is a joint venture between SOMELEC (40%), KG Power (34%) and SNIM (26%). The Investment Convention, which regulates the relationship between the State and SPEG, was signed and ratified by the Mauritania Parliament and the Senate. The Shareholders' agreement between SOMELEC, KG Power and SNIM, establishes the project company, SPEG, and governs the relationship between the parties in relation to the SPEG Power Project.

93. The SPEG Power Project, the North HV line and the South HV line have all been designed by the same reputable owner's engineer, who is also advising SPEG and SOMELEC during the procurement phase. During construction, SPEG and SOMELEC will continue to benefit from the advice of a single owner's engineer. IDA will monitor the progress of the Project, including during the construction phases of the plants and associated infrastructure and facilities. To ensure this, usual and customary covenants relating to reporting, monitoring and

access to information will be included in the PRG-related legal agreements[22] with the relevant parties (e.g., provision of periodic construction progress reports).

94. Refer to section III above for a description of the project's contractual structure.

B. Monitoring and evaluation of outcomes/results

95. Monitoring of project outcomes and results indicators will be done by Tullow, SPEG, SOMELEC, SENELEC and EDM. Data for monitoring project outcomes and results indicators will be collected by Tullow and SPEG in regular progress reports. Annex 1 presents the Project's Results Framework that defines specific results to be monitored.

C. Sustainability

96. The Project will enable the GoMR to obtain gas for its power sector thus enabling SOMELEC to reduce its average cost of production and put the state-owned company on a more financially sustainable path. It will also enable Senegal and Mali to obtain power at lower cost than alternatives being considered thus also enhancing the financial health of their respective power sectors.

97. Long term sustainability of the gas investment is ensured by Tullow, which has been successfully operating oil and gas fields in 25 countries, mostly in Africa, over the past 20 years following oil and gas industry best practices. By backstopping SPEG's payments, the PRG will help ensure that funds are available to properly operate and maintain the assets over time. The sustainability of SPEG's investments is ensured by a qualified management team, who are assisted by professional engineering, financial and legal advisors, and are selecting experienced EPC and O&M contractors, including Wartsila.

98. The Project also contributes to environmental sustainability as the alternative would be oil-based power generation, which emits more pollutants and green-house gases per unit of energy than gas-fired generation.

V. KEY RISKS AND MITIGATION MEASURES

A. Risk Ratings Summary

Risk	**Rating**
Stakeholder Risk	H
Implementing Agency Risk	
-Capacity	S
-Governance	S
Project Risk	
-Design	S
-Social and Environmental	S
-Program and Donor	S
-Delivery, Monitoring and Sustainability	S
Overall Implementation Risk	**H**

[22] These covenants will be included in the Project Agreement between IDA and Tullow in connection with the upstream PRG, the Project Agreement between IDA and SOMELEC in connection with the downstream PRGs, as well as in the Cooperation Agreement between IDA and SPEG.

B. Overall Risk Rating Explanation

99. **The overall Project risk rating is High.** This reflects the complexity of reaching agreements among stakeholders with different incentives and securing timely construction of all parts of a project of this magnitude, in a risky country and sector environment. Financing and procurement of all parts of the project are well advanced and measures have been taken to mitigate construction risks. Although the proposed structures of the IDA and MIGA guarantees are well established and tested around the world, the operational and financial performance of the Mauritanian, Senegalese and Malian power sectors could weigh on the financial sustainability of the Project. The IDA and MIGA guarantees themselves as part of a continued broader involvement from the WBG and other donors in the energy sector mitigate these risks. Environmental and social risk will also need to be managed carefully.

100. **Delays in mobilizing full financing for SPEG Power Project and transmission lines.** There is a clear plan for financing the SPEG Power Project and new transmission lines, with financing intentions from a number of donors and SPEG shareholders Kinross and SNIM. Board approvals from all the donors and/or the SPEG shareholders are expected by the end of May 2014. **Mitigation:** The Bank is in regular contact with project donors and SPEG itself and expects to be warned if any delays in approving and mobilizing funds for the Project are encountered. Full mobilization of required capital for the project will be a condition of effectiveness for the PRGs.

101. **Construction delays and cost overruns in the Banda Gas Project, the SPEG power plant and/or the transmission lines.** There is a risk that the cost of the Project is higher than estimated once procurement is complete. In addition, there is the potential for construction delays. **Mitigation:**

i. Procurement for the upstream Banda Gas Project is very advanced: EPC contracts offers have been received and negotiated; they will be signed once the GSA is finalized and the Banda Gas JV partners take the final investment decision. It is unlikely that any further cost increases would happen after procurement is complete for the ‘turnkey, fixed-price’ EPC contracts which will be signed with experienced international firms. Furthermore, the Banda Gas JV partners have the financial capacity to absorb potential Banda Gas Project cost overruns, if any. If there is a delay in gas availability from the upstream Banda Gas Project, the SPEG Power Project, which is dual fuel, can run on oil products. The GSA stipulates that the Banda Gas JV would compensate SPEG for any such additional fuel cost caused by a gas delivery delay. The GSA also includes a 6 month ramp-up period in gas volume.

ii. <u>SPEG Power Project:</u>

- The construction of the dual fuel plant is well advanced and its commissioning is scheduled for March 2015, well ahead of the start of the overall Banda Gas-to-Power Project in mid-2016. However, title to the plant will be with SOMELEC until it is transferred to SPEG prior to delivery of first gas. The transfer of the plant’s title to SPEG, which will be monitored closely, is a condition of effectiveness of the upstream PRG.
- CCGT plant bidding process has been launched and has attracted significant competition, which translates to low uncertainty on prices.

- Both the dual fuel plant and CCGT contracts include market practice liquidated damages (LDs) and indemnification mechanisms, which are designed to absorb some cost overruns and delay scenarios.

iii. Transmission facilities: Procurement for the North HV line is well advanced. Appraisal for the South HV line (Mauritania portion) by AFD is scheduled for mid-May 2014. IsDB has already approved the financing for the South HV line (Senegal portion). Regarding exports, the existing OMVS transmission line can carry 80 MW. Furthermore, the economic analysis (refer to Annex 4) has highlighted that the project can weather a delay in commissioning of new transmission lines up to a year without jeopardizing its viability.

iv. Owner's engineer: The continued presence of a reputable owner's engineer during the procurement phase and construction phase will reduce the risk of construction delays or cost overruns and assure the quality of the works.

102. **Gas production is not enough to cover take-or-pay requirements.** This risk is deemed to be low to the extent that the gas volumes at stake have already been confirmed and are not contingent upon additional assessment or drilling. **Mitigation:** A redundancy is built in with the drilling of a second well and gas production is only a fraction of recoverable gas. Furthermore, as per the GSA, gas supply risk is allocated to the Banda Gas JV, whose operator Tullow is a reputable and experienced international contractor. If there were a shortfall in gas supplied under the GSA, a number of options and compensations are available: (i) Tullow could secure an alternative source of gas to be supplied to SPEG; (ii) SPEG could run the dual fuel plant using heavy fuel oil; and (iii) if the shortfall persists, this would be a cause of termination of the GSA, which would trigger termination payment to SPEG. It is expected that this would also trigger termination of the PPAs. Please note however that this risk, which is mainly Tullow's risk, is not borne by the WBG through the guarantees it will provide. See Annex 2 for further details on gas field specifications.

103. **Lower electricity demand than projected.** Electricity demand from one or several of the power off-takers of the SPEG Power Plant could turn out to be lower than projected in the feasibility study. Ultimately, if energy demand were to fall short of the gas take-or-pay quantity, SPEG would end up paying more per unit of energy to meet the upstream annual income target until sufficient demand has built up. This risk is estimated to be low. **Mitigation**: If one off-taker were to demand less power, others could compensate by increasing their take-or-pay volumes. The financial analysis (downside scenario) demonstrates that the price of electricity remains competitive even if demand turns out to be 30% lower than the base-case. Additionally, SOMELEC, the sole off-taker of SPEG power, will enter into secondary PPAs with each of its downstream power purchasers (SENELEC, EDM, KG Power and SNIM) that provide take-or-pay obligations sufficient to support SPEG's obligations under the GSA.

104. **Financial difficulties for SOMELEC, SENELEC and/or EDM, which impact on their ability to meet payment obligations under their respective PPAs.** All three utilities are currently unable to fully cover operating expenses through current revenues and each depends on government subsidies. Each country has a sector policy to phase out subsidies. However, there is still a risk of non-payment under their respective PPAs if their financial performance were not to improve sufficiently due to oil price increases or if government subsidies were insufficient to cover the revenue gap. **Mitigation:** The Bank and other donors are engaged in sector dialogue

and interventions to support power utility recovery and reforms in all three countries. The proposed IDA PRGs include a mechanism that would alert the Bank at an early stage if one of the power off-takers were late in making payments under its respective PPA, and the Bank team would start consultations with Project stakeholders to find a solution before the PRG is triggered. In addition a primary purpose of this Project is to lower the cost of power production for each of the utilities, enhancing their financial situations. By way of technical assistance, the Bank has financed a recently completed power sector master plan and tariff study for Mauritania. In both Senegal and Mali, the Bank is financing energy sector investment projects designed to support each country's power utilities' recovery plans. The Bank will reinforce its sector dialogue in all three countries (particularly Mauritania), and assist them in implementing the reforms and investment projects that were identified as necessary for reaching a sustainable power sector.

105. **Political and security risks.** Although Mali has witnessed political and security turbulences over the past two years, the political risk is not considered a major risk to achieving the Project's development objective. The main reasons for this are: (i) the political situation has improved since early 2013 with the success of the international military action and the restoration of Mali's sovereignty over its northern territories; and (ii) exports from Manantali hydropower in Mali to Mauritania and Senegal were not interrupted despite recent security concerns in Mali, hence there is precedence to support the view that the exchange of power within the OMVS framework will continue to be isolated from political events to the extent that all stakeholders recognize its economic importance for the region.

VI. APPRAISAL SUMMARY

A. Economic and financial analyses

Economic analysis

106. **Project's development impact:** The economic analysis (cost-benefit analysis) of the Banda Gas-to-Power Project shows that the Project is economically beneficial with an estimated Economic Internal Rate of Return (EIRR) of 20.6% and a Net Present Value (NPV) of US$993 million (at 10% discount rate).

107. Investments under the Project will improve the sub-region's power supply capacity by adding 300 MW of power to the interconnected grid. The analysis focuses on direct quantifiable benefits resulting from the Project. The analysis values the incremental consumption at the consumers' willingness to pay (WTP) including SOMELEC, SENELEC and EDM end users and Kinross and SNIM. A sensitivity analysis shows that the economics of the Project are robust. The EIRR remains well above 12% under the assumption of considerable cost increase, reduced exports to Senegal, and delays in commissioning.

108. Further to the economic value of electricity captured by end-users, Mauritania will benefit from: (i) royalties and incomes taxes generated by the upstream gas project; (ii) dividends distributed to SOMELEC and SNIM as shareholders of SPEG; and (iii) income taxes withheld on SPEG. The net benefits of the Project will be allocated between the three countries as follows: 57% for Mauritania, 31% for Senegal and 12% for Mali.

109. Enabling the region to tap into cheaper source of generation will enhance the competitiveness of the regional economy; in particular in Mauritania where a large number of mining sites still await to be developed and which economic feasibility depends among other variables on cost of energy. Hence this Project has the potential to have a strong multiplier effect

on the economy. In addition, the envisioned investments whether upstream or downstream are expected to generate a significant number of jobs to build, operate and maintain the offshore site, the gas processing plant, power plants and transmission lines.

110. **Appropriateness of public sector financing:** The Project is providing limited public sector financing to backstop private sector investment in the Banda Gas-to-Power Project. The WBG credit enhancement and risk mitigation framework for the Project is designed for the complementary and efficient use of both IDA PRGs and MIGA guarantees to support the objective of tapping into cleaner, more competitive and reliable energy required for sustainable growth. The PRGs and MIGA coverage have a significant leveraging impact – A PRG amount of US$261M (counted as only US$65 million from the IDA country allocations) and MIGA cover of up to US$ 585M are leveraging more than US$1.5 billion of investments of which around two thirds is being mobilized by the private sector (including Kinross and SNIM).

111. **World Bank Group's value added:** Given the risk perception of investors towards Mauritania, the lack of credit history of the newly formed entity, SPEG, and the weak credit profile of each of the three public utility power purchasers (SOMELEC, SENELEC, and EDM), the Project would not have been bankable without the intervention of credit enhancement and risk mitigation instruments from IDA and MIGA. WBG's support is critical for providing confidence to investors and convening different countries around the same development objectives. Not only does the Project help mobilize private capital, but it is also aligned with and embedded in a strong sector dialogue with the authorities in each country. The Project leverages the convening power of the WBG to foster regional power trade. In addition, WBG's technical assistance and overall support in bringing transactions to financial closure adds significant value to the region and assists in the goal of increasing the supply of energy.

<u>Financial analysis for Banda Gas Project</u>

112. Based on a capital expenditure (CAPEX) estimate of US$650 million for the upstream gas project and a take-or-pay quantity of 42 BBtu/ day, gas production would yield nominal revenues of US$184 million per annum. Under base case assumptions, the upstream investors are expected to recover their investments over 6-8 years and a reasonable equity return is expected to accrue to the JV partners over the 20-year GSA.

113. The Banda Gas Project's financial viability has been tested under various stress scenarios. Of all the scenarios tested, the project was most vulnerable to the gas production volume (i.e. gas supply risk). The break-even volume is 75% of the envisioned take-or-pay. However, given the project technical design, this scenario is deemed highly unlikely. In conclusion, the gas project is financially robust and can sustain reasonable adverse outcomes in key variables.

114. The GoMR's undiscounted tax revenues and profits stemming from the Banda Gas Project are estimated at US$2.6 billion over the lifetime of the proposed Project, while all of the physical investment is being undertaken by the private sector. The breakdown for government revenues is: 60% profit from Joint-Venture and 40% tax revenues.

<u>Financial analysis for SPEG Power Project</u>

115. A separate financial analysis was undertaken for the SPEG Power Project on the basis of the financial model developed by SPEG's financial adviser. Project cost for the power plant is estimated at US$467.1 million. It is expected that the power plant will be financed with

shareholder equity[23] in the first phase. However, shareholders are likely to refinance their investment in the power plant with cheaper debt post-financial close.

116. As per the terms of an umbrella PPA between SPEG and SOMELEC, SOMELEC's payment to SPEG is structured as follows: (i) a fixed component of US$6.6 million per month corresponding to the investment cost of SPEG and the fixed O&M cost; and (ii) a variable component of US¢ 10.7 per kWh reflecting fuel and variable O&M expenditures. A third tariff component is being discussed to ensure SPEG is able to pay its take-or-pay obligation under the GSA that requires SOMELEC commit to a minimum take-or-pay amount under the umbrella PPA. The umbrella PPA tariff structure is to be replicated at the secondary PPA level, with Kinross, SNIM, SENELEC and EDM as respective off-takers. The table below highlights the breakdown of the tariff for SOMELEC on first year of operation in US¢ per kWh.

Table 5: Electricity tariff at SPEG's substation on year 1 of operation

	US¢ per kWh
Capital Recovery Component	3.7
Fixed O&M Component	0.8
Fuel Component	10.0
Variable O&M Component	0.7
Total	**15.2**

117. The exact average tariff of each offtaker from SOMELEC will reflect its own load factor. In order to derive this tariff level, the SPEG Power Plant's IRR was set at 10%. It is considered a reasonable return for its shareholders whose main objective is to produce electricity at lowest cost possible. The investor payback period is 8 years. A sensitivity analysis has been undertaken to assess the impact of different variables on the power plant's financial sustainability. It shows a robust project able to sustain reasonable variations (+20%) in key variables, namely CAPEX and electricity output.

Financial analysis for SOMELEC, SENELEC and EDM

118. Financial analysis was carried out for each of the three utilities, SOMELEC, SENELEC and EDM. All three utilities rely on a similar generation mix (essentially expensive HFO and a small share of regional hydropower) with tariffs of the same order of magnitude, ranging between US¢ 22 per kWh and US¢ 24 per kWh. All three utilities suffer from tangible financial losses as a result of under-recovery of costs and relying strongly on government support.

119. SOMELEC and SENELEC have begun to pursue a more financially sustainable path through a projected shift in their generation mix (e.g., gas-fired assets in Mauritania, coal generation in Senegal, and hydropower in Mali) within the next five years. All three utilities will continue to rely on government support for the next three to five years, although at a decreasing level. The Project will help reduce average cost of power generation for each utility and thereby provides an opportunity for all three utilities to reduce their reliance on government subsidies.

B. Technical

120. **Banda Gas Project**. The gas project's technical design has been reviewed as part of the preparation process and found to be appropriate, following international oil and gas industry best practices. The production sharing contract (PSC) has also been reviewed and was found in

[23] SOMELEC's share of equity is funded through concessional financing.

accordance with industry practice. The field development plan prepared by Tullow adheres to normal professional standards in the oil and gas industry and is supported by geological, geophysical, and engineering analyses performed to a very high standard. The well designs are conventional and previous wells drilled in the field have not encountered abnormal pressures or temperatures. The two wells are to be connected to a common production manifold on the sea floor and then piped to shore. This approach is a commonly accepted alternative to a fixed production platform, particularly for simple developments. The sub-sea systems, pipeline and processing facility utilize conventional technology. Tullow has extensive experience constructing and operating similar facilities throughout the world.

121. **SPEG Power Plant**. The power plant uses proven technology. The EPC contractor for the initial phase 180 MW dual fuel plant (which will also have a five-year O&M contract) is one of the world's most experienced international firms in generating electricity from heavy fuel oil using reciprocating engine technology. The power plant is expected to run on heavy fuel oil until mid-2016 when gas from Banda field is made available. The WBG has financed approximately twenty similar installations in different parts of the world; the experience with the technology and the contractor has consistently been positive. The combined cycle gas turbine plant (CCGT) will be 120 MW plant fuelled by natural gas. The expected fuel efficiency of the CCGT is about 45% (at 75% load and site ambient and assuming GE6B turbines), whereas that of the engines on natural gas is 42%. The impact of the SPEG Power Plant on grid stability in Mauritania was part of the feasibility study and appropriate technical measures were recommended to maintain such stability. Stability analysis is also planned by SOGEM to ensure that the OMVS transmission network will be able to accommodate planned power plants, including the SPEG Power Plant.

122. **South HV line**. Total length of the required new transmission line is just about 400 km between Nouakchott in Mauritania and Tobène in Senegal, of which 240 km is in territory of Mauritania and 170 km in Senegal. Cost of the line is estimated at US$170 million, including substations and engineering. Construction is estimated at 30 months; this translates in a projected commissioning by early 2017. Short-circuit calculations, reactive compensation, load flow calculations and transients, are all technical considerations that have been taken into account in the conceptual design. Designs have been carried out by a highly experienced engineering firm with a track record in transmission line design, including many lines in desert conditions.

123. SPEG and SOMELEC, the owners of the power plants and transmission lines (Mauritania portion), have some technical capacity to supervise the construction of such infrastructure. All the facilities will be turn-key EPC contracts with international suppliers and the utilities will hire an owner's engineer to help with supervision during the procurement and construction phase. SENELEC has the experience with supervision of transmission line construction, but will also benefit from both an EPC contract and an owner's engineer for its portion of the South HV line. The IDA team appraised that the various utilities with the planned support of an owner's engineer have sufficient capacity to manage the EPC contractors to ensure works are carried out to quality standards, within cost estimates, and in a timely fashion.

C. Financial Management

124. There will be no traditional financial management issues associated with the Project because there are no World Bank financed procurement or procurement-related disbursements under the Project. Tullow is responsible for financial management of the upstream Banda Gas Project. Tullow possesses adequate financial management systems, including accounting,

reporting, auditing, and internal controls, and relevantly qualified staff. The annual financial statements are prepared using internationally accepted accounting principles. In addition, Tullow financials are audited in accordance with international standards on auditing.

125. The revenues from gas sales are attributed to the GoMR (as per the PSC) and each of the Banda gas joint venture members, through Tullow, as operator of the joint venture. Each JV member is expected to finance its share of the joint venture investments through its own equity. Tullow will contract with and pay the various contractors responsible for constructing the project infrastructure on behalf of the JV members. Tullow has a dedicated project unit in charge of designing and contracting the various investment components, through its own competitive bidding process, which is in line with market practice in the oil and gas private sector.

126. While the proposed upstream gas IDA PRG does not finance investments of the Joint Venture, the proceeds of the L/C guaranteed by IDA will be directed to Tullow which as operator, is charged with distributing these proceeds to the JV members pro rata to their share in the joint venture. To this effect, Tullow, as operator, will sign a back-up agreement with the Joint Venture members to share these proceeds. Tullow will also be responsible, on behalf of JV members, to pay for the costs associated with the L/C PRG structure, including the L/C bank cost, and the IDA PRG costs.

127. Project cash flows will be monitored and administered by an Account Agent to provide cash-flow transparency and ensure Project parties are able to clearly monitor and identify the flow of payments. To facilitate this requirement, SPEG will select, by competitive tender, an independent, international financial party to undertake the duties and obligations of Account Agent / Cash Flow Manager, who will establish and manage a set of lock-box accounts on behalf of the Project parties, into which cash payments will be made and disbursed in accordance with the Project documentation.

D. Procurement

128. **Upstream Banda Gas Project**. World Bank Procurement Policies require that procurement of goods and services for a project supported through a PRG must be carried out with due regard to economy and efficiency. IDA's appraisal concluded that the overall procurement process being carried out by Tullow in implementing the gas development project follows a classic oil industry pattern and meets general principles of good practice, industry standards of economy, efficiency and transparency for this type and size of project.

129. IDA also reviewed the process by which Tullow and its partners obtained their interests in the production sharing contract covering Zone A (the location of the Banda field). The original production sharing contract (PSC) was signed on September 8, 1996. The original PSC was subsequently revised and replaced with the current PSC signed on June 6, 2006 and approved by ordinance N° 2006-011 dated June 16, 2006. Both the 1996 and 2006 PSCs were awarded on the basis of bilateral negotiations between GoMR and the partners. Mauritania did not introduce the concept of competitive tendering for licenses until it enacted new legislation in 2010, and even post-legislation, has continued with direct negotiations as the model for subsequent awards. The 2006 PSC was amended in 2012 to cover the portion of the Banda field that was previously covered by a separate production sharing agreement. In addition, the amendment improved the fiscal terms applicable to the Banda field in order to improve the economic conditions for development of the field to the point where commercial development could be considered.

130. According to the Field Development Plan prepared by Tullow, development of the Banda field will comprise 5 main parts: (a) drilling rig; (b) subsea production system; (c) umbilical; (d) pipeline EPC; and (e) gas plant EPC. Each of these activities will be carried out under contracts with established engineering and service companies. These contracts are subject to international competitive bidding and will include completion guarantees and other undertakings assuring successful completion of the work.

131. **SPEG Power Plant**. All procurement for the SPEG Power Plant, both for the two-phased power plant development and related transmission lines, is based on professional feasibility studies and is being conducted on the basis of competitive international tenders.

132. Procurement of the 180 MW dual-fuel power plant followed the procurement procedures of the Islamic Development Bank (IsDB) and the Arab Fund for Economic and Social Development (AFESD). Due diligence on the awarded EPC contract shows that:

i. The overall contract price is within the expected range for equipment of this type;

ii. The power plant has the optimal technical configuration considering price, expected performance, fuel efficiency, reliability, availability, air and effluent emissions, longevity, future operating cost, high ambient temperature environment, high dust environment, and ability to switch seamlessly between two fuels and

iii. The selected contractor, Wärtsila of Finland, has constructed approximately 20 power projects in which the WBG has been involved since 1993. Wärtsila has consistently proven to provide good quality equipment in difficult locations and ensures excellent ongoing technical performance.

133. With respect to the 120 MW CCGT power plant and the transmission lines, the design and bid documentation were prepared by the owner’s engineer. Under an international competitive bidding process supervised by the owner’s engineer, 7 bidders from various countries have presented offers for the CCGT plant, which are being evaluated. To date, the CCGT and North HV line tender processes have been handled in a professional, competitive and fully transparent manner.

E. Environmental and Social Safeguards

134. The Banda gas-to-power project is a public-private partnership, jointly supported by IDA and MIGA. The proposed operation is classified as a Category A project and will follow the World Bank Performance Standards applicable to private sector projects (O.P. 4.03). All required safeguards documents have been reviewed, approved and disclosed in country and in the Infoshop.

<u>Banda Gas Project</u>

135. The Banda Gas Project ESIA, disclosed on August 30, 2013, identifies all significant environmental and social impacts as well as impacts on terrestrial biodiversity. Impacts on the marine as well as the terrestrial biodiversity have been evaluated as minimal. Social impacts are very limited. A joint MIGA and IDA Environmental and Social Review Summary for the upstream component was disclosed on March 12, 2014 on MIGA’s website.

SPEG Power Project and related transmission lines

136. The ESIA for the SPEG facilities (including the North HV line) was disclosed on December 2, 2013. SPEG has developed a full ESIA and a Resettlement Policy Framework (RPF) for the SPEG project, including the North HV line and the OMVS HV line extension. The full ESIA is based on a preliminary ESIA completed in 2012. The ESIA has been approved by the Bank and disclosed in country and through the Bank's Infoshop on December 2, 2013. The SPEG RPF has been approved and disclosed on March 19, 2014. This RPF also covers the Mauritania portion of the South HV line.

137. The ESIA for the Mauritania portion of South HV line was disclosed in country and in the Infoshop on March 4, 2014. IDA assessed that it meets the criteria of Performance Standard 1 of O.P. 4.03 in that the process of identifying risks and impacts has consisted of an adequate, accurate, and objective evaluation and presentation, prepared by competent professionals. The environmental and social risks of this transmission line are manageable.

138. The portion of the South HV Line located in Senegal will be owned and operated by SENELEC. It is within the Project's area of influence while recognizing that it is not under the direct control of any of the beneficiaries of the IDA guarantees. As such, the assessment and mitigation of risks for this section takes into account the level of control and influence the Guarantee beneficiaries can exercise vis-à-vis SENELEC. The ESIA and the RPF for this section of the line has been reviewed to assess the risks related to this linked infrastructure. The ESIA and the Resettlement Policy Framework (RPF) for the Senegal portion of the South HV line were disclosed in country and through the Infoshop on April 17, 2014. The transmission line will be co-financed by the French Development Agency (AFD). AFD is applying environmental and social safeguards policies similar to that of the World Bank Performance Standards, and the ESIA for this infrastructure explicitly refers to the World Bank Performance Standards. IDA has worked in close coordination with AFD during the review of the ESIA (for both the Mauritania and Senegal segments). The ESIA for the South HV line was prepared by the same consulting firm that also undertook the feasibility and engineering study for this infrastructure.

139. An IDA Environmental and Social Review Summary relative to the downstream component, composed of the SPEG power plants, the North HV Line and the South HV Line until the delivery points of the secondary PPAs, was disclosed on March 21, 2014.

140. The Table below provides further details on what Performance Standards apply to the Project and how the parties have addressed these Performance Standards.

World Bank Performance Standards triggered	Yes	No	TBD
PS 1: Assessment and Management of Environmental and Social Risks and Impacts	X		
The Banda gas field is located approximately 55 km offshore of Nouakchott. It is owned by a consortium of investors, with Tullow Oil Plc (Tullow) as the majority shareholder and operator in the Joint Venture. Tullow has prepared a field development plan (subsequently approved by the Government of Mauritania in January 2013) which provides for production of up to 65 Billion Btu per day of gas over 20 years. It consists of the drilling and installation of two subsea wells tied back to an onshore gas processing plant via a subsea production manifold and a 10-inch pipelines. Key risks include: vessel collision risk, economic displacement through loss of access to fishing grounds (in the unlikely event of a spill), water and sediment contamination, discharges of commissioning fluids, noise, habitat loss and impacts to marine and coastal habitats and species, well blowout and pipeline rupture, soil erosion, hazardous materials and waste generation and air emissions (including CO_2). Based on current information, the			

upstream portion of the project has not identified impacts that could not be avoided or reduced to acceptable levels through the application of the proposed mitigation measures, as described in the Environmental Management Plan (EMP).

The 180 MW dual fuel power plant currently being built and that will be operated for a period of five years by the company Wartsila has not been assessed specifically in this SPEG ESIA, but both the analysis of cumulative impacts and the hazards assessment have taken into consideration the impacts of its operation. SPEG is a new entity set-up by its shareholders (SOMELEC, Kinross and SNIM) for being the entity responsible for the new infrastructures covered by the downstream ESRS with the notable mention that after their construction the North HV and South HV transmission lines will be transferred respectively to SOMELEC and to OMVS. The due diligence carried out by the IDA team has confirmed that SPEG has very little capacity particularly for overseeing the implementation of the environmental and social management plans and the resettlement plans and will have to consequently sub-contract these missions to external specialized firm or other capable government agencies. The two instruments above specify clearly the areas of influence and the monitoring objectives to be achieved and constitute and environmental management system that will ensure the environmental and social integrity of the project.

The SPEG ESIA includes a hazards assessment that covers the main risks of accident that could affect the power plant. It also includes an analysis of the four following alternatives: (i) “no project” option; (ii) choice of fuel and supplies; (iii) choice of power plant location and; (iv) route selection for the transmission line.

The South HV line project has been segmented in three parts for the purpose of the assessment:

- ✓ 193km Segment 1: 225 kV line from the new power plant in Nouakchott to the Beni Nadji substation (Mauritania).
- ✓ 76km Segment 2: 225kV line from Beni Nadji (Mauritania) to Saint Louis substation (Senegal). For this segment three variants have been studied from a technical and environmental point of view as this segment of the line crosses the Senegal River.
- ✓ 144km Segment: from Saint Louis (Senegal) to Tobène (Senegal).

The inter-connection will necessitate the construction of a sub-station in Saint-Louis as well as an extension of the existing substations of Beni Nadji (Mauritania) and Tobène (Senegal).

The ESIA assessed several possible corridors. On the Mauritania side it concluded that the best compromise between economic, social and environmental imperatives would be to recommend a corridor that would avoid passing through the Diawling National Park, an important migratory bird nesting place that made the park a recognized Ramsar site in 1994. However on the Senegal side it would be very difficult to avoid the Senegal River delta and avoid passing near sensitive ecological areas such as the Djoudj national Park. An alternative route is proposed in the ESIA in order to minimize the impact, particularly on birds, on the sensitive ecological zones mentioned as the line crosses the Senegal River. The extra length of line would be 11km. It is not expected that specific permits will have to be obtained as the lines (North HV and well as South HV) will not go through protected areas.

The Environment and Social Management Plan (ESMP) and Monitoring Plan are exhaustive and cover the pre-construction phase, the construction phase and the post-construction phase and also cover the issue of bird collisions with the line. However, the capacity of SPEG, SOMELEC and SENELEC (SENELEC will have to implement the ESMP for the segment of the line on the Senegalese territory in compliance with the Senegalese environmental regulations and also on the basis of the World Bank Performance Standards) to implement the management plans contained in the above ESIAs is limited and would have to be enhanced through sub-contracting their implementation to a specialized entity or another competent governmental agency. IDA will ensure that environmental and social requirements will be passed on to the builder and operator of the SPEG power Plant.

PS 2: Labor and Working Conditions	X		
The clients will establish safe and healthy working conditions for their employees, promote fair treatment, non-discrimination and equal opportunity, promote compliance with national employment and labor laws, protect workers, especially vulnerable groups, will not employ children and avoid the use of forced labor. Adequate Environmental, Health and Safety Plans will be prepared and implemented by Tullow, SPEG and their contractors and sub-contractors, as well as SOMELEC, for the Mauritania segment of the South HV Line.			
PS 3: Resource Efficiency and Pollution Prevention	X		
The clients will avoid or minimize impacts on human health and the environment by reducing pollution from project activities (waste management plans will be prepared as part of the EMPs in the case of the upstream component). The clients will promote more sustainable use of natural resources, such as water and energy, and reduce project-related greenhouse gas (GHG) emissions.			
PS 4: Community Health, Safety, and Security	X		
The clients will anticipate and avoid impacts on human health and safety of nearby communities, personnel and property. Workers will be housed in Nouakchott, so that no separate worker camps will be needed. Tullow, SPEG and their contractors and sub-contractors will carry out HIV/AIDS prevention activities. The ESIAs/RPFs prepared for the three components have consulted upon with institutional stakeholders as well as with the potentially affected population.			
PS 5: Land Acquisition and Involuntary Resettlement	X		
The Resettlement Policy Framework (RPF) for the SPEG Power Project covers the land acquisition necessary for the construction and operation of the gas pipeline from its point of landing to the gas processing and power plant site. An RPF has been prepared because final sitings and alignments are yet to be determined for the onshore civil works in Mauritania (gas processing and power plant sites, transmission lines); resettlement impacts are expected to be moderate. Tullow and the Government of Mauritania are discussing which of them will pay the compensation; both sides have agreed that such compensation will be undertaken in accordance with PS 5. For the downstream portion, SPEG will handle any compensation related to the power plants and SOMELEC will handle any compensation related to the transmission lines. The RPFs for the South HV Line for the Mauritania and Senegal segments prescribe that, when the final corridor for the transmission lines (both for the North and South HV Lines) have been selected and it has been identified that people will be affected, RAPs will be prepared, consulted upon, and disclosed before any construction activity starts.			
PS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	X		
The Banda Gas-to-Power upstream and downstream project components may encounter sensitive marine and terrestrial ecosystems, including natural habitats. These potential impacts have been identified by the three ESIAs. Adequate safeguard management plans have been developed as part of the EIAs. This World Bank Performance Standard has been triggered even though the impacts on marine and terrestrial biodiversity have been evaluated as manageable. For the South HV line ESIA, the corridor recommended following the ESIA process will minimize impacts as it avoids the Park of Diawling on the Mauritanian side of the Senegal river and the Park of Djoudj on the Senegalese side, both being very rich biodiversity areas.			
PS 7: Indigenous Peoples		X	
There are no Indigenous Peoples in the project area.			
PS 8: Cultural Heritage	X		
The Banda Gas Project ESIA has identified 13 cultural heritage Late Stone Age sites on the project footprint of the gas treatment plant. An adequate cultural heritage management plan has been developed as part of the EMP. The SPEG ESIA did not identify any cultural heritage sites in the project area. The South HV line ESIA has not reported significant potential cultural heritage sites in relation to that infrastructure.			

Annex 1: Results Framework and Monitoring

PDO: The Project's Development Objective (PDO) is to enable production of natural gas for generation of electricity to reduce the cost and increase the supply for Mauritanian households and industry, and enable regional integration through exports of electric power from Mauritania to Senegal and Mali.

			Target Values							
Project Level Result Indicators	**Core indicator**	**Unit of Measure**	**Baseline**	**2015**	**2016**	**2017**	**2018**	**Frequency and Reports**	**Responsibility for Data Collection**	**Description**
Quantity of gas supplied from the Banda Gas Field to SPEG		BBtu/day	0	0	21	42	42	Yearly	Tullow/ SPEG	The Gas Project will deliver gas to SPEG Power Project. First gas is scheduled for mid-2016.
Electricity delivered by SPEG to SOMELEC at delivery point		GWh/annum	0	0	912.5	1,825	1,825	Yearly	SPEG/ SOMELEC	Delivery point for SOMELEC is at the gate of SPEG's power plant.
Electricity delivered by SOMELEC to SENELEC at delivery point		GWh/annum	0	0	420	840	840	Yearly	SOMELEC/SENELEC	Delivery points for SENELEC are at (i) the entrance of the OMVS network in Nouakchott and at (ii) the border between Mauritania and Senegal on South HV line.
Electricity delivered by SOMELEC to EDM at delivery point		GWh/annum	0	0	168	336	336	Yearly	SOMELEC/EDM	Delivery point for EDM is at the entrance of the OMVS network in Nouakchott.
SOMELEC's average cost of power production		USD/kWh	0.20	0.20	0.175	0.15	0.15	Yearly	SOMELEC	Average cost of generation of all SOMELEC plants and through imports, to be supplied by SOMELEC.
Number of beneficiaries	X	Number of people	7,000,000	7,600,000	8,200,000	8,800,000	8,800,000	Yearly	SOMELEC, SENELEC and EDM	Number of households who are customers of the three utilities, multiplied by average number of people per household (5). Number of beneficiaries is expected to grow in line with electricity demand, but stops growing beyond 2017 as generation from the plant reaches its full potential.
Intermediate Outcome Indicators										
Private Capital Mobilized	X	MUSD	350	700	950	950	950	Yearly	Tullow/ SPEG	Cumulative private capital mobilized through the Banda Gas and the SPEG projects.
Installed power generation capacity by SPEG	X	MW	0	180	300	300	300	Yearly	SPEG	Dual fuel plant (180 MW) planned to be commissioned by

										March 2015 and CCGT by mid-2016.
Availability of the SPEG power plant (%)		%	0	90.3%	90.3%	90.3%	90.3%	90.3%	SPEG	Average plant availability throughout the year.
Greenhouse gas emissions avoided		tons CO_2/annum	0	0	150,000	300,000	300,000	Yearly	SPEG	Calculated as the difference between CO_2 emissions by the project compared to alternative generation of power using heavy fuel oil.

Annex 2: Detailed Project Description

I – Physical Infrastructure

Upstream Banda Gas Project

1. The Banda field was discovered in 2002 by Woodside using the drillship Deepwater Discovery. The field is located approximately 20km from the Chinguetti field in water depths of around 250m. The discovery well encountered a hydrocarbon column of 137m. Three further wells have subsequently been drilled on the structure. The Banda-2 well was designed to appraise the discovery and was subsequently completed as a gas disposal and storage well for the Chinguetti field development. Two other appraisal wells were drilled and subsequently suspended.

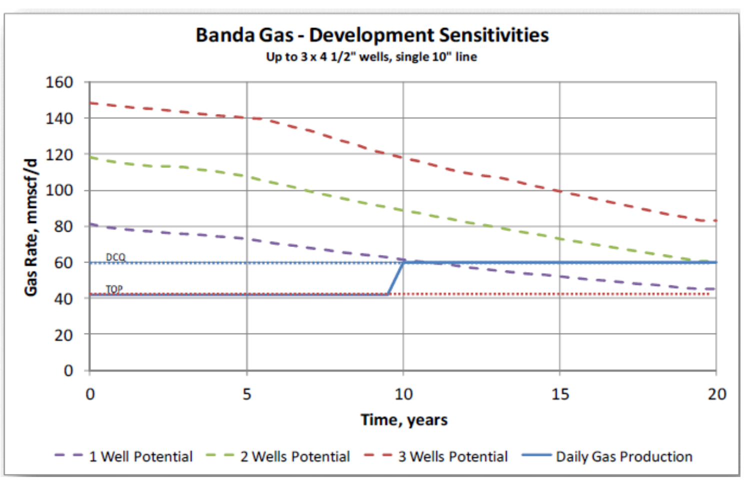
2. Tullow acquired operatorship of the field in November 2011 and further developed the static and dynamic reservoir models, resulting in an improved understanding of the productive capacity of the field. Tullow declared the Banda field as a commercial discovery in September 2012 after reaching preliminary gas commercialization agreements with GoMR and SPEG. The field development plan is based on the following assumptions about the final gas sales arrangements:

Table 1: Banda Gas Sales Arrangements

Max Daily Quantity	70.8 BBtu per day
Daily Contract Quantity (DCQ)	60 BBtu per day
Duration of Supply	20 years from the start date

3. The technical analysis shows that the take-or-pay (TOP) quantities can be delivered with a two well development. (see graph below). For demand profiles closer to an average of the DCQ, a third well might be required. However the two initial wells will have sufficient capacity to defer the decision on a third well.

Figure 1: Banda field development sensitivities



4. Recoverable gas resources are estimated at 695 Bcf with a range of 580-810 Bcf. At planned production rates of 40-60 mmscfd, total production over the 20-year project life would

be only 300-400 Bcf. Thus, available resources, even at the low end of estimates, substantially exceed production requirements.

5. Production from the two wells will flow to a sub-sea manifold and control unit and then to shore via an 80km 10-inch pipeline to an onshore gas processing plant. The gas plant will be designed to deliver 20-70.8 BBtu/day for the 20-year delivery period. The plant will be configured to deliver conditioned gas at the delivery point at a pressure of approximately 40 bars to the adjacent power plants. Some condensate production is expected and the gas plant will include road tanker loading facilities for transfer of condensate to third party customers.

6. Banda capital cost is estimated at US$ 650 million. Tullow and SPEG agreed on a gas price of US$ 12 /mmBtu at the start year.

7. Assuming project sanction occurs in June 2014, first gas production is estimated for Quarter 3, 2016.

<u>SPEG Power Project</u>

8. SPEG Power Project, which will be installed north of Nouakchott, includes:

- Dual fuel plant of 180 MW (120 MW currently under construction by Wärtsila with an option to be extended to 180 MW that was exercised in June 2013); and
- Combined cycle gas turbines (CCGT) power plant with a capacity of 120 MW.

9. Transmission infrastructure includes:

- 225 kV power transmission line from Nouakchott to the intermediate site (PK41) and intermediate Site to Tasiast;
- 90 kV line from PK41 to Nouadhibou and corresponding substations;
- 225 kV connection between Nouakchott North substation and the OMVS substation south of Nouakchott; and
- 225 kV line between Mauritania and the delivery point for power exports to Senegal (see description below).

<u>Dual fuel power plant</u>

10. The dual fuel power plant of approximately 120 MW capacity is based on dual fuel reciprocating engines. The plant is currently under construction by Wärtsila under an EPC contract. The plant consists of 8 engines, each of approximately 15 MW. The plant has the capability to run on heavy fuel oil (HFO) or Natural Gas. The plant is expected to be fully online by March 2015 and will initially run on HFO. As soon as natural gas is made available at the gas delivery point, the plant will then run on natural gas. At site conditions plant efficiency is estimated to be 41.4% running on HFO and 45.1% running on natural gas.

<u>CCGT plant</u>

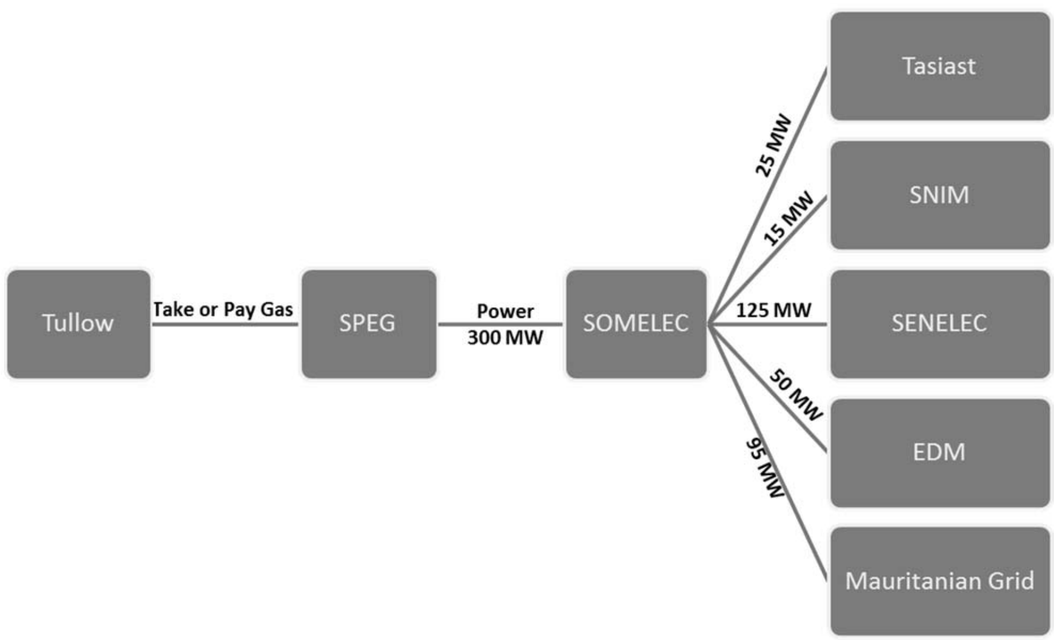
11. The 120 MW CCGT plant will run with GE-6B gas turbines. Net efficiency is calculated to be of the order of 47% at yearly average site conditions. Units should be able to operate on light fuel oil (LFO) as backup fuel during (short) periods of unavailability of natural gas. The choice of LFO as backup fuel is linked to the choice of combustion technology (dry low NOx burners) and meeting World Bank emissions requirements. Given the high cost of LFO, this fuel

is intended to be used for short periods of time only. The backup fuel functionality is not intended to cope with the risk of potentially long delay in construction of the gas supply infrastructure. In such case, running the dual fuel plant on HFO will be more economical.

12. **Grid stability**. As part of the feasibility study, contingency and dynamic analyses were carried out by Tractebel in order to ensure that the grid will continue to operate in a stable fashion once the power plant has been integrated. The studies show that the most critical line in terms of distribution of reactive load (leading to strong variations of voltage) is the Nouakchott-Intermediary point. The studies recommend locating some of the future generation at this intermediary point. Additional reactive power will likely be required to stabilize voltage in the absence of generation at the intermediary point. Meanwhile, exports to Senegal and Mali will allow the Mauritanian system to have a larger rotating mass with the larger installed capacity and be more reliable as the excess margin of production over load is enhanced.

13. Project gas and power offtakes are expected to be as follows:

Figure 2: Project Gas and Power Off-takes



<u>Transmission Line between Mauritania and Senegal</u>[24]

14. Once the 300 MW total generation project is operational, an export capacity of up to 250 MW is required. There is already an existing transmission line that was constructed in conjunction with the Manantali Hydroelectric project and that has a carrying capacity of about 80 MW. This capacity is insufficient and implies that a new transmission line with a carrying capacity of about 170 MW is required. It is recommended that this line be constructed at a higher voltage than the existing line and have the ability to have two circuits in the future. The Transmission tower design would be for double circuit steel lattice with two overhead ground-

[24] The transmission line between Nouakchott and the border between Mauritania and Senegal is part of the project. The part of the line on Senegal's territory is within the Project's area of influence while recognizing that it is not under the direct control of any of the beneficiaries of the IDA Guarantees.

wires with fiber optic communication cables. However, initially only one side of the line would have conductors (wires) strung.

15. Total length of the required new transmission line is just about 410km between Nouakchott in Mauritania and Tobène in Senegal, of which 240km is in territory of Mauritania and 170km in Senegal.

16. Cost of the line is estimated at US$170 million, including substations and engineering. Construction is estimated at 30 months. If the line were constructed double circuit, which is not necessary for the present 300MW gas to power project, cost would be about $200 million.

17. Grid Stability, Short-Circuit Calculations, Reactive Compensation, Load flow calculations and transients, are all technical considerations that have been taken into account by the owner's engineer.

II - Proposed IDA and MIGA Guarantees

18. The WBG, working closely with GoMR, SPEG, Tullow and the power off-takers in Senegal and Mali, has brought together a comprehensive risk mitigation package that proposes to make available a complement of WBG's risk mitigation and credit enhancement products from IDA and MIGA to address political risk and payment security issues. Each of the institutions' instruments works in collaboration with the beneficial impacts of the others' to create an enhanced risk profile for the Project that is conducive to private sector participation.

19. The IDA instruments being proposed include: (i) an IDA Partial Risk Guarantee (PRG) for the benefit of Tullow to support SPEG's payment obligations under the GSA; (ii) an IDA PRG for the benefit of SOMELEC to support SENELEC's payment obligations under its PPA and (iii) an IDA PRG for the benefit of SOMELEC to support EDM's payment obligations under its PPA[25].

20. The MIGA guarantee will be offered directly to Banda gas field joint venture partners to cover their equity investments in the Project against the risks of transfer restriction, expropriation, breach of contract and war and civil disturbance. Under Breach of Contract coverage, MIGA has been requested to cover the Hydrocarbon Production Sharing Contract for Zone A ("PSC A") in addition to early termination risk under the GSA, to the extent backstopped by GoMR in a Letter of Support ("LoS").

21. The WBG instruments are designed to support the sub-regional strategy for development of the Banda gas resource. The amount of credit enhancement offered under the proposed PRG operation is the minimum amount of credit support necessary to secure private investment capital for the Banda Gas Project component. The amount of MIGA coverage provided is based, in addition to MIGA's own net capacity limits, on the private sector's risk appetite under the Project. Without the WBG's proposed credit enhancements and risk mitigation, it is unlikely the Banda upstream joint venture would invest in developing the Banda gas project.

[25] The Bank received a request for a guarantee to the project from the GoMR on September 24, 2012, from the GoSN on July 26, 2013 and from the GoML on January 22, 2014.

Proposed IDA Guarantee Structure

22. The proposed IDA PRG package consists of a credit enhancement mechanism to mitigate risks associated with SPEG's lack of credit history as a newly created and majority public-owned entity, and the low creditworthiness of SENELEC and EDM, the two public utility power purchasers. By extending the IDA's proposed PRGs to mitigate risks associated with export power sales to Senegal and Mali, IDA is enhancing the creditworthiness of SPEG as well as the two public utility power purchasers from Senegal and Mali, thus assisting GoMR in securing sufficient levels of gas purchase and the required associated power sales, to justify private sector's development of Mauritania's Banda gas field.

Upstream Support to Banda Gas Project

23. The proposed upstream support is an IDA guarantee for SPEG's upstream gas payments obligations under the GSA and seeks to mitigate SPEG's off-taker payment risk, up to a maximum of US$130 million (i.e. the agreed amount of payment security to be provided by SPEG under the GSA, as such security is made available under a standby letter of credit (L/C)). GoMR will enter into an indemnity agreement with IDA with respect to the amount of guarantee provided.

24. The proposed upstream SPEG gas payment PRG will backstop a standby letter of credit (L/C) that SPEG is required to provide as payment security for its gas purchases under the GSA. The standby L/C provided by SPEG, for the benefit of Tullow (as operator, on behalf of the gas JV partners), is expected to cover a pre-agreed capped amount of gas payments corresponding to not more than US$130 million of deliveries under the GSA (equivalent to about 9 months of gas TOP payments), thereby providing necessary certainty of revenues and timeliness of payment to the Banda Gas JV which is making significant investment in the upstream gas infrastructure.

25. A Request for Proposals (RFP) for L/C issuing Bank was issued on February 14, 2014. The following criteria for evaluation of proposals was used: (i) a strong experience in the field of structured finance and trade finance activities; (ii) creditworthiness acceptable to address the long term drawdown needs over the L/C tenor; and (iii) competitive pricing of the L/C. Two reputable and experienced commercial banks have been identified to provide a L/C for the benefit of Tullow and are currently in the negotiations phase with SPEG. IDA expects this process to be completed by end of May 2014.

Support for Export Power Sales under the SENELEC PPA and the EDM PPA

26. IDA is also proposing two additional payment guarantees to ensure timely receipt of: (a) up to US$99 million in PPA payments to SOMELEC, for power exports to Senegal; and (b) up to US$32 million in payments under the PPA arrangement with Mali. IDA will enter into corresponding indemnity agreements with the GoSN and GoML.

27. The proposed downstream export payment PRGs will backstop L/Cs that SENELEC and EDM are required to provide as payment security for power purchases under their respective PPAs[26]. Together, the export payment PRGs provide payment security to SOMELEC up to

[26] In the event where there is no commercial bank appetite to provide L/Cs for the benefit of SOMELEC at the downstream level, the PRG structure used will be a deemed loan structure whereby the PRG beneficiary is

US$131 million in payment security. The risk of SPEG non-payment under the GSA is covered entirely under the Mauritania indemnity agreement, while the risk of non-payment by each of the two public utilities (SENELEC and EDM) purchasing power from SOMELEC will be covered under the Senegal and Mali indemnity agreements, respectively.

28. The two-pronged, upstream/downstream PRG structure with separate indemnity agreements is designed to eliminate gaps in payment security between upstream and downstream, while also minimizing the amount of overlap and duplication in PRG coverage. There will be some limited instances under which SPEG could theoretically be responsible for the full take or pay amounts due under the GSA with no corresponding claims under either of SOMELEC's PPAs with SENELEC and EDM, but this has been minimized to the fullest extent possible. Annex 6 provides an indicative term sheet for the proposed IDA PRGs.

29. To facilitate the multi-party payment and cash-flow arrangements required under the Project, an Account Agency and Cash Flow Management Agreement among IDA, SPEG, SOMELEC[27], SNIM, Kinross, the L/C Beneficiary, an Account Agent, and possibly also SENELEC and EDM, will need to be entered into as a condition of PRG effectiveness. The purpose behind this requirement is to provide cash-flow transparency and ensure, in the event of a call under any of the PRGs, that the Project parties are able to clearly identify which of the parties has had a payment default thereby avoiding the Bank from being drawn into a payment dispute between Project parties. The Account Agency and Cash Flow Management Agreement will also address certain cash-flow priorities from PPA payments and appropriate cash flow management mechanisms and notice provisions that need to be established. Such mechanics are standard market practice in multiparty projects such as the proposed Banda Gas-to-Power Project. To facilitate this requirement, on February 14, 2014, SPEG issued a competitive international tender[28] for an experienced, independent financial party to undertake the duties and obligations of Account Agent/Cash Flow Manager, who will establish and manage a set of lock-box accounts on behalf of the Project parties, into which cash payments will be made and disbursed in accordance with the Project documentation. Subsequent to the competitive tender, a reputable and experienced commercial bank[29] was identified to act as the Account and Cash Flow Management Agent and is currently in the negotiations phase with SPEG. IDA expects the selection of the Account and Cash Flow Management Agent to be completed by end of May 2014.

SOMELEC. The risks covered would be exactly the same; the only difference is the absence of the liquidity feature that is provided by the L/C bank.

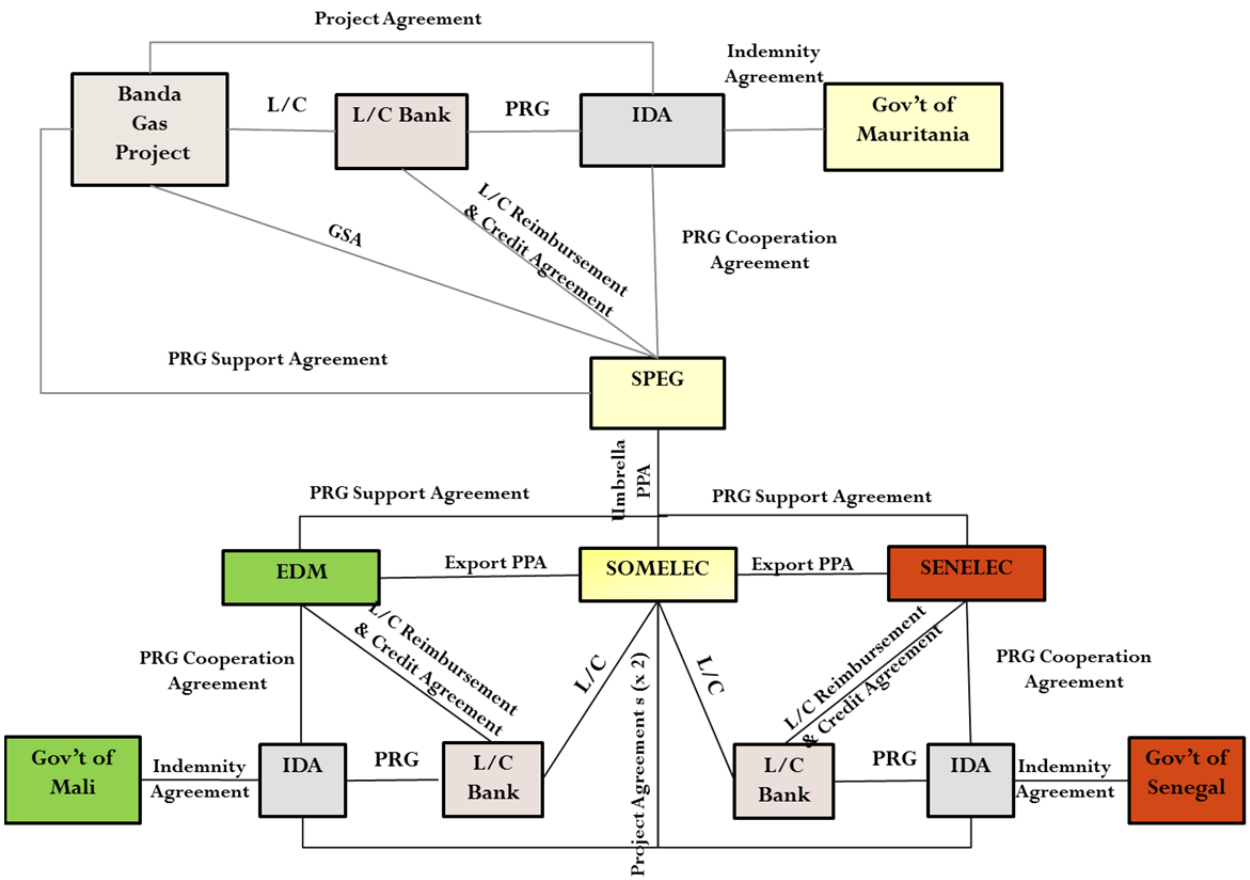
[27] The risk that IDA takes on SOMELEC is mainly a payment risk to SPEG of what is due through their PPA. This risk is mitigated by the cash flow account structure which will be a condition of effectiveness of the PRGs. This structure will secure the funds from the downstream utilities and ensure a priority of payments to the Banda Gas JV. Provided the downstream PPA payments are made, the gas JV payments will be made, therefore avoiding the risk of the L/C being drawn. As only 65% of the annual revenues of SPEG are to be used to pay for gas, this leaves an adequate security margin on the payments to be made by SOMELEC before a payment default of the GSA may arise. In addition to the cash-flow account structure, the L/C mechanism will ensure that if a payment default arises, the commercial bank will have 12 months before being able to draw under the IDA upstream PRG, allowing time for the GoMR to settle the situation if needed.

[28] The same RFP for issuing L/C Bank was used for the selection of the Account and Cash Flow Management Agent.

[29] It is one of the two issuing L/C Banks that were identified through the same tender.

30. Figure 3 illustrates the PRG related agreements and proposed guarantee structure.

Figure 3: PRG related agreements[30]



31. The total amount of PRG coverage is considered appropriate under the circumstances, taking into consideration: (i) the World Bank's experience with other, similarly situated gas projects in the region and globally; (ii) Kinross's shareholding in SPEG, backed by a relatively strong, creditworthy parent company balance sheet[31]; and (iii) the complementarity of the IDA PRG with MIGA's guarantee.

Scope of MIGA Risk Coverage

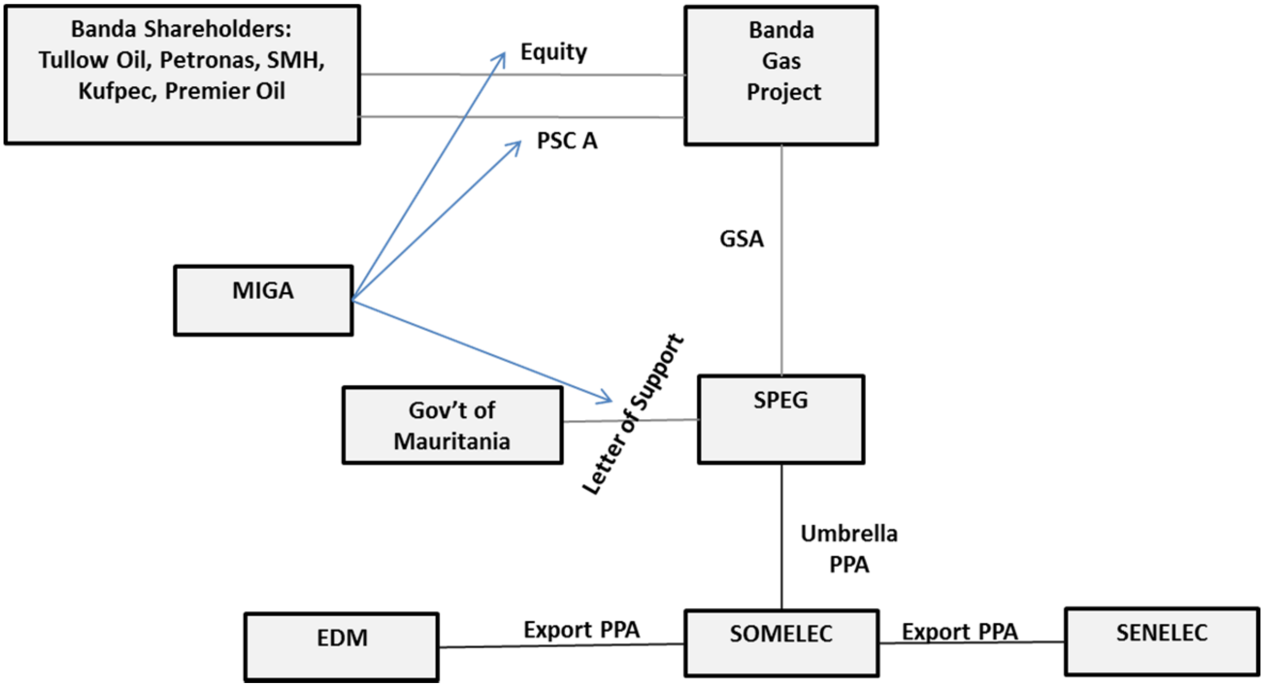
32. Both the proposed IDA upstream gas PRG and MIGA guarantees are ultimately designed to provide credit enhancement and risk mitigation for SPEG's payment obligations under the GSA. The MIGA guarantee is offered directly to the Joint Venture partners to cover their equity investments in the Banda Gas Project. The upstream developers requested MIGA's guarantees in support of their equity investment in the upstream development as well as to enhance the credit

[30] The Account Management and Cash Flow Agreement as well as the PPAs with Kinross and SNIM are not included in this diagram.

[31] Kinross is rated Baa3, hence it is still considered investment grade. However, the recent decline in gold prices has had a negative impact on the company's credit rating.

support to the payment obligation, namely the termination payment obligation under the GSA, as backstopped by GoMR.

Figure 3: MIGA is covering the PSC and termination payment owed by GoMR pursuant to the LoS under Breach of Contract



33. The proposed MIGA support includes a guarantee to Tullow, as well as the other members of the upstream consortium (collectively, the "Guarantee Holders"), covering their investments of US$650 million in the Banda gas field. MIGA's coverage will be for a period of up to 20 years. MIGA will guarantee up to 90% of the JV partners' investment, and MIGA's gross exposure will be up to US$585 million. MIGA's net exposure under this Project would be US$220 million after treaty reinsurance. The remaining amount of US$315 million will be facilitated through facultative reinsurance.

34. MIGA's proposed guarantee will cover the risks of Transfer Restriction, Expropriation, Breach of Contract and War and Civil Disturbance. Under Breach of Contract coverage, MIGA has been requested to cover the Hydrocarbon Production Sharing Contract for Zone A ("PSC A") in addition to the GoMR Letter of Support (the "LoS") as backstopping the obligations of SPEG under the GSA. The parties to the PSC A are the Islamic Republic of Mauritania, represented by the Minister for Energy and Petroleum, and the upstream partners. The PSC A is currently operated by Tullow. The parties to the GSA are the upstream partners and SPEG, and the LoS will be issued by GoMR in favor of the upstream partners.

35. MIGA will not cover the GSA agreement directly, but rather will cover the LoS which backstops SPEG's termination payment under the termination clause of the GSA. The termination payment, and therefore MIGA's BoC coverage, would only be triggered after the PRG is triggered. The LoS, which has not been finalized, will cover SPEG's obligations to pay a termination payment in the event of a SPEG default under the GSA. MIGA will in turn provide a guarantee covering the inability to enforce an arbitral award rendered against GoMR under the LoS.

Table 2: Proposed Guarantees and Underwriting Structure

Types of Investment to be covered	Amount	Guaranteed Percentage	Term of Contract
Equity	US$650 million	90%	Up to 20 years
Estimated Total Amount of Guarantee:	**US$585 million**		
Less: - Syndication (expected amount):	US$315 million		
- Treaty:	US$50 million		
Estimated Net Amount of Guarantee:	**US$220 million**		
Tenor of Guarantee	20 years		

Annex 3: Operational Risk Assessment Framework (ORAF)

<table>
<tr><td>Project Stakeholder Risks</td><td>Rating:</td><td colspan="3">H</td></tr>
<tr><td rowspan="2">Description :
Main project stakeholders are: GoMR, power utilities SOMELEC, SENELEC and EDM, private sector participants (Kinross, Tullow), electricity consumers, including households and businesses, and communities potentially affected by project infrastructure.
Key risks are (i) low capacity of GoMR / SOMELEC in managing project preparation and negotiating with private sector; (ii) perception of high country risk by private investors in Mauritania and of Senegal and Mali as export markets for power; (iii) risk of project delay for end-consumers, which would result in power shortages; and (iv) the risk that mining companies are given preferential access to power generated by the project ahead of SOMELEC and its consumers.</td><td colspan="4">Risk Management:
For each identified risk, the main mitigating factor follows: (i) GoMR / SOMELEC receive legal advice from an international firm and from the services of a financial adviser as shareholders in SPEG; (ii) country political and regulatory risk for all three countries will be mitigated by WBG guarantees, including PRG(s) and MIGA guarantees; (iii) all stakeholders are committed to the rapid development and construction of the project, and the procurement of EPC and O&M contractors through rigorous and competitive procedures has already begun; and (iv) the risk of preferential treatment for mining companies as power off-takers is mitigated through the fact that GoMR/SOMELEC is the largest shareholder of SPEG, it is driving the project and will benefit from appropriate advisors.</td></tr>
<tr><td>Resp: GoMR, private sector participants, donors</td><td>Stage: Implementation</td><td>Due Date : Dec-31-2015</td><td>Status: Ongoing</td></tr>
<tr><td colspan="5">Implementing Agency Risks (including fiduciary)</td></tr>
<tr><td>Capacity</td><td>Rating:</td><td colspan="3">S</td></tr>
<tr><td>Description :
SPEG, a majority government owned company, operating under private sector Mauritanian law, is a recently created entity for the purpose of undertaking this project. SPEG’s controlling entity, GoMR through SOMELEC and SNIM, has not developed or financed a PPP of this magnitude so far; it may be difficult for SPEG and SOMELEC to supervise the construction phase of the power plants and transmission lines in Mauritania.

SOMELEC, SENELEC and EDM may also face challenges in negotiating comprehensive PPAs.</td><td colspan="4">Risk Management :
The sustainability of SPEG’s investments is ensured by the retention of experienced international engineering, legal and financial advisors, as well as high caliber EPC and O&M contractors, including Wartsila. SPEG will also benefit from the backing of its private sector shareholder, Kinross. During the construction phase of the plants and transmission lines, SPEG and SOMELEC are expected to continue to benefit from advice from an owner’s engineer and will have the obligation to share owner’s engineer reports with the World Bank Group.

PPIAF funds have recently been tapped into to support SPEG and EDM in a number of specific areas to enable them to implement this regional power supply project. This includes conducting an independent review of global contractual and technical risks, insurance adequacy and capacity building of SPEG and EDM utility staff members on this regional project.

SNIM, a state owned mining company and a shareholder of SPEG, is used to managing large investments and raising international financings. SPEG investment will be implemented through EPC contracts that transfer most construction risks to the contractor. During operation, SPEG intends to hire a world class O&M operator to manage its project.

SENELEC has experience in negotiating PPAs with IPPs in Senegal. In addition, all three utilities already have the experience of negotiating PPAs within the framework of OMVS. As a shareholder of SPEG, SOMELEC is expected to benefit from the same legal and financial advice as SPEG. EDM will benefit from PPIAF funds to get legal counsel whose role will be to ensure that the main commercial arrangements of the project are balanced.</td></tr>
</table>

	Resp: GoMR, Tullow, other private sector participants, EPC contractors, O&M operator	**Stage:** Implementation	**Due Date :** Dec-31-2034	**Status:** Ongoing
Governance	**Rating:**	**S**		
Description: Multiple stakeholders with different objectives may lead to tensions within SPEG between SOMELEC, SNIM and Kinross regarding project scope. Potential conflicts of interest could arise as GoMR plays multiple roles in this project, as owner of SOMELEC, controlling entity of SPEG, revenue participant in upstream gas and overall policy maker for the energy sector. As a result, GoMR often is present de facto on both sides of a negotiation.	**Risk Management** : Private sector participants are used to working in Africa and negotiating with governments. Ultimately all parties have a common interest in generating and selling power using Banda gas, as there is no other use for that gas currently. Also WBG due diligence imposes international best practice on the project, which is reinforced by using world class contractors and advisors. In order to address corruption, the GoMR adopted a comprehensive National Anti-corruption Strategy in 2011 and a draft decree to set up the committee to fight corruption was prepared by civil society. To the extent that Tullow will be handling all procurement procedures for the Banda Gas Project, there is little scope for political interference in that process. However, this is not the case with the SPEG Power Project, which is government-led. To the extent that donors are funding a large portion of the SPEG Power Project, such as IsDB, AFESD, AFD and Saudi Fund, and that international tendering procedures are being followed, it is expected that fraud and corruption risk will be reduced.			
	Resp: GoMR, private sector investors, donors	**Stage:** Implementation	**Due Date :** Dec-31-2034	**Status:** Ongoing
Project Risks				
Design	**Rating:**	**S**		
Description: The Project is complex due to the number of different stakeholders and the matrix of contracts required to build the infrastructure and keep it running.	**Risk Management:** Tullow, the upstream gas operator, is experienced and has developed similar projects in Africa; Tullow is therefore expected to handle its part of the project well. During the design and procurement phases of the Project, SPEG and SOMELEC have benefitted from professional assistance from experienced engineering, legal and financial advisors. World Bank Group due diligence indicates that the design of the project is appropriate and robust in its technical, contractual and financial structure.			
	Resp: Tullow, GoMR, private sector partners, donors	**Stage:** Implementation	**Due Date :** Dec-31-2015	**Status:** Ongoing
Social & Environmental	**Rating:**	**S**		
Description: This is a category A project. The Project could have adverse impacts on the terrestrial and marine environment. The risks identified through an upstream ESIA for the Gas	**Risk Management :** The upstream Banda Gas Project, Tullow will be responsible for the implementation and overall monitoring of the Environmental Management Plans (EMPs) and Environment, Health and Safety Plans (EHSs), while the contractors will integrate the EMP and EHS requirements into their			

<table>
<tr><td rowspan="2">development, and two downstream ESIAs for: i) the power generating facilities and the North HV line, and ii) the South HV line between Mauritania and Senegal, consist of the potential impacts on marine biodiversity, terrestrial biodiversity (through potential impact on birds due to collision with transmission lines) as well as impacts on people through instances of land acquisition and involuntary resettlement.</td><td colspan="4">operational procedures. Tullow’s environmental and social management system has been assessed as being satisfactory.

For the SPEG Power Project, downstream power generation and transmission infrastructure, SPEG has developed a full ESIA and a Resettlement Policy Framework (RPF) for the SPEG project, including the North HV line and the OMVS HV line extension. The SPEG and SOMELEC environmental and social management systems are weak so it will be required that they will outsource monitoring of the environmental and social aspects of their operation in relation to this project in order to ensure an acceptable level of environmental and social management integrity.</td></tr>
<tr><td>Resp: Tullow, GoMR, donors</td><td>Stage: Implementation</td><td>Due Date : Dec-31-2034</td><td>Status: ongoing</td></tr>
<tr><td>Program & Donor</td><td>Rating:</td><td colspan="3">S</td></tr>
<tr><td rowspan="2">Description: Total project financing for the downstream project from international finance institutions and private shareholders has been identified, but is not fully approved yet.</td><td colspan="4">Risk Management: SOMELEC has already obtained sufficient funds from donors for its share in the SPEG power plants and in the North HV line (though it may need some additional funds for the latter). The other SPEG shareholders, Kinross and SNIM who are mining companies, have confirmed in writing their intention to fund their share of SPEG equity. Regarding the South HV line, funds have been committed from IsDB and AFD is expected to submit its funding share in the line for Board approval in May 2014.</td></tr>
<tr><td>Resp: GoMR, SPEG, donors</td><td>Stage: Preparation</td><td>Due Date : Jun 30-2014</td><td>Status: Ongoing</td></tr>
<tr><td>Delivery Monitoring & Sustainability</td><td>Rating:</td><td colspan="3">S</td></tr>
<tr><td rowspan="2">Description: GoMR/SOMELEC have not implemented a PPP of the magnitude of this project before. They will need support during construction and operation of the project.</td><td colspan="4">Risk Management: Private sector stakeholders of the PPP will be involved in monitoring project delivery. During the development and operating phases, it is expected that SPEG will benefit from support of an owner’s engineer and would hire a world class O&M contractor to manage the infrastructure. Also construction phase risk will be mitigated by having EPC contracts for the various components. Bank and other donor supervision during implementation is another mitigating factor.</td></tr>
<tr><td>Resp: GoMR, private investors, O&M contractor, donors</td><td>Stage: Implementation</td><td>Due Date : Dec-31-2034</td><td>Status: Not yet started</td></tr>
<tr><td colspan="5">Overall Risk</td></tr>
<tr><td colspan="5">Implementing Risk Rating: H</td></tr>
<tr><td colspan="5">Description: The high risk rating reflects the complexity of reaching agreements among stakeholders with different incentives and securing timely construction of all parts of a project of this magnitude, in a risky country and sector environment. Financing and procurement of all parts of the project are well advanced and measures have been taken to mitigate construction risks. Although the proposed structures of the IDA and MIGA guarantees are well established and tested around the world, the operational and financial performance of the Mauritanian, Senegalese and Malian power sectors could weigh on the financial sustainability of the Project. The IDA and MIGA guarantees themselves as part of a continued broader involvement from the WBG and other donors in the energy sector reform and investment mitigate these risks. Environmental and social risk will also need to be managed carefully.</td></tr>
</table>

Annex 4: Economic and Financial Analysis

I. Economic analysis of Banda Gas-To-Power Project

A. Methodology and Assumptions:

1. The analysis focuses on direct quantifiable benefits resulting from the Project. In particular, "*incremental consumption*", as result of the Project is assessed and estimated. The incremental electricity output is delivered to two main categories of off-takers:

- ✓ The consumers of SOMELEC, SENELEC and EDM will be receiving power, reduced by the amount of technical and commercial losses of transmission and distribution network, at an average of US¢ 23 per kWh (proxy for the sub-region's willingness to pay, refer to paragraphs 2 and 3 below for rationale).
- ✓ Kinross and SNIM will be absorbing the power, reduced by transmission losses only, at US¢ 18 per kWh. This represents the substitution cost for mining firms that rely on HFO-based generation for their operations in the absence of grid power.

2. The economic analysis derives a conservative estimate of the net economic benefit from the electricity produced. The electricity produced (net of transmission and distribution losses) is valued at final consumer tariffs in Mauritania, Senegal and Mali.

3. The willingness to pay (WTP) for electricity is high in the presence of electricity shortages and suppressed demand, as is the case in the three incumbent countries. The higher valuation is reflected in the tariffs that the final consumers pay. As the WTP of the consumer is no-lesser-than the actual amount being paid, the tariff may be considered a lower bound on the economic value of electricity.

4. A range of less quantifiable benefits will also accrue from the Project, including those from the socio-economic and environmental benefits of increased electricity access. Although not estimated, they should not be ignored in assessing the economic viability of the Project. Increased access to electricity will ensure better education and income opportunities leading to improved living standards among the residents of the areas covered under the Project. Children will be able to study at night; households will be enabled to start or expand home-based businesses, which are a main source of livelihoods especially among the poor. Reliable and expanded electricity supply will support commercial and industrial activities. Access to grid electricity will decrease reliance on polluting and expensive energy alternatives, reducing the threat to the environment and people's health.

5. Project costs comprise all costs of the integrated gas-to-power project; this includes the upstream component (circa US$650 million), the power plants (US$476 million) as well as the associated transmission infrastructure (US$347 million). Both benefits and costs are estimated in economic terms at constant 2013 prices. The analysis is built over a period of twenty years and uses a discount rate of 10%.

B. Economic Returns:

6. Based on the methodology and assumptions described above, the estimated Economic Internal Rate of Return (EIRR) of the project is 20.6% and the Net Present Value (NPV) is US$993 million.

7. In addition to the economic value of electricity captured by end-users, Mauritania will benefit from: (i) royalties and incomes taxes from the upstream gas project; (ii) dividends distributed to SOMELEC and SNIM as shareholders of SPEG; and (iii) income taxes on SPEG. Should these fiscal revenues be included in the economic analysis, project EIRR is

revised upwards to 26.3% while project NPV in nearly US$ 1.8 billion. The net benefits of the Project will be allocated between the three countries as follows: 57% for Mauritania, 31% for Senegal and 12% for Mali.

Sensitivity analysis:

8. Sensitivity analysis was conducted to test the robustness of the profitability of the project to changes in key parameters of project costs and benefits. The rates of return were examined under the following cases:

i. 1 year delay in gas commissioning;

ii. 1 year delay in commissioning of the transmission lines;

iii. Cap of 80 MW on exports to Senegal was considered given the uncertainty in respect of the additional transmission line required for an export beyond 80 MW;

iv. Increase of 20% in the overall project cost was considered which could be introduced as a result of cost overrun and project delays; and

v. Willingness to pay of SOMELEC, SENELEC and EDM consumers reduced down to US¢ 18 per kWh.

Table 1: Results of Sensitivity Analysis

	NPV @ 10% DF (USD MM)	EIRR (%)
Base Case	$993	20.6%
1-year delay in Gas	$799	17.8%
1-year delay in North HV line commissioning	$933	19.9%
Export to Senegal capped at 80 MW	$661	17.2%
Export to Senegal capped at 80 MW and no EDM exports	$222	12.5%
Banda GTP CAPEX increased by USD 300 MM (20%)	$777	17.4%
Willingness to pay reduced to US¢ 18 per kWh	$495	14.5%

9. In summary, the Project is economically viable and the exports to Senegal, together with the capital costs, are both variables that have a strong impact on the economic viability of the Project. The EIRR remains well above 12% under the assumption of considerable cost increase, reduced exports to Senegal, and delays in commissioning.

Table 2: Economic Cost-Benefit Analysis (Base Case)

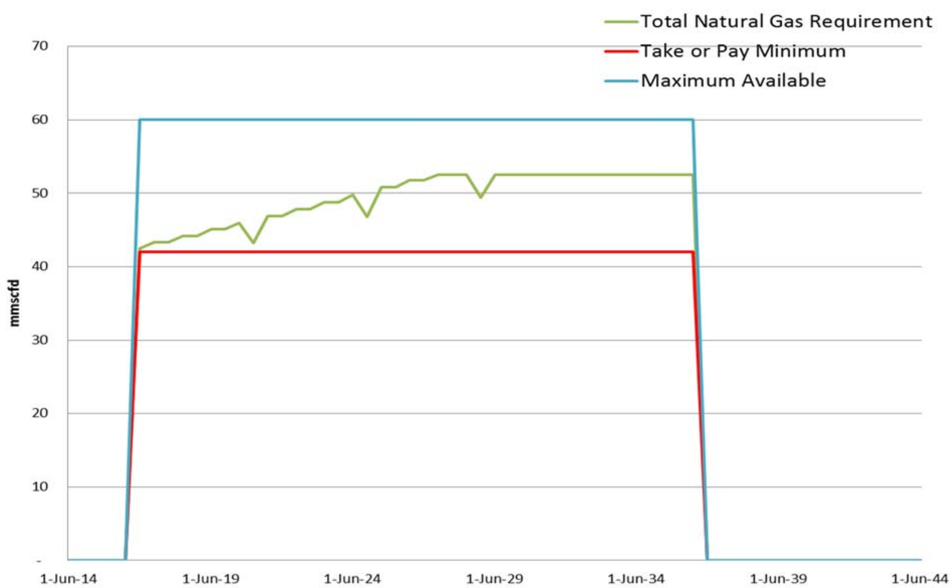
Year	Banda Gas Capex	SPEG CAPEX	OPEX Banda	OPEX SPEG	HFO/LFO Fuel Cost	Associated Oil to Banda	Value to Somelec consumers	Value to Senelec Consumers	Value to EDM Consumers	Value to Kinross & SNIM	Net Benefit
2013	43.1										-43
2014	266.4	197.8									-464
2015	266.4	214.9		18	127		54	110	27	-	-435
2016	74.1	410.7	7	24	64	10	61	147	30	24	-307
2017			14	30		20	67	185	33	48	308
2018			14	30		18	72	185	33	48	312
2019			14	30		18	78	185	33	48	318
2020			14	30		17	84	185	33	48	323
2021			14	30		17	91	185	33	48	329
2022			14	30		15	98	185	33	48	335
2023			14	30		15	106	185	33	48	343
2024			14	30		14	114	185	33	48	350
2025			14	30		14	123	185	33	48	359
2026			14	30		12	133	185	33	48	367
2027			14	30		12	144	185	33	48	378
2028			14	30		11	144	185	33	48	376
2029			14	30		11	144	185	33	48	376
2030			14	30		9	144	185	33	48	375
2031			14	30		9	144	185	33	48	375
2032			14	30		8	144	185	33	48	373
2033			14	30		8	144	185	33	48	373
2034			14	30		6	144	185	33	48	372
2035	93		7	15		3	72	92	16	24	93

II. Financial analysis of Banda Gas Project

10. The upstream gas component of the Project is expected to cost about US$650 million in capital expenditures concentrated in 2014 and 2015 (accounting for 82% of total project cost. Economic life of the Project is 20 years with gas flowing as of July 1st, 2016. An abandonment cost of US$93 million is assumed to be incurred on last year of operation.

11. Based on an agreed price of US$12/mmBTU for a daily consumption up to 60 BBtu and an annual load factor of 70% on a take-or-pay basis, which amounts on average to 42 BBtu/day. Under this scenario, gas production would yield over US$184 million per annum (inflated at 2%).

Figure 1: Natural gas use by SPEG in base case



12. In addition to the gas revenues, the financial analysis included an associated oil production valued at US$100 per barrel: oil revenue is estimated at US$20 million per annum in early years of production and decreases linearly to US$6 million by 2035. Required operating expenditures are estimated at US$14 million per year.

13. Table 3 outlines the various cash-flow items on a yearly basis. The Banda Gas Project is expected to earn a pre-tax return of 24.9%. With respect to the private investor, and after netting the government's share of profits, this translates into a reasonable internal rate of return (IRR) and a reasonable net present value (based on a 10% discount rate).

14. Stress scenarios were conducted to assess viability of the upstream gas project under challenging circumstances. One challenging scenario could be one where Tullow is not able to monetize associated oil production to the project: investor IRR would drop but not significantly, and to a level that is still deemed attractive to the private investors. Another challenging scenario for Tullow is one where the JV runs into cost overrun: a US$ 100 million cost overrun would only decrease the return by 2% per annum. Gas production and supply risk is assumed by Tullow. Should the gas production be capped at 31.5 BBtu/day throughout life of the project (25% below ToP), investor IRR would fall down significantly. Such a scenario is unlikely to occur given the redundancy built within the gas project. In conclusion, the Banda Gas Project is financially robust.

Table 3: Banda gas field projected cash-flows

Base Upstream	Units	Total		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
				Devel	Const	Const	Const	Operation	Operation	Operation	Operation	Operation	Operation	Operation	Operation	Operation	Operation	Operation	Operation	Operation	Operation	Operation	Operation	Operation	Operation	Operation	Operation
Inflation	%	2.0%																									
Gas Production	Bbtu						21.0	42.0	42.8	43.7	44.6	45.5	46.4	47.3	48.2	49.2	50.2	51.2	52.22	52.2	52.2	52.2	52.2	52.2	52.2	52.2	52.2
Gas Production	Bcf	365.8					7.7	15.3	15.6	15.9	16.3	16.6	16.9	17.3	17.6	18.0	18.3	18.7	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1
Gas Price	$/mmBtu						12.0	12.2	12.5	12.7	13.0	13.2	13.5	13.8	14.1	14.3	14.6	14.9	15.2	15.5	15.8	16.2	16.5	16.8	17.1	17.5	17.8
Gas Revenue	$MM	5,457.5					92	188	195	203	211	220	229	238	248	258	268	279	290	296	302	308	314	320	327	333	340
Condensate Yield	Bbl/MMcf						12.0	13.0	13.0	12.0	12.0	11.0	11.0	10.0	10.0	9.0	9.0	8.0	8.0	7.0	7.0	6.0	6.0	5.0	5.0	4.0	4.0
Condensate Production	MMBbl	3.0					0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Condensate Price	$/Bbl						100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Condensate Revenue	$MM	306.6					9.2	19.9	20.3	19.1	19.5	18.3	18.6	17.3	17.6	16.2	16.5	14.9	15.2	13.3	13.3	11.4	11.4	9.5	9.5	7.6	7.6
Revenue	$MM	5,764.1					101	208	216	222	231	238	247	255	265	274	284	294	305	309	315	319	325	330	336	341	348
Capex	$MM	650.0		43.1	266.4	266.4	74.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Opex	$MM	336.8					7.0	14.0	14.3	14.6	14.9	15.2	15.5	15.8	16.1	16.4	16.7	17.1	17.4	17.8	18.1	18.5	18.8	19.2	19.6	20.0	10.00
Abandonment Costs	$MM	93.0					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	93.0
Pre-tax CF	$MM	4,684.3		(43.1)	(266.4)	(266.4)	20.1	194	201	208	216	223	232	239	249	257	268	277	288	291	297	301	307	311	317	321	245
Pre-tax ROR	%	26.4%																									
Cost Recovery Balance	$MM		150	193.1	459.5	725.8	754.8	662.0	565.2	465.3	361.3	253.8	141.9	26.2	-	-	-	-	-	-	-	-	-	-	-	-	-
Max Cost Recovery	$MM		52%	-	-	-	52.1	106.9	111.0	114.5	118.9	122.6	127.4	131.4	136.6	141.0	146.5	151.3	157.2	159.3	162.3	164.4	167.6	169.9	173.2	175.5	179.0
Cost Recovery	$MM	1,229.7		-	-	-	52.1	106.9	111.0	114.5	118.9	122.6	127.4	131.4	42.3	16.4	16.7	17.1	17.4	17.8	18.1	18.5	18.8	19.2	19.6	20.0	103.0
Profit Oil	$MM	4,534.3		-	-	-	49.1	100.7	104.5	107.8	112.0	115.5	120.0	123.8	222.9	257.4	267.8	276.7	287.9	291.5	297.0	300.8	306.6	310.6	316.6	320.8	244.5
							52.1	106.9	111.0	114.5	118.9	122.6	127.4	131.4	42.3	16.4	16.7	17.1	17.4	17.8	18.1	18.5	18.8	19.2	19.6	20.0	10.0
Investor Economics																											
Cost Recovery	$MM	1,229.7			-	-	52.1	106.9	111.0	114.5	118.9	122.6	127.4	131.4	42.3	16.4	16.7	17.1	17.4	17.8	18.1	18.5	18.8	19.2	19.6	20.0	103.0
Profit Oil	$MM	2,981.3	66%		-	-	32.3	66.2	68.7	70.9	73.6	75.9	78.9	81.4	146.5	169.2	176.0	181.9	189.3	191.6	195.3	197.8	201.6	204.2	208.2	211.0	160.8
Capex	$MM	(650.0)		(43.1)	(266.4)	(266.4)	(74.1)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Opex	$MM	(336.8)			-	-	(7.0)	(14.0)	(14.3)	(14.6)	(14.9)	(15.2)	(15.5)	(15.8)	(16.1)	(16.4)	(16.7)	(17.1)	(17.4)	(17.8)	(18.1)	(18.5)	(18.8)	(19.2)	(19.6)	(20.0)	(10.0)
Abandonment Costs	$MM	(93.0)			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(93.0)
Pre-tax CF	$MM	3,131.3		(43.1)	(266.4)	(266.4)	3.3	159	165	171	178	183	191	197	173	169	176	182	189	192	195	198	202	204	208	211	161
Depreciation	$MM	(800.0)			-	-	(68.9)	(137.8)	(137.8)	(137.8)	(137.8)	(80.0)	(22.2)	(22.2)	(22.2)	(22.2)	(11.1)	-	-	-	-	-	-	-	-	-	-
Tentative Taxable Income	$MM	2,981.3					8.5	21.3	27.7	33.0	39.8	103.4	168.6	174.9	150.6	147.0	164.9	181.9	189.3	191.6	195.3	197.8	201.6	204.2	208.2	211.0	160.8
Loss Carryforward	$MM	-					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Taxable Income	$MM	2,981.3					8.5	21.3	27.7	33.0	39.8	103.4	168.6	174.9	150.6	147.0	164.9	181.9	189.3	191.6	195.3	197.8	201.6	204.2	208.2	211.0	160.8
Income Tax	$MM	1,073.3	36%				3.1	7.7	10.0	11.9	14.3	37.2	60.7	63.0	54.2	52.9	59.4	65.5	68.2	69.0	70.3	71.2	72.6	73.5	74.9	75.9	57.9
After-tax CF	$MM	2,058.1		(43.1)	(266.4)	(266.4)	0.2	151	155	159	163	146	130	134	119	116	117	116	121	123	125	127	129	131	133	135	103
After-tax ROR	%	18.1%																									
		342.0																									
Government Economics																											
Profit Oil	$MM	1,553.0					16.8	34.5	35.8	36.9	38.3	39.6	41.1	42.4	76.3	88.1	91.7	94.8	98.6	99.8	101.7	103.0	105.0	106.4	108.4	109.9	83.7
Income Tax	$MM	1,073.3					3.1	7.7	10.0	11.9	14.3	37.2	60.7	63.0	54.2	52.9	59.4	65.5	68.2	69.0	70.3	71.2	72.6	73.5	74.9	75.9	57.9
Total Income	$MM	2,626.3					19.9	42.1	45.8	48.8	52.7	76.8	101.8	105.4	130.5	141.1	151.1	160.3	166.8	168.8	172.0	174.2	177.6	179.9	183.4	185.8	141.6

III. Financial analysis of SPEG Power Plant

15. A separate financial analysis was undertaken for the SPEG Power Plant on the basis of the financial model developed by Taylor DeJongh (TdJ), dated February 19, 2014. While TdJ's model version assumed 50% of leverage, the model was adjusted for the purposes of this analysis to reflect 100% equity; the impact of a 50% leverage was analyzed in the sensitivity analysis. The rationale for TdJ's approach is that shareholders are considering at a later stage to raise financing at the project level in order to increase their returns on their investment. Given the time constraint, shareholders have agreed that they would first stand behind their equity commitment and then refinance the project.

16. SPEG's sale of electricity to SOMELEC is conservatively expected to increase at an annual rate of 2% resulting in an increase of the load factor[32] from 77% in the first year of operation up to a capped level of 95%. This is driven by the rising demand on the national Mauritanian grid at 8% per annum; SENELEC, EDM, Kinross and SNIM were assumed to have a constant demand over the Project's horizon with a load factor of 85%.

SPEG Power Plant financing plan

17. Total SPEG costs are estimated at US$467.1 million, financed through shareholder equity, which for SOMELEC will be contributed 'in kind' through the transfer of title of the dual fuel plant to SPEG, and for Kinross and SNIM, paid in cash. The table below provides a snapshot of the SPEG Power Plant financing plan.

Table 4: SPEG Sources and Uses of Funds

Sources	US$ M	Uses	US$ M
Shareholder Equity		Dual fuel plant 180 MW	221.2
- Cash Contributions	245.9	Combined Cycle 120 MW	217.3
- Contributions in kind	221.2	Pre-Completion General and Administrative Costs	11.4
		Working Capital	16.3
		Financing Costs	0.8
Total	**467.1**	**Total**	**467.1**

18. *Dual Fuel Plant* – The dual fuel plant is currently being financed by SOMELEC, with funds sourced from the Islamic Development Bank (IsDB) and Arab Fund for Economic and Social Development (AFESD). It is envisaged that SOMELEC will transfer the power plant to SPEG prior to first gas from the Banda field. GoMR has secured financing for phase 1a (120 MW) of the dual fuel plant from AFESD and IsDB and financing from IsDB for the 60 MW extension (phase 1b).

19. *CCGT* - Tractebel Engineering, the owner's engineer, is launching an international competitive tender which will result in the award of a lump-sum turnkey EPC contract for the CCGT by end of May 2014. The complete financing of the CCGT is not yet secured up to this day; so are the working capital and various administrative costs of SPEG. These are expected to be funded through the equity contributions of Kinross and SNIM to SPEG. However, SPEG is considering raising debt at a later stage as explained above at the project company level post financial close, from potential lenders who have expressed interest in that regard.

20. *Tariff* - As per the PPA, SOMELEC's payment to SPEG is based on the following tariff structure: (i) a non-escalating component of US$5.6 million per month corresponding to the

[32] Load factor is defined as the ratio of actual power generated to the maximum power that can be generated under a 90.29% availability factor.

investment cost of SPEG plus a fixed O&M cost of US$ 1million per month that is indexed to inflation; and (ii) a variable component of US¢ 10.7 per kWh reflecting fuel and variable O&M expenditures. A third component is being considered to ensure that SOMELEC pays for the minimum amount of electricity corresponding to the gas take-or-pay volume even if this volume has not been off-taken. This tariff structure is expected to be replicated at the secondary PPA level. The exact average tariff of each off-taker from SOMELEC will reflect its own load factor. Table 5 highlights the breakdown of tariff for SOMELEC on first year of operation in US¢ per kWh.

Table 5: Tariff breakdown for SOMELEC

	US$ cents per kWh
Capital Recovery Component	3.7
Fuel Component	10.0
Fixed O&M Component	0.8
Variable O&M Component	0.7
Total	**15. 2**[33]

Project Revenues and Ratios

21. Revenues to SPEG Power Project under the umbrella PPA with SOMELEC, are estimated at US$330 million per annum in average (US$281 million on first year). In terms of priorities, revenues will serve first gas expenditures, which account for 85% of total operating expenditures, then other operating expenditures and lastly dividends will be distributed to its shareholders (about US$1.1 billion over the project lifetime).

22. Project IRR is estimated at 10% under the tariff highlighted above. It is considered as a reasonable return for its shareholders which main objective is to produce electricity at lowest cost possible. Payback period for investors is 8 years post-completion. A sensitivity analysis has been undertaken to assess the impact of different variables on project's financial sustainability. It shows a robust project able to sustain reasonable variations (+20%) in key variables, namely CAPEX and electricity output. At a cost of US¢ 18 per kWh, power from the project may be unattractive to SENELEC, but this risk is mitigated by the fact that EDM would most likely increase its offtake from the project if SENELEC capped its imports at 80 MW.

Table 6: Results of Sensitivity Analysis

	FIRR (%)	SPEG Tariff (US$/kWh)
Base Case	10%	0.152
Export to Senegal capped at 80 MW	10%	0.18
SPEG CAPEX increased by +20%	8.9%	0.152
50% Leverage	10%	0.149

IV. Financial analysis of SOMELEC

23. SOMELEC has suffered from financial losses in 2012 despite the increased efficiencies realized in operations and substantiated by the efficiency improvement from 71.26% in 2010 up to 76.26% in 2012. On the one hand, sales have increased by more than 20% compared to 2011 in line with the increase of fuel expenses; on the other hand, the government has reduced its subsidy allowance to SOMELEC by UMA 1.7 billion (US$5.7 million). This has

[33] The tariff calculated (US¢ 15.2 per kWh) is slightly higher than what was discussed during PPA negotiations in Nouakchott (US¢ 14.9 per kWh). Underlying the calculated tariff is a 100% equity structure that was secured from sponsors. In contrast, the tariff being negotiated is based on 50% debt that still needs to be secured at a later stage.

resulted in a deficit almost doubling between 2011 and 2012 and reaching UMA 4.7 billion (US$16 million).

Table 7: Improvement in system losses (Source SNC Lavalin tariff study)

	2010	2011	2012	Variation 2011/2010	Variation 2012/2011
Net Generation (MWh)	516,489	524,688	586,249	1.59%	13.3%
Billed Energy(MWh)	368,044	389,431	447,096	5.81%	20.3%
Global Efficiency	71.26%	74.22%	76.26%	4.15%	6.74%
Number of customers	124,153	144,090	161,091	16.06%	25.64%

Table 8: Simplified version of net income statement for SOMELEC

MUMA	2011	2012	Variation 2012/2011
Sales	25,046	28,981	21.2%
Other Revenues	1,001	1,059	5.8%
Subsidy	8,700	7,000	-19.5%
Total revenues	**34,748**	**37,040**	**6.6%**
Fuel and Energy charges	23,936	28,882	20.7%
Other charges (SG&A, D&A, interest expenses, taxes…)	13,315	12,876	-3.3%
Total expenses	**37,251**	**41,758**	**12%**
Net Income	(2,503)	(4,718)	~2Xdeficit

(Source Rapport d'activité de SOMELEC 2012 and 2011)

24. The consecutive years of negative earnings have taken a toll on SOMELEC's balance sheet: the equity portion of SOMELEC is dangerously close to zero by end of 2012 with paid in capital of UMA 42.3 billion (US$143 million) versus a negative UMA 41.1 billion (US$139 million) of retained earnings. The company which has become highly leveraged (>90%) is essentially operating on short, medium and long term debt. This testifies to the urgency of its recapitalization by the capital injection and tariff adjustment.

25. Meanwhile, the next five-year investment plan 2013-2017 is estimated at about UMA 138.3 billion (US$468 million): UMA 78.3 billion (US$265 million) for production, UMA 46.6 billion (US$158 million) for transport and UMA 13.4 billion (US$45 million) for distribution. The bulk of these investments are concentrated in 2013, 2014 and 2015. Following this investment plan, gross assets are expected to increase from UMA 43.5 billion (US$147 million) in 2012 up to UMA 150.4 billion (US$510 million) in 2015, an increase of almost 350% in three years. This would only put an additional pressure on SOMELEC whose financing charges will be expected to increase in line with these investments.

26. According to the most recent tariff study, the financial improvement of SOMELEC will require a 33% increase in the tariff from a current average tariff of 64 UMA/kWh (US$ 0.22/kWh) up to 85.6 UMA/kWh (US$ 0.29/kWh). The commissioning of the gas to power project in 2016 will consolidate this improvement by tapping into cheaper sources of energy compared to the expensive fuel oil and diesel plants that represent a large share of the current generation mix. The study urges SOMELEC in parallel to engage in a vigorous campaign for enhanced collection of receivables and reduction of losses.

Table 9: Coverage and liquidity ratios

	2012	2013	2014	2015	2016	2017
Average Tariff (UMA/kWh)	64.23	85.6	85.6	85.6	85.6	85.6
Average Tariff Adjustment		33.30%	0%	0%	0%	0%
Debt Service Cover Ratio		1.02	0.58	1.12	0.96	0.87
Return on total asset		5.80%	1.70%	4.80%	4.70%	4.90%
Liquidity ratio		0.77	0.7	0.91	1.34	1.46

V. Financial analysis of SENELEC

Historical performance

27. Despite several tariff adjustments between 2007 and 2009, tariffs have not kept up with the increase in costs of generation. Tariffs are currently approximately 30% below what is needed to cover SENELEC's expenses and investments needs. The Government provides revenue compensation to SENELEC based on the difference between revenue requirements reviewed by the regulator and actual tariffs.

28. SENELEC's financial performance over the last years has been characterized by negative EBITDA and net loss since 2005, with the exception of 2009, when oil price dropped. SENELEC experienced the worst financial performance in 2010, which was a record year in terms of load shedding and losses. A 10% increase in revenues was not sufficient to offset the increase in fuel and energy costs, estimated at 55%. As a result, the increase in fuel cost led in large part to a deterioration of the gross margin from +40.8% in 2006 down to -10.2% in 2012 (see table 10 below).

29. Despite a year by year increase in subsidies, these are still not sufficient to cover SENELEC's financial deficit.

Table 10: Summary of SENELEC's income statements over 2006-2012

	Actual					Estimates (1)	
FCFA Mln	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**
Income Statement							
Revenues	157,183	180,526	209,744	221,459	243,465	241,974	279,380
		14.9%	*16.2%*	*5.6%*	*9.9%*	*-0.6%*	*15.5%*
(-) Fuel & energy costs	(93,064)	(123,691)	(188,831)	(144,332)	(223,196)	(248,052)	(307,944)
Gross Margin	64,119	56,835	20,913	77,127	20,270	(6,078)	(28,564)
	40.8%	*31.5%*	*10.0%*	*34.8%*	*8.3%*	*-2.5%*	*-10.2%*
(-) Others operating	(83,386)	(57,853)	(44,704)	(56,469)	(43,869)	(44,428)	(68,112)
(-) Staff expenses	(20,912)	(22,116)	(22,779)	(26,534)	(28,032)	(28,388)	(25,783)
EBITDA	(40,178)	(23,135)	(46,570)	(5,876)	(51,631)	(78,894)	(122,459)
	-25.6%	*-12.8%*	*-22.2%*	*-2.7%*	*-21.2%*	*-32.6%*	*-43.8%*
(-) D&A	(16,609)	(18,240)	(15,397)	(21,013)	(28,837)	(20,898)	(8,403)
(-) Financial charges	(10,220)	(2,311)	(4,974)	(6,739)	(2,619)	(9,080)	(1,079)
(-) Taxes	(1)	(1)	(1)	(1)	(1)	(1)	(1)
NI Bef. tariff Subs.	**(67,008)**	**(43,687)**	**(66,942)**	**(33,629)**	**(83,088)**	**(108,873)**	**(131,941)**
(+) Tariff Subsidies	32,881	37,339	60,000	39,535	28,070	103,371	118,717
Net Income	**(34,127)**	**(6,348)**	**(6,942)**	**5,905**	**(55,018)**	**(5,503)**	**(13,224)**

30. In this difficult environment, it is not surprising to see that SENELEC's financial situation has been worsening for the past years. Due to poor cash collection, short term assets have increased, representing about 50% of total assets. This is best illustrated by looking at days of receivables, which have tripled between 2006 and 2012, from 122 to 413 (more than a year), respectively. In 2007 and 2008, SENELEC was recapitalized by GoSN (FCFA 36 billion, ie US$76 million) and the French Development Agency (FCFA 30 billion, ie US$63 million). SENELEC has managed to continue operations because of continuing high levels of GoSN's support and increasing recourse to debt. It should be noted that direct subsidies to SENELEC are expected to decrease from FCFA 105 billion (US$221 million) in 2012 to approximately FCFA 80 billion (about US$168 million) in 2013 (not included in Figure 2).

Figure 2: High levels of cash injection from GoSN

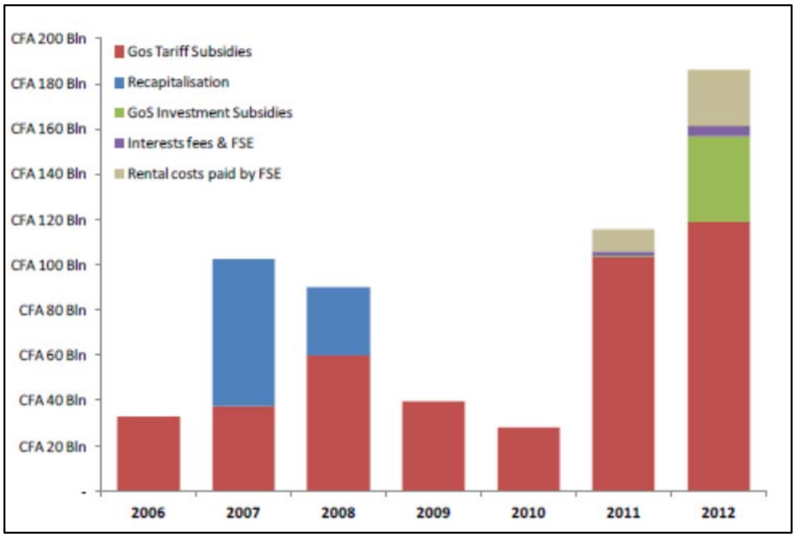
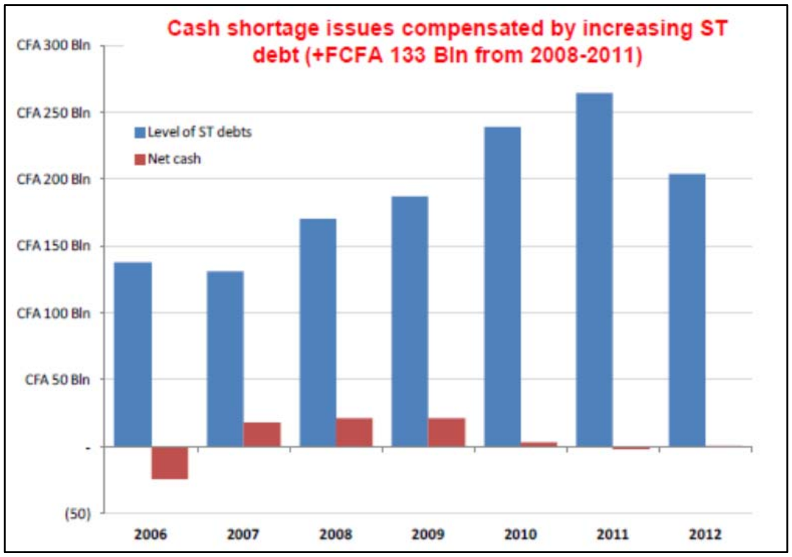


Figure 3: Cash shortage compensated by increasing short term debt

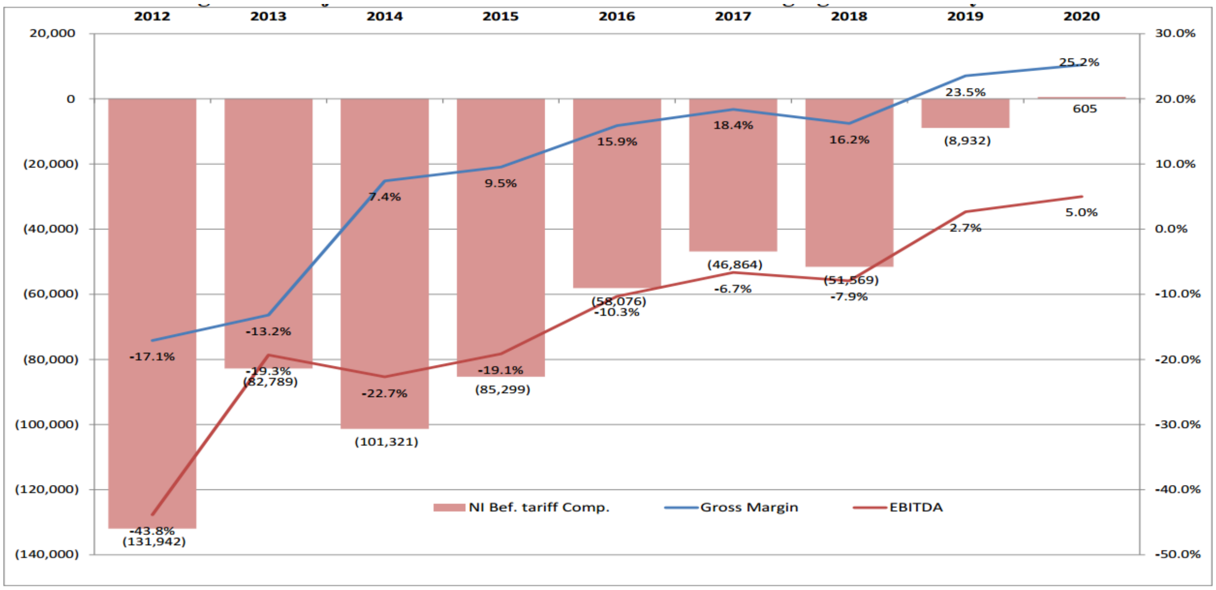


SENELEC's prospects

31. With power imports form Mauritania, the rehabilitation of existing plants, the commissioning of Sendou I and Tobène IPP, and increased regional hydropower and other operational measures, the financial position of SENELEC is expected to improve. The return to profitability is expected to occur in 2018.

32. Over the coming years, the GoSN will still have to provide subsidies, though at a declining level. The revenue gap for 2014 is estimated at about FCFA 101 billion (US$213 million), and about FCFA 85 billion (US$179 million) to FCFA 47 billion (US$99 million) for the following three years 2015-2018 (see figure 4).

Figure 4: Projected Net income before subsidies converging to balance by 2020



VI. Financial analysis of EDM

33. Since 2010, EDM-SA has become increasingly dependent on government support for current operations. In this context, the level of operating government subsidy is a major driver of its financial performance. EDM-SA found itself unable to procure fuel in sufficient quantities, contributing to significant load-shedding (hence the slightly reduced volume of generation in 2012 over the previous year).

Table 11: EDM-SA - key performance indicators

	Unit	2009	2010	2011	2012
Net generation (incl. imports)	GWh	1,097	1,213	1,298	1278.9
Sales	GWh	867	951	1,045	1,033
Losses	%	*21.0%*	*21.6%*	*19.6%*	*19.2%*
Electricity sales	FCFA Billions	80.7	91.6	95.6	94.5
Operating income	FCFA Billions	1.2	-5.8	-15.3	Unavailable
Operating margin	%	*1%*	*-6%*	*-16%*	Unavailable

34. The imbalance between EDM-SA's operating costs and revenue is structural. The GoML is using a combination of three lines of action to restore the financial viability of the sector: (i) increasing the subsidy level to the sector; (ii) increasing revenue through tariff adjustments; and (iii) reducing generation costs.

i. <u>Subsidies:</u> In order to ensure the continuity of supply in Mali and allow EDM-SA to carry out adequate maintenance of its assets, the provision of operating subsidy to EDM-SA will remain necessary in the short term. In March 2013, after analyzing the prospects of EDM-SA for 2013 and 2014, the GoML – in consultation with the IMF and IDA - decided to increase the level of subsidy to EDM-SA to FCFA 57 billion in 2013 (~US$120 million). The objective of this subsidy is to start to restore the financial equilibrium of the utility and avoid the accumulation of additional liabilities (short term financial debt, arrears with suppliers). This subsidy provides transparency regarding the real cost of the absence of electricity tariff adjustment. However, it should be noted that these subsidies to the electricity sector are regressive and are problematic from a fiscal sustainability perspective.

ii. Tariff adjustments: In February 2013, the GoML increased electricity tariffs by on average 7% as a first step towards cost-reflective tariffs. The GoML has also approved the tariff indexing framework proposed by the sector regulator. Moving to fully cost-reflective tariffs will require further increases totaling at least an additional 25 to 30 %.

iii. Reducing generation costs: The Félou regional hydropower plant has recently been commissioned and is helping to reduce average generation costs. The interconnection with Côte d'Ivoire, operational since the end of 2012 has the potential to provide slightly less expensive bulk generation. However, given the tight supply/demand balance in Côte d'Ivoire, the volume of power imports will be limited over the next few years.

35. For EDM-SA, in order to be able to meet the growth in demand for electricity, developing (or co-developing at the regional level) less expensive sources of power generation is a strategic imperative. This Project, together with the Gouina regional hydropower power project and smaller domestic hydropower investments, are therefore critical for the Malian electricity sector.

Annex 5: Statement of MIGA's Exposure[34]

1. MIGA'S EXPOSURE (CONTINGENT LIABILITY)

US$ million	*Transfer Restriction*	*Expropriation*	*War & Civil Disturbance*	*Breach of Contract*	*Non Honoring of Sovereign Financial Obligations*	*Maximum*
Gross Exposure	590.4	590.4	590.4	585.0	0.0	590.4
% of total portfolio	8.5	7.2	9.1	14.5	0.0	5.2
Net Exposure	224.9	224.9	224.9	220.0	0.0	224.9
% of total portfolio	5.6	4.6	6.1	9.5	0.0	3.5
CUP	0.0	0.0	0.0	0.0	0.0	0.0
Current Amount*	3.1	3.1	3.1	0.0	0.0	3.1

* On a gross basis

2. MIGA's NET EXPOSURE BY SECTOR

	Mauritania		Africa		MIGA Worldwide	
	US$ million	%	*US$ million*	%	*US$ million*	%
Agribusiness	0.0	0.0	127.3	7.1	179.4	2.8
Construction	0.0	0.0	0.0	0.0	5.8	0.1
Financial	0.0	0.0	27.2	1.5	1,950.5	30.2
Financial Services	0.0	0.0	7.0	0.4	362.0	5.6
General Banking	0.0	0.0	20.2	1.1	1,290.5	19.9
Investment Fund	0.0	0.0	0.0	0.0	0.0	0.0
Leasing	0.0	0.0	0.0	0.0	177.7	2.7
Mortgage	0.0	0.0	0.0	0.0	120.3	1.9
Infrastructure	4.9	2.2	1,124.9	62.8	2,663.8	41.2
Electric, Gas and Sanitary Services	0.0	0.0	0.0	0.0	34.0	0.5
Power	0.0	0.0	611.1	34.1	979.5	15.1
Telecommunication	4.9	2.2	126.3	7.1	440.2	6.8
Transportation	0.0	0.0	104.0	5.8	656.8	10.2
Water Transportation	0.0	0.0	41.2	2.3	267.1	4.1
Water Supply	0.0	0.0	162.3	9.1	206.1	3.2
Other	0.0	0.0	80.0	4.5	80.0	1.2
Manufacturing	0.0	0.0	61.2	3.4	636.1	9.8
Mining	0.0	0.0	6.6	0.4	168.0	2.6
Oil and Gas	220.0	97.8	356.3	19.9	606.0	9.4
Retail	0.0	0.0	0.9	0.1	112.4	1.7
Services	0.0	0.0	74.5	4.2	134.6	2.1
Tourism	0.0	0.0	10.8	0.6	12.4	0.2
Total	**224.9**	**100.0**	**1,789.9**	**100.0**	**6,468.8**	**100.0**

[34] Including this and other projects approved by the Board in Mauritania as of November 30, 2013.

3. LIST OF ACTIVE PROJECTS IN MAURITANIA

Investor Name	**Project Name**	**Host Country**	**Business Sector**
Office National de Telcomms."TUNISIE TELECOM"	Licence - setting up & exploitation mobile phone	Mauritania	Infrastructure

MARGINAL IMPACT ON PORTFOLIO EXPOSURE AND ECONOMIC CAPITAL CONSUMPTION						
Exposures as of September 30, 2013	*Gross Exposure*		*Net Exposure*		*Economic Capital Consumption*	
	($ Million)	*Percent*	*($ Million)*	*Percent*	*($ Million)*	*Percent*
Before new project						
Mauritania portfolio	5.4	0.05%	4.9	0.08%	0.1	0.01%
Global Portfolio	**10,527.1**	**100.00%**	**6,269.3**	**100.00%**	**516.1**	**100.00%**
After new project						
Mauritania portfolio	590.4	5.31%	224.9	3.47%	49.9	9.14%
Global Portfolio	**11,112.1**	**100.00%**	**6,489.3**	**100.00%**	**545.5**	**100.00%**

Annex 6: Proposed IDA Guarantees

SUMMARY OF INDICATIVE TERMS AND CONDITIONS OF IDA PARTIAL RISK GUARANTEES IN SUPPORT OF PAYMENTS UNDER GAS SALES AGREEMENT

This term sheet contains a summary of terms and conditions of the proposed Partial Risk Guarantee ("**PRG**") by the International Development Agency ("**IDA**").

L/C Applicant:	SPEG, as "Buyer" under a Gas Sales Agreement ("**GSA**") to be entered into with the Banda Gas Field JV (the "**L/C Beneficiary**").
IDA Guaranteed L/C:	Revolving standby letter of credit[35] ("**L/C**") issued in favor of the L/C Beneficiary by the L/C Bank at the request of SPEG. SPEG's obligations to repay the L/C Bank's amounts drawn under the L/C will be guaranteed by IDA. Any amounts drawn by the L/C Beneficiary under the L/C that are repaid by SPEG to the L/C Bank within the L/C Reimbursement Period would be reinstated as described below.
L/C Beneficiary:	The Banda Gas Field JV[36], represented by Tullow, as operator of the JV; provided that a JV member that is an international financial institution (or an affiliate thereof) is precluded from being a direct beneficiary of the L/C.
L/C Bank:	A commercial bank acceptable to IDA, SPEG and the L/C Beneficiary.
L/C Form:	The L/C will be issued in a form satisfactory to the L/C Beneficiary, SPEG and IDA.
Purpose:	The IDA PRG would backstop the obligation of SPEG to repay the L/C Bank for the amounts drawn by the L/C Beneficiary under the L/C on account of payments due to the L/C Beneficiary from SPEG under the GSA following the occurrence of a Guaranteed Event (as defined below).
Guaranteed Events:	SPEG's commitment to comply with specified payment obligations under the GSA, as such will be further detailed in a PRG Support Agreement (see below) to be entered into between SPEG and L/C Beneficiary.
Maximum L/C Amount:	Up to a maximum of US$130 million (expected to be at least equal to the IDA PRG Maximum Guaranteed Amount).
L/C Fees:	To be payable by the L/C Beneficiary to the L/C Bank.
L/C Reimbursement Period:	Following a drawing under the L/C by the L/C Beneficiary, SPEG would be obligated to repay the L/C Bank the amount so drawn under the L/C together with accrued interest thereon within a period of not less than 365 days pursuant to a Reimbursement and Credit Agreement (see below) to be entered into between SPEG and the L/C Bank. In the event of a timely repayment by SPEG, the L/C will be reinstated by the amount of such repayment. In the event SPEG does not repay within the period of not less than 365 days set forth under the Reimbursement and Credit Agreement, the L/C Bank would then have the right to call on the PRG for the principal

[35] Or other comparable instrument acceptable to IDA.

[36] The JV members are subsidiaries of Tullow Oil, Petronas, Kufpec, Premier Oil and potentially SMH.

	amounts plus accrued interest due from SPEG under the Reimbursement and Credit Agreement. Any amount paid by IDA to the L/C Bank under the PRG would be subtracted from the Maximum Bank PRG Guaranteed Amount, and even if SPEG's payment default is remedied, following a payment under the PRG, those amounts would not be reinstated.
Conditional payments in the event of dispute:	In the event of a dispute between the L/C Beneficiary and SPEG in connection with a Guaranteed Event, the L/C can also be drawn for provisional payments, subject to dispute resolution mechanisms under the GSA (or PRG Support Agreement) acceptable to IDA. Such a dispute resolution mechanism may include the obligation for the L/C Beneficiary to provide to SPEG with appropriate security (acceptable to SPEG and IDA, and to be reflected in the PRG Support Agreement) in the amount of provisional payments in the event that the final decision determines that SPEG had no liability or its liability was for less than the amount of the provisional payments.
Maximum IDA PRG Guaranteed Amount:	Up to a maximum of US$130 million (expected to be equal to the Maximum L/C Amount).
L/C Validity Period:	Up to 20 years, provided that provisions allowing for the winding down of security and IDA PRG support if SPEG satisfies certain criteria (such as SPEG's (i) creditworthiness; (ii) track record; (iii) ability to procure a letter of credit or other payment security) may be included if the L/C Beneficiary and SPEG so agree, and the terms of such agreement is acceptable to IDA.
Maximum IDA Guarantee Period:	The L/C Validity Period, plus 14 months.
Interest Rate on Drawings During the Reimbursement, Period Charged by the L/C Bank:	A 'spread' above LIBOR acceptable to SPEG and agreed by IDA.
Guarantee Fees:[37]	75 bps per annum on the maximum aggregate disbursed and outstanding Maximum IDA PRG Guaranteed Amount.
Upfront (Initiation/Processing) Fees: [38]	One-time upfront fees for IDA PRGs: - An Initiation Fee of 15bps on the Maximum IDA PRG Guaranteed Amount or US$ 100,000, whichever is greater; - A Processing Fee of 50bps on the Maximum IDA PRG Guaranteed Amount; and - Reimbursement of expenses for outside IDA PRG legal counsel.
Conditions Precedent to the effectiveness of the IDA Guarantee:	Usual and customary conditions (to be satisfied in form and substance acceptable to IDA) for operations of this type including, but not limited to, the following:

[37] The World Bank's Board of Executive Directors typically reviews loan and guarantee fees once a year in respect of the next fiscal year. The fiscal year begins on July 1. The applicable fee as of the date that the Guarantee Agreement becomes effective remains constant throughout the term of the guarantee.
[38] Same as above.

	a) Execution, delivery and effectiveness of the relevant project documents, including the GSA and the PPAs. b) All relevant host country environmental approvals required for the operation and compliance with all applicable requirements relating to the World Bank's policies on environmental and social safeguards and sanctionable practices[39]. c) Delivery of satisfactory legal opinions, including from: (i.) counsel to SPEG relating to the PRG Support Agreement, the Reimbursement and Credit Agreement, and the Cooperation Agreement; (ii.) counsel to the L/C Beneficiary relating to the Project Agreement, and the PRG Support Agreement; (iii.) counsel to each party to the Account Agency and Cash Flow Management Agreement with respect thereto; d) Evidence satisfactory to IDA that adequate funds (including shareholder contributions) have been committed for (i) SPEG, with respect to the construction of the combined cycle gas turbine, and (ii) SOMELEC, with respect to the construction of the dual fuel plant, the North HV line, the South HV line and the interconnection to OMVS substation. e) Payment in full of the Upfront Fees and the first installment of the Guarantee Fee. f) Execution and delivery of the relevant financing documents, including: (i.) Guarantee Agreement between the L/C Bank and IDA; (ii.) Reimbursement and Credit Agreement between L/C Bank and SPEG; (iii.) PRG Support Agreement between SPEG and the L/C Beneficiary; (iv.) Project Agreement between the L/C Beneficiary and IDA; (v.) Cooperation Agreement between IDA and SPEG; (vi.) Indemnity Agreement between IDA and the Islamic Republic of Mauritania; and (vii.) Account Agency and Cash Flow Management Agreement among relevant project participants to be determined (e.g., SOMELEC, SPEG and Account Agent). g) The power plant assets (including key project agreements) have been duly transferred from SOMELEC to SPEG.
Guarantee Agreement:	The terms and conditions of the IDA PRG would be embodied in a Guarantee Agreement between the L/C Bank and IDA.

[39] "Sanctionable practices" include corrupt, fraudulent, collusive, coercive, or obstructive practices.

Project Agreement:	The L/C Beneficiary would enter into a specific Project Agreement with IDA in respect of the PRG. Under such agreement, the L/C Beneficiary will, *inter alia*, provide reports (including audit reports) and other Project information, and make warranties, representations and covenanted undertakings, including in respect of compliance with applicable Mauritanian environmental laws and relevant environmental and social safeguard instruments (consistent with World Bank environmental and social safeguard policies) and World Bank anti-corruption policies and procedures, including relating to sanctionable practices. IDA may suspend or terminate the PRG if the L/C Beneficiary breaches the representations and warranties or covenants under the Project Agreement.
Cooperation Agreement	SPEG would enter into a Cooperation agreement with IDA pursuant to which it will undertake to (i) comply with all its obligations under the transaction documents to which it is a party, including to promptly replenish the L/C if it is ever drawn; (ii) will obtain IDA's consent prior to agreeing to any change to any transaction document which would materially affect the rights or obligations of IDA under the PRG or any other transaction document; (iii) will provide certain notices to IDA; (iv) will take all action necessary on its part to enable the L/C Beneficiary to perform all of the L/C Beneficiary's obligations under its Project Agreement with IDA, and other relevant transaction document; (v) will cooperate with IDA and furnish to IDA all such information related to such matters as IDA shall reasonably request; (vi) promptly inform IDA of any condition which interferes with, or threatens to interfere with, such matters; and (vii) will comply with the account management obligations set forth in the Account Agency and Cash Flow Management Agreement.
Indemnity Agreement:	Mauritania would enter into an Indemnity Agreement with IDA. Under such agreement, the Islamic Republic of Mauritania would, *inter alia*, undertake to indemnify IDA on demand, or as the IDA may otherwise determine, for any payment made by IDA under the Guarantee Agreement. The Indemnity Agreement will follow the legal regime, and include dispute settlement provisions, which are customary in agreements between member countries and IDA.
Account Agency and Cash Flow Management Agreement:	The relevant parties to be determined (including SPEG and SOMELEC) would enter into an Account Agency and Cash Flow Management Agreement to, *inter alia* (i) detail the payment mechanisms under the GSA and various PPAs, or other relevant Project documents; (ii) ensure proper management of cash flow amongst the various Project parties; and (iii) ensure that the correct parties are held accountable for any payment obligations and/or any subsequent defaults.
PRG Support Agreement:	SPEG will enter into a PRG Support Agreement with the L/C Beneficiary under which SPEG will undertake to provide payment security to the L/C Beneficiary for the loss of revenues resulting from the occurrence of a Guaranteed Event on the basis of drawdown and dispute resolution mechanisms and supporting

	documentation to be agreed between the parties and satisfactory to IDA and consistent with the provisions of the GSA.
L/C Reimbursement and Credit Agreement:	SPEG will enter into a Reimbursement and Credit Agreement with the L/C Bank in which it will undertake to repay the L/C Bank for the amounts drawn under the L/C within a period of not less than 365 days from the date of each drawing.

SUMMARY OF INDICATIVE TERMS AND CONDITIONS OF IDA PARTIAL RISK GUARANTEES IN SUPPORT OF EXPORT POWER AGREEMENTS TO SENEGAL AND MALI

This term sheet contains a summary of terms and conditions of the proposed Partial Risk Guarantee ("PRG") by the International Development Agency ("IDA"). This draft term sheet assumes the use of a standby letter of credit for export power PRGs as agreed between the PPA parties. A deemed loan structure would be considered as well, if the L/C structure is not workable.

L/C Applicant:	SENELEC/EDM, as "buyer" under a PPA to be entered into with SOMELEC (the "L/C Beneficiary"). For the purposes of this term sheet, references to the term "L/C Applicant" shall refer to SENELEC or EDM, as appropriate, as the buyer under its respective power purchase agreement with SOMELEC.
IDA Guaranteed L/C:	Revolving standby letter of credit40 ("L/C") issued in favor of the L/C Beneficiary by the L/C Bank at the request of the L/C Applicant. The L/C Applicant's obligations to repay the L/C Bank's amounts drawn under the L/C will be guaranteed by IDA. Any amounts drawn by the L/C Beneficiary under the L/C that are repaid by the L/C Applicant to the L/C Bank within the L/C Reimbursement Period would be reinstated as described below.
L/C Beneficiary:	SOMELEC, as seller under the PPA.
L/C Bank:	A commercial bank acceptable to the IDA, L/C Applicant and the L/C Beneficiary.
L/C Form:	The L/C will be issued in a form satisfactory to the L/C Beneficiary, L/C Applicant and IDA.
Purpose:	The IDA PRG would backstop the obligation of the L/C Applicant to repay the L/C Bank for the amounts drawn by the L/C Beneficiary under the L/C on account of payments due to the L/C Beneficiary from the L/C Applicant under the PPA following the occurrence of a Guaranteed Event (as defined below).
Guaranteed Events:	The L/C Applicant's commitment to comply with specified payment obligations under the PPA, as such will be further detailed in a PRG Support Agreement (see below) to be entered into between the L/C Applicant and L/C Beneficiary.
Maximum L/C Amount:	For the PRG relating to the PPA between SENELEC and SOMELEC, up to a maximum of US$99 million; and For the PRG relating to the PPA between EDM and SOMELEC, up to a maximum of US$32 million. (In each case, expected to be at least equal to the IDA PRG Maximum Guaranteed Amount).
L/C Fees:	To be payable by the L/C Beneficiary to the L/C Bank.
L/C Reimbursement	Following a drawing under the L/C by the L/C Beneficiary, the L/C

[40] Or other comparable instrument acceptable to IDA.

Period:	Applicant would be obligated to repay the L/C Bank the amount so drawn under the L/C together with accrued interest thereon within a period of not less than 365 days pursuant to a Reimbursement and Credit Agreement (see below) to be entered into between the L/C Applicant and the L/C Bank. In the event of a timely repayment by the L/C Applicant, the L/C will be reinstated by the amount of such repayment. In the event the L/C Applicant does not repay within the period of not less than 365 days set forth under the Reimbursement and Credit Agreement, the L/C Bank would then have the right to call on the PRG for the principal amounts plus accrued interest due from the L/C Applicant under the Reimbursement and Credit Agreement. Any amount paid by IDA to the L/C Bank under the PRG would be subtracted from the Maximum Bank PRG Guaranteed Amount, and even if the L/C Applicant's payment default is remedied, following a payment under the PRG, those amounts would not be reinstated.
Conditional payments in the event of dispute:	In the event of a dispute between the L/C Beneficiary and L/C Applicant in connection with a Guaranteed Event, the L/C can also be drawn for provisional payments, subject to dispute resolution mechanisms under the PPA (or PRG Support Agreement) acceptable to IDA. Such a dispute resolution mechanism may include the obligation for the L/C Beneficiary to provide to L/C Applicant with appropriate security (acceptable to the L/C Applicant and IDA, and to be reflected in the PRG Support Agreement) in the amount of provisional payments in the event that the final decision determines that L/C Applicant had no liability or its liability was for less than the amount of the provisional payments.
Maximum IDA PRG Guaranteed Amount:	For the PRG relating to the PPA between SENELEC and SOMELEC, up to a maximum of US$99 million of principal outstanding under the Reimbursement and Credit Agreement; and For the PRG relating to the PPA between EDM and SOMELEC, up to a maximum of US$32 million of principal outstanding under the Reimbursement and Credit Agreement, in each case, plus accrued interest.
L/C Validity Period:	Up to 20 years, provided that provisions allowing for the winding down of security and IDA PRG support if the L/C Applicant satisfies certain criteria (such as L/C Applicant's (i) creditworthiness; (ii) track record; (iii) ability to procure a letter of credit or other payment security) may be included if the L/C Beneficiary and SPEG so agree, and the terms of such agreement is acceptable to IDA..
Interest Rate on Drawings During the Reimbursement, Period Charged by the L/C Bank:	A 'spread' above LIBOR acceptable to the L/C Applicant and agreed by IDA.
Guarantee Fees:	75bps per annum on the maximum aggregate disbursed and outstanding Maximum IDA PRG Guaranteed Amount.
Upfront	One-time upfront fees for IDA PRGs.

(Initiation/Processing) Fees: [41]	- Initiation Fee of 15bps on the Maximum IDA PRG Guaranteed Amount or US$ 100,000, whichever is greater; and - Processing Fee of 50bps on the Maximum IDA PRG Guaranteed Amount.
Guarantee Agreement:	The terms and conditions of the IDA PRG would be embodied in a Guarantee Agreement between the L/C Bank and IDA.
Project Agreement:	The L/C Beneficiary would enter into a Project Agreement with IDA in respect of the PRG. Under such agreement, the L/C Beneficiary will, inter alia, provide reports (including audit reports) and other Project information, and make warranties, representations and covenanted undertakings, including in respect of compliance with applicable environmental laws and relevant environmental and social safeguard instruments (consistent with World Bank environmental and social safeguard policies) and World Bank anti-corruption policies and procedures, including relating to sanctionable practices. It will also undertake to comply with the account management obligations set forth in the Account Agency and Cash Flow Management Agreement. IDA may suspend or terminate the PRG if the L/C Beneficiary breaches the representations and warranties or covenants under the Project Agreement.
Cooperation Agreement	The L/C Applicant would enter into a Cooperation agreement with IDA pursuant to which it will undertake to (i) comply with all its obligations under the transaction documents to which it is a party, including to promptly replenish the L/C if it is ever drawn; (ii) will obtain IDA's consent prior to agreeing to any change to any transaction document which would materially affect the rights or obligations of IDA under the PRG or any other transaction document; (iii) will provide certain notices to IDA; (iv) will take all action necessary on its part to enable the L/C Beneficiary to perform all of the L/C Beneficiary's obligations under its Project Agreement with IDA, and other relevant transaction document; (v) will cooperate with IDA and furnish to IDA all such information related to such matters as IDA shall reasonably request; and (vi) promptly inform IDA of any condition which interferes with, or threatens to interfere with, such matters.
Indemnity Agreement:	Senegal, with respect to the PRG relating to the PPA between SENELEC and SOMELEC, and Mali, with respect to the PRG relating to the PPA between EDM and SOMELEC, would each enter into an Indemnity Agreement with IDA. Under such agreement, the member country would, inter alia, undertake to indemnify IDA on demand, or as the IDA may otherwise determine, for any payment made by IDA under the Guarantee Agreement. The Indemnity Agreement will follow the

[41] The Bank will review with the project beneficiaries of both GSA and PPA PRGs which party will be responsible for the payment of these fees. It could be envisaged that the responsibility is borne by the gas JV, and that the fee payment is reflected in the GSA payment terms

	legal regime, and include dispute settlement provisions, which are customary in agreements between member countries and IDA.
PRG Support Agreement:	The L/C Applicant will enter into a PRG Support Agreement with the L/C Beneficiary under which the L/C Applicant will undertake to provide payment security to the L/C Beneficiary for the loss of revenues resulting from the occurrence of a Guaranteed Event on the basis of drawdown and dispute resolution mechanisms and supporting documentation to be agreed between the parties and satisfactory to IDA and consistent with the provisions of the PPA.
L/C Reimbursement and Credit Agreement:	The L/C Applicant will enter into a Reimbursement and Credit Agreement with the L/C Bank in which it will undertake to repay the L/C Bank for the amounts drawn under the L/C within a period of not less than 365 days from the date of each drawing.
Account Agency and Cash Flow Management Agreement:	The relevant parties to be determined (including SPEG and SOMELEC) would enter into an Account Agency and Cash Flow Management Agreement to, inter alia (i) detail the payment mechanisms under the key project documents, including the gas supply agreement and various PPAs; (ii) ensure proper management of cash flow amongst the various Project parties; and (iii) ensure that the correct parties are held accountable for any payment obligations and/or any subsequent defaults..
Conditions Precedent to the effectiveness of the IDA Guarantee:	Usual and customary conditions (to be satisfied in form and substance acceptable to IDA) for operations of this type including, but not limited to, the following: a) Execution, delivery and effectiveness of the relevant project documents, including the gas supply agreement and the PPAs. b) All relevant host country environmental approvals required for the operation and compliance with all applicable requirements relating to the World Bank's policies on environmental and social safeguards and sanctionable practices[42]. c) Delivery of satisfactory legal opinions, including from: (i.) counsel to L/C Applicant relating to the PRG Support Agreement, the Reimbursement and Credit Agreement and the Cooperation Agreement; (ii.) counsel to the L/C Beneficiary relating to the Project Agreement and the PRG Support Agreement; (iii.) counsel to the Republics of Senegal and Mali relating to their respective Indemnity Agreement; (iv.) counsel to each party to the Account Agency and Cash Flow Management Agreement in respect thereof. d) Evidence satisfactory to IDA that adequate funds (including shareholder contributions) have been committed for (i) SPEG, with respect to the construction of the combined cycle gas turbine, and (ii) SOMELEC, with respect to the construction of the dual fuel plant, the North HV line, the South HV line and the interconnection to OMVS substation.

[42] "Sanctionable practices" include corrupt, fraudulent, collusive, coercive, or obstructive practices.

	e) Payment in full of the Upfront Fees and the first installment of the Guarantee Fee. f) Execution and delivery of the relevant financing documents, including: (i) Guarantee Agreement between the L/C Bank and IDA; (ii) Reimbursement and Credit Agreement between L/C Bank and L/C Applicant; (iii) A PRG Support Agreement between the L/C Applicant and the L/C Beneficiary; (iv) A Project Agreement between the L/C Beneficiary and IDA; (v) A Cooperation Agreement between the L/C Applicant and IDA; (vi) The Indemnity Agreement between IDA and each of the Republics of Senegal and Mali; (vii) Account Agency and Cash Flow Management Agreement among the relevant project participants to be determined (e.g., SPEG, SOMELEC and the Account Agent);

Annex 7: Implementation Support Plan

1. The Implementation Support Plan (ISP) described in the annex explains how IDA will supervise the project and support the implementation of the risk mitigation measures in close collaboration with MIGA.

2. The level of technical support needed includes staff with energy sector knowledge and expertise; specialized commercial guarantees expertise including commercial legal counsel and financial experts; safeguards specialists; power engineering as well as monitoring and evaluation (M&E) expertise. The primary responsibility for this support lies with the project Task Team Leader with key inputs from other specialized staff. The main focus in terms of support during implementation is summarized in the table below.

Implementation Support Plan

Time	*Focus*	*Skills Needed*	*Resource Estimate (IDA Only)*	*Partner Role*
First twelve months	Effectiveness, financial closure, selection of L/C banks, safeguards, construction progress, political developments.	Sector Safeguards Commercial Financial Legal Engineer Country team	$300,000	
12th month-48th month	Review of progress in construction and generation by SPEG and related transmission lines; review of sector technical and financial performance; and safeguards. Review implementation progress of the reform process and project performance against indicators. Review status of completion against indicators and PDO.	Sector Commercial Financial Legal Safeguards Environment Social M & E	$400,000	
49th month till end of guarantee effectiveness period	On-going supervision and monitoring of legal covenants and risks that could lead to a possible call on any of the signed IDA or MIGA guarantees.	Commercial Financial Legal	$25,000 per year	IDA and MIGA will conduct on-going portfolio risk management functions

Skills Mix Required

Skills Needed	*Number of Staff Weeks*	*Number of Trips*	*Comments*
Team Leader/ Energy Specialist Guarantee Specialist Lawyer Financial Analyst Power Engineer Social Environmental Monitoring	Estimated to be 7-10 weeks per person per year for team leader and guarantee specialist; estimated 1-3 weeks per person for other staff.	3 per year in the first year, 1-2 in subsequent years.	

Annex 8: WBG Team Composition

World Bank (IDA)

Name	Title	Specialization	Unit
Moez Cherif	Sr. Energy Economist	Task Team Leader (TTL)	AFTG2
Katharine Baragona	Sr. Infrastructure Finance Specialist	Guarantees Team Leader	TWIFS
Patrice Caporossi	Sr. Infrastructure Finance Specialist	Guarantees Team Leader	TWIFS
Bassem Abou Nehme	Energy Finance Specialist	Sector, Economic and Financial Analysis	AFTG2
Anthony Molle	Sr. Counsel	Legal (PRG)	LEGSO
Paul Nickson	Power Engineer	Technical (Power)	PPIAF
Hocine Chalal	Lead Environment Specialist	Environment Safeguards	AFTN1
Alexandra Bezeredi	Regional Environmental & Safeguards Advisor	Social Safeguards	AFTSG
David John Santley	Sr. Petroleum Specialist	Technical and Financial (Gas)	SEGM2
Alexandra Planas	Energy Consultant	Energy Economist	AFTG2
Natalie Nicolaou	Energy Finance Specialist	Guarantees	TWIFS
Manuel Berlengiero	Sr. Energy Specialist	Mali Energy Sector	AFTG2
Silvana Tordo	Lead Energy Economist	Technical (Gas)	SEGM1
Amadou Konare	Sr. Environment Specialist	Environment Safeguards	AFTN1
Salamata Bal	Sr. Social Development Specialist	Social Safeguards	AFTCS
Lu T. Ha	Sr. Program Assistant	Project Processing	AFTG2
Rita Ahiboh	Sr. Program Assistant	Project Processing	TWIFS
Batouly Dieng	Project Assistant	Project Processing	AFMMR
Seynabou Thiaw Seye	Program Assistant	Project Processing	
Mohamed El Hafedh Hendah	Procurement Specialist	Procurement	AFTPW

MIGA

Name	Title	Unit
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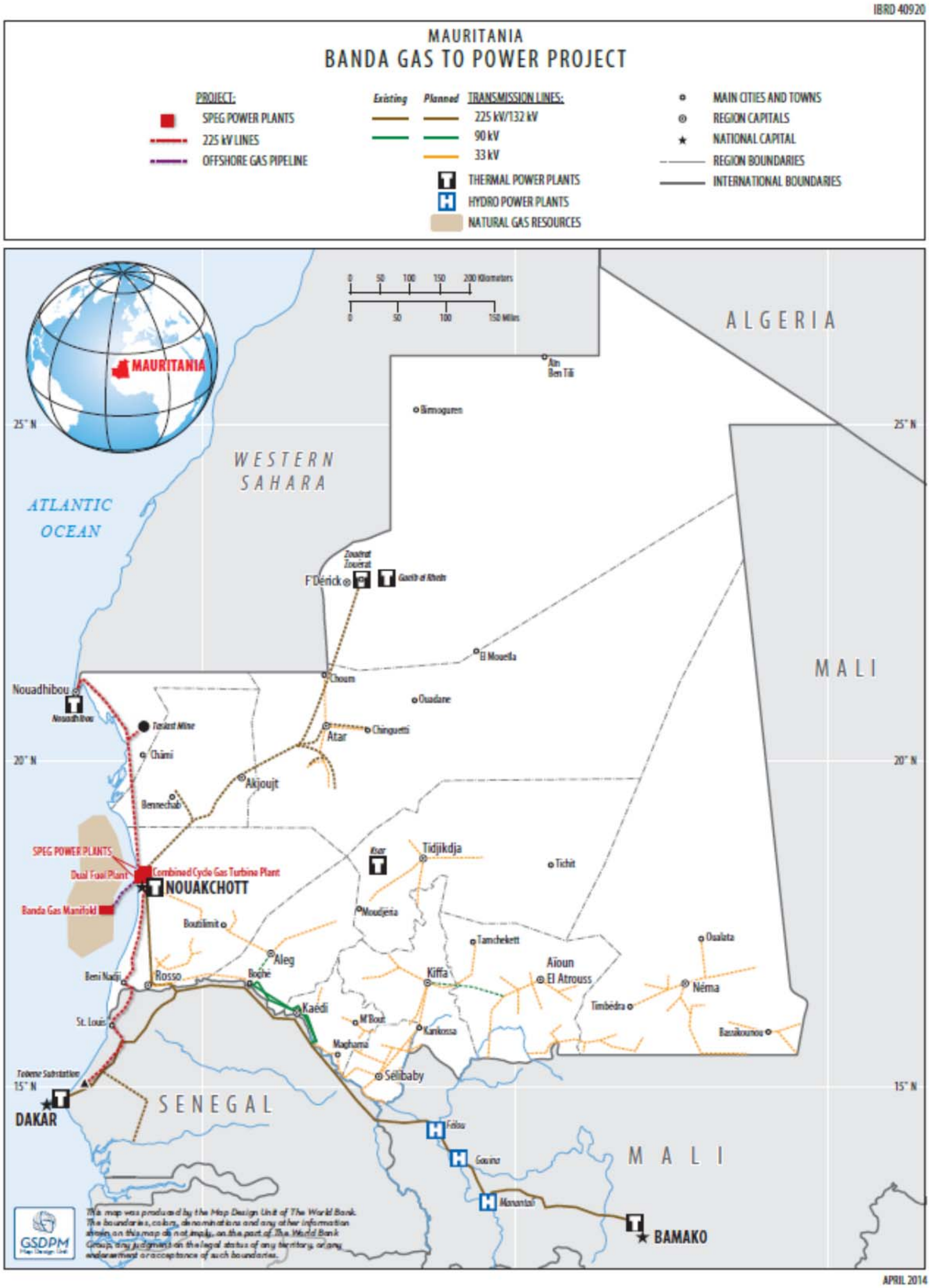
Hoda Atia Moustafa	Counsel	MIGLC
Conor Healy	Sr. Risk Management Officer	MIGES
Debra Zanewich	Sr. Environmental Specialist	MIGES
Jillian Crowther	Social Specialist	MIGES
Wyfield Chow	Sector Analyst	MIGOP

Annex 9: Map


IBRD 40920
MAURITANIA
BANDA GAS TO POWER PROJECT
PROJECT:
SPEG POWER PLANTS
225 kV LINES
OFFSHORE GAS PIPELINE
Existing
Planned
TRANSMISSION LINES:
225 kV/132 kV
90 kV
33 kV
THERMAL POWER PLANTS
HYDRO POWER PLANTS
NATURAL GAS RESOURCES
MAIN CITIES AND TOWNS
REGION CAPITALS
NATIONAL CAPITAL
REGION BOUNDARIES
INTERNATIONAL BOUNDARIES
MAURITANIA
ALGERIA
WESTERN SAHARA
ATLANTIC OCEAN
MALI
SENEGAL
MALI
Bir Moghrein
Ain Ben Tili
F'Dérick
Zouérat
Nouadhibou
Tasiast Mine
Châmi
Choum
Ouadane
Atar
Chinguetti
El Mouella
Akjoujt
Bennechab
SPEG POWER PLANTS
Dual Fuel Plant
Combined Cycle Gas Turbine Plant
Banda Gas Manifold
NOUAKCHOTT
Tidjikdja
Tichit
Moudjéria
Boutilimit
Aleg
Tamchekett
Oualata
Kiffa
Aïoun
El Atrouss
Néma
Rosso
Boghé
Kaédi
Timbédra
Beni Nadji
St. Louis
M'Bout
Kankossa
Maghama
Bassikounou
Sélibaby
Tobene Substation
DAKAR
Félou
Gouina
Manantali
BAMAKO
25° N
20° N
15° N
GSDPM
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APRIL 2014