



Project Information Document/ Integrated Safeguards Data Sheet (PID/ISDS)

Concept Stage | Date Prepared/Updated: 03-Feb-2017 | Report No: PIDISDSC19708



BASIC INFORMATION

A. Basic Project Data

Country Senegal	Project ID P160652	Parent Project ID (if any)	Project Name Supporting Gas Project Negotiations and Enhancing Institutional Capacities (P160652)
Region AFRICA	Estimated Appraisal Date Mar 02, 2017	Estimated Board Date Apr 26, 2017	Practice Area (Lead) Energy & Extractives
Lending Instrument Investment Project Financing	Borrower(s) Ministere de l'Economie et des Finances et du Plan	Implementing Agency Secretariat of the Comité d'Orientation et de Suivi (Office of the President of Senegal)	

Proposed Development Objective(s)

Supporting the government's capacity to progress negotiations towards final investments decisions and lay the foundations for the sector's contributions to the economy through enhanced legal and regulatory framework and capacity building.

Financing (in USD Million)

Financing Source	Amount
International Development Association (IDA)	20.00
Total Project Cost	20.00

Environmental Assessment Category B-Partial Assessment	Concept Review Decision Track I-The review did authorize the preparation to continue
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Other Decision (as needed)

N/A



B. Introduction and Context

Country Context

1. The Republic of Senegal is located in the western most part of Africa's Sahel region and has a national territory that spans 196,722 km². Senegal borders Mauritania in the north, Mali in the east, Guinea to the southeast, and Guinea-Bissau to the southwest. Senegal further borders The Gambia, a sovereign enclave occupying a narrow land along the banks of the Gambia river as well as shares a maritime border with Cape Verde.

2. Senegal is one of the most stable countries in Africa. Since its independence from France in the 1960s, the country has considerably strengthened its democratic institutions. It has notably had three peaceful political transitions with four presidents: Leopold Sedar Senghor (1960-1980), Abdou Diouf (1981- 2000), Abdoulaye Wade (2000- 2012), and since March 2012, Macky Sall. In March 2016, the government pushed through a package of 15 constitutional reforms in a national referendum, which strengthens the powers of parliament, shortens presidential terms from seven to five years and entrenches the two-term limit. As a result, the next presidential election is expected in 2019.

3. Over the last decade, Senegal averaged an annual population growth rate of just under three percent bringing its total population to 15.1 million by 2015, of which 44 percent live in urban zones. Poverty remains high in Senegal, affecting 46.7 percent of the population. Lackluster economic growth prior to 2014 and repeated shocks in recent years have further hampered progress, with poverty incidence decreasing only by 1.8 percentage points between 2006 and 2011, and the number of poor actually increasing to reach 6.3 million in 2011.

4. Over the course of 2015, Senegal's macroeconomic performance has been strong with a Gross Domestic Product (GDP) growth rate of 6.5% in 2015, a rate not attained since 2003. This spur in growth is remarkable, particularly when compared against other African economies that have registered a marked slowdown given the depressed global environment—characterized by the still fragile recovery in the euro zone, uncertainty surrounding the UK's exit from the EU, and slowing growth in China. As a result, Senegal registered as the second fastest growing economy in West Africa, behind Côte d'Ivoire.

5. The main drivers of growth were higher private sector demand, stimulated by lower energy and transport prices, as well as the ambitious public investment program carried out by the government, up by almost 0.4% of GDP in 2015. At the sectorial level, services remained the engine of growth, contributing to over one third of the economic expansion, while the industry's contribution increased to approximately 23 percent because of the solid performance of the chemical industry and construction sector. The agricultural sector accounted for almost 34 percent of GDP growth in 2015 mainly due to good rainfall and various targeted government programs in favor of rice production and horticulture value chains.

6. In July 2016, the Government of Senegal (GoSN) approved a revised 2016 budget law, which adds another US\$373 million in public spending. Overall the government budget increased by approximately 5.3 percent in 2016, which is roughly equivalent to 32 percent of GDP. There was a modest fiscal deficit of 1.8 percent of GDP in 2016, down by 0.8 percentage points compared to 2015. Revenue collection is expected to improve in 2016 to reach 22.3 percent of GDP, up from 21.6 percent in 2015. Securing the revenue base is an important objective for the authorities to preclude future increases in borrowing or budget deficits. The immediate priority is to increase tax mobilization through continued capacity building and modernization of tax administration, as well as the rationalizing of spending related to wages and salaries. In addition, a decrease in the current expenditure to total expenditure ratio from 80 percent in 2015 to 75 percent in 2016 will contribute to the reduction of the deficit while allowing for an increase in the investment ratio and for the development of the social safety net.



7. The GoSN adopted an ambitious program that prioritizes economic diversification and exports. The Emerging Senegal Plan (ESP) is the authorities' blueprint to help Senegal exit the trap of low growth and high poverty. It intends to make Senegal a hub for West Africa by achieving high rates of equitably shared economic growth. The ESP aims to implement priority socio-economic reforms and investment projects to increase economic growth while preserving macroeconomic stability and debt sustainability. Senegal is receiving technical support from the International Monetary Fund (IMF) from 2015-2017 under a Policy Support Instrument (PSI) to assist with the implementation of the ESP. The PSI implementation continues to be satisfactory as concluded by the IMF's second review mission in March 2016.

Sectoral and Institutional Context

B.1. Oil and Gas Sector Background

8. The Ministry of Energy and Renewable Energy Development (MERED) is the entity responsible for the oil and gas sector through its Directorate of Hydrocarbons (DH). It ensures the implementation of the Laws promulgated by the President of Senegal, with respect to oil and gas off-shore and on-shore exploration and production activities, hydrocarbons imports, exports and marketing, as well as crude oil refining, transport, storage and petroleum products distribution. MERED also oversees the National Oil Company of Senegal (PETROSEN), which was created in May 1981, with a state participation of 99% of the company's capital.

9. As defined by the Petroleum Code (No. 98-05 of 8 January 1998) and its implementing decree (No. 98-810 of 6 October 1998), PETROSEN is active upstream, midstream and downstream oil and gas. In upstream oil and gas, PETROSEN's mission is to evaluate the country's hydrocarbon resources, to promote the development of these resources by international oil companies, as well as to oversee petroleum developments and monitor contract compliance. PETROSEN is thus in charge of the preparation and negotiation of all petroleum conventions and Production Sharing Contracts (PSC), which are signed by the MERED and the petroleum companies, while it is the signatory of all Joint Operating Agreement (JOA). In the downstream oil and gas, PETROSEN is strategic stakeholder of the refinery.

10. In 2013, natural gas reserves were marginal at 363 million cubic meters and natural gas sales surpassed 41 million m³. The totality of the gas sold in 2013 was delivered by pipeline to SOCOCIM, a cement producer (about 22 million m³), and SENELEC (about 18 million m³) to generate electricity. Senegalese sedimentary basin is divided in 18 separate blocks: 8 onshore blocks and 10 offshore blocks. Over the entire basin, only Gadiaga field No. 2, on the onshore block Tamna was in production in 2013. The other 17 blocks were under exploration. In a Council of Minister press release of January 27, 2016, President Macky Sall indicated that a significant discovery of gas had been made in the Geumbeul-1 well, in the northern part of the St. Louis Offshore Profond license area, operated by Kosmos Energy (60 percent), Timis Corporation (30 percent), and Petrosen (10 percent).

11. Over the last two years, Senegal has made significantly more oil and gas discoveries. Developments in Senegal's oil and gas sector have the potential to fuel shared and equitable economic growth, to generate employment (direct, indirect and induced) as well as other local content, and to support diversification. As is the case for any resource rich country, Senegal will however also be running the risk of a 'resource curse' that could negatively affect the country's economic performance, and bring fragility, and violent conflicts. Unless effectively managed, the sector development could lead to a 'paradox of plenty' rather than growth, shared prosperity, and poverty reduction. Political decision-making rooted in good governance principles of transparency and accountability will be needed to make the extractive resources of the country a blessing and not a curse. Senegal will also need to complete its oil and gas fiscal, legal and



regulatory framework as well as to scale-up its institutional capacity to engage timely and constructively with industry operators, during the negotiation of the pre-requisites needed for Final Investment Decisions (FID) to be made on the projects' development.

12. *Discoveries in the Sangomar block.* In late 2014, Cairn Energy PLC (40 percent, operator) in partnership with ConocoPhillips (35 percent), FAR (15 percent), and Petrosen (10 percent) made two significant discoveries. First, the FAN-1 well, drilled to a water depth of 1,430 meters, is estimated to contain 330Mb of oil, and second, the SNE-1 well, drilled to a water depth of 1,000 meters, contains an estimated 561Mb of oil, as well as non-associated gas, of which volume and characteristics have not been disclosed. An appraisal campaign for the SNE well was conducted and included a 3D seismic analysis in 2015 and covered four delineation wells (SNE-2, SNE-3, BEL-1, and SNE-4) drilled in 2016. This campaign confirmed the quality of the crude oil (32° API), the productivity of the wells as well as the likely development concept for the project – floating production storage and offloading (FPSO). In July 2016, Woodside Petroleum Ltd agreed to a binding purchase and sale agreement with ConocoPhillips to acquire all of the company's interests in Senegal. The purchase was expected to become effective on January 1, 2016 with a completion of the deal by year-end, pending agreement from the GoSN. However in August 2016, FAR announced that ConocoPhillips failed to comply with their Joint Operating Agreement regarding the sale of the stake and intends to exercise its pre-emption rights. GoSN urged the parties to reach an amicable solution. In the Sangomar block, the concept for the development of SNE oil and gas resource still needs to be finalized and the appraisal program for FAN is to be developed.

13. *Discoveries in Tortue and Teranga.* In 2015, Kosmos (90 percent, operator) in partnership with Societe Mauritanienne Des Hydrocarbures et du Patrimoine Minier (SMHPM, 10 percent) made a discovery in the Ahmeyim-1 offshore well in southern Mauritania, close to the border with Senegal. In early 2016, Kosmos (60 percent, operator) in partnership with Timis (30 percent) and Petrosen (10 percent) reported another offshore gas discovery in Senegal in the Geumbeul-1 well located roughly five kilometers from the Ahmeyim-1 well. Both drilling operations reached the target formation at a water depth of approximately 2,700 meters and over 5,000 meters of sediment. Moreover, both exploration wells encountered about 100 meters of net gas pay. In March 2016, the Ahmeyim-2 well, which was drilled in Mauritania, encountered 78 meters (256 feet) of net gas pay. The drilling confirmed reservoir continuity on both sides of the border. In May 2016, Teranga-1 was successfully drilled in Senegal. While the latter is not part of Tortue, it belongs to Grand Tortue – a larger inboard trend that extends from Marsouin in Mauritania to Teranga in Senegal, and may hold 25 – 50 Tcf of gas. The appraisal program for Grand Tortue must be completed to provide a thorough assessment of the nature and size of the reservoirs, as well as the specifications of the gas and its deliverability. In the meantime, Kosmos has concluded a Memorandum of Understanding with Petrosen and the SMHPM, the national oil companies of Senegal and Mauritania respectively, to establish the principles of an intergovernmental cooperation agreement for the development of the cross-border resource. The objective is to allow the parties to work together toward an early development of the field, in a bid to maximize value for all stakeholders. In this context, the parties have decided to develop a unitization agreement that assigns 50 percent of the gas discovered to Senegal and 50 percent to Mauritania until further drilling is done, and the reality of the reservoir is better known. In addition, the parties have agreed on a project development concept, which would entail an FPSO unit above the field, and a 140 kilometer pipeline bringing the gas to a small floating Liquefied Natural Gas (FLNG) production unit, anchored behind a large rock breakwater to be constructed 8 kilometers away from the Mauritanian and the Senegalese coasts.

B.2. Immediate Challenges Ahead for Oil and Gas Development

14. A number of challenges need to be addressed by the GoSN to ensure that the ongoing oil and gas developments adequately contribute to economic growth and employment. Such challenges not only include those that all new



producer countries face, but also all the specific challenges relating to the nature of the discoveries as well as Senegal's energy profile.

- i. A fair and effective unitization agreement should be developed and ratified to ensure that the development of the transnational resource will not create geo-political tensions between Senegal and Mauritania.
- ii. The project concepts according to which Sangomar and Grand Tortue discoveries will be developed should optimize fiscal revenues and other positive externalities for the country, while maximizing operators' expected profits.
- iii. GoSN should team up with the operators to determine whether and how the projects' development could supply gas to the domestic market in a timely manner.
- iv. GoSN should identify optimal options to finance the participation of Petrosen as soon as investments decisions can be made by the project operators.
- v. A capacity audit and gap analysis should be developed to assess capacity enhancement needs in order to ensure effective negotiation of the oil and gas projects, as well as to optimize project execution and to allow the Senegalese people to seize job opportunities that will be directly and indirectly created by these projects.

15. While the need to scale up capacity and to find affordable options to finance the share of the National Company are common to any new sectoral development, the need to develop a sound unitization agreement and to approve robust project developments might be more challenging.

B.3. Key Issues for Consideration in Addressing Some of the Immediate Challenges

a) Unitization Agreement

16. An immediate challenge for Senegal and Mauritania is to develop the foundation for a successful unitization agreement. Cross-border hydrocarbon deposits can create complex legal issues between countries. At the time of discovery, the situation is one of the following: (i) the countries have ratified a definitive agreement, such as a joint development agreement or a unitization agreement, which articulates how they will jointly develop the cross-border resource; (ii) the countries have reached only a delimitation agreement with regard to addressing the contingency of cross-border resource in a non-definitive way; or (iii) the countries have no delimitation agreement in place and/or dispute the boundary. At the time of the discovery of Tortue, Senegal and Mauritania were in the second case, and are now actively trying to draw on international best practices to develop a definite agreement. Lessons learnt in over a century of oil and gas developments are clear on the merit of a cooperative approach between countries. Where territories are not disputed, this means that setting-up a unitization agreement, articulating the modalities according to which the joint development will occur, and coordinating resource development will be conducted by all the rights owners in separate tracts overlying the reservoir. The early North Sea bilateral treaties (e.g. UK/Norway treaty in respect of the Frigg field) are being used as a starting point for Tortue. Although Frigg field was not designed for Liquefied Natural Gas (LNG) development, it is a seminal agreement that brings useful lessons for Tortue development, which will be one of the very first cases of LNG development done on a transnational gas resource.



17. To develop a successful unitization agreement, the parties should thoroughly analyze the specificities of LNG development versus oil or piped gas development. While the apportionment of reserves between parties and the process for subsequent redetermination can be difficult to agree on in any unitization, given the high stake, the issue is amplified in cross-border contexts due to the increased number of stakeholders and the additional geo-political dimension. It is also made more challenging in the case of LNG development due to the large size of the investments involved. Aside from reaching an agreement on the initial apportionment, there are practical issues that arise following a redetermination that need to be carefully considered and addressed. These issues arise because even small movements in the apportionment of reserves may lead to a requirement to make substantial (retrospective) adjustments to address any over/under-payment of costs or over/under-lifting of hydrocarbons on the basis of the prior apportionment. Such adjustments may be effected by cash payments, which invariably will have tax consequences, and/or through further adjustments to entitlement of hydrocarbons over a set period of time to adjust for historic over- and under-lifting. Agreeing appropriate redetermination and adjustment mechanics in the context of an LNG project can be particularly difficult due to the large amounts of capex involved in constructing the facility, and because the produced LNG will almost certainly be sold under long-term committed contracts. Thus, in the absence of any joint marketing arrangement, any redetermination has the potential to result in the concessionaires of one country ceasing to receive a sufficient share of production to meet their delivery obligations, and the concessionaires of the other country having excess volumes that need to be marketed. Typically, unitization agreements initially include only broad principles in relation to apportionment and redetermination. The detailed proposals are generally formulated by the operators, who are likely to be better placed to do this and, in theory, have aligned interests with their respective awarding governments in this area. Each government can then exercise its influence and control through approval of the concessionaires' proposals.

18. Deciding on the correct apportionment and approach to redetermination is a matter of balancing the need for fairness against time constraints, and the cost and disruption of each subsequent redetermination. Ideally, a reasonably accurate apportionment will be agreed before or at the time of the FID, as this will reduce the chances of a significant redetermination, along with sizeable adjustments and the associated complications, being required at a later date. In practice, however, there may be insufficient information at the start of the project to determine the reserves with any degree of accuracy, and/or the time it would take to do so may delay commencement of the project. If there is sufficient information to give the respective governments comfort that the initial project will not substantially deplete the field, the first redetermination can potentially be deferred until the time of the second project (e.g. 2015 unitization agreement for the Rovuma basin in Mozambique). When such an approach is adopted, a fall back is defined in case a second project is not implemented by a long-stop date. In addition to a well-designed unitization agreement, a field specific inter-governmental agreement is likely to be needed to support effective transnational development. The existing Production Sharing Contracts (PSCs) should continue to govern the relationship between the governments and their respective concessionaires, but these are unlikely to adequately address all the relevant issues for an LNG development (the fiscal terms, for example, may not respond appropriately to the different categories of costs and revenues) and will thus likely need to be complemented with separate or supplemental midstream host government agreements.

b) Hydrocarbon Project Development Concepts and Domestic Gas-to-Power Generation

19. The technical concepts that will be used to develop the oil and gas projects will directly impact the potential for fiscal revenues, local content, gas-to-power and new domestic industries. SNE, in the Sangomar block, contains a significant amount of non-associated gas. It would be important for Senegal to assess whether the quantities of this gas and its composition could enable a commercially viable gas-to-power project. If the gas includes a high level of sulfur, carbon or nitrogen, which are costly particles to remove during treatment, it might not be possible to develop an



economically viable domestic power generation project using this resource. If the gas is not sweet, sour or low Cal but simply dry or rich in natural gas liquids, and if it is available in large enough quantities, then a gas-to-power option could be contemplated. With a discovery already fully appraised, such an option could be an expeditious solution to the need to diversify the energy mix away from heavy fuel oil (HFO). However, if there is a risk that the development of gas-to-power slows oil development, which has a higher commercial value, it would not be preferred by the operator. Also, the infrastructure needed to produce, treat and transport the gas to the domestic market may lead to additional costs that may prove uneconomical for the operator. It is thus important that the GoSN thoroughly assesses the situation and identifies actions and potential instruments that could incentivize the operator to execute a concept that allows gas-to-power generation to be both a technical and a financial optimum. Similarly, it would be valuable for Senegal to include all concepts allowing gas-to-power projects during the screening studies of Tortue and Teranga developments. Such projects could be considered as by-products of a larger LNG project or as small stand-alone projects. Typically, the development of LNG export projects with onshore gas treatment and/or liquefaction facilities are the most favorable options for gas-to-power development. In such cases, indeed, the pipeline linking the offshore findings to the shore and the gas treatment plant are infrastructures paid by the export project, so that domestic development is more affordable. However, LNG developments take relatively long and— given that electricity demand is increasing sharply in Senegal and that electricity supply is predominantly done using expensive HFO— it is important to study whether smaller gas developments could be done on a stand-alone basis ahead of the larger LNG project.

20. The development of Tortue, the transnational resource is a high-risk high-reward project for both Senegal and Mauritania. Tortue is a gas discovery, located 150 kilometers away from the coast, in ultra-deep water. It has a complex geology and straddles the borders of Mauritania and Senegal. The size of the resource is sufficiently large to serve both the regional and international markets. Given that the regional market is very limited in size with no gas transport infrastructure network, resource development would mostly target international markets and involve the liquefaction of the gas in view of its transportation. This could be done in a liquefaction plant that could be located either on a FLNG plant, where gas treatment would could also be done in shallow water or— more traditionally—treatment and liquefaction can be managed onshore. In the latter case, a harbor would have to be built in order to allow the loading of LNG cargoes. Roads and an airport would typically be built around the liquefaction plant, which would either have to be connected to the power grid or to be built using its own power generation system. LNG projects are therefore “mega-projects”, which include several large infrastructure projects, the construction of which can bring job opportunities and other local content. Because of the cost associated with the development of this infrastructure, it is generally not commercially viable to build more than one plant to exploit a reservoir. One of the few exceptions is Qatar’s “North Field”, which straddles the country’s median line boundary with Iran, where the gas fields are known as “South Pars”. Estimated to hold 450 Tcf of recoverable gas, these fields are the world’s largest non-associated natural-gas fields, which explains that the resource could be developed independently by the two countries. In the case of smaller gas resource, such as Tortue, a key challenge is to decide in which country the LNG infrastructures would be developed in the likely event an onshore solution is optimal. If the bathymetric profile of both Mauritania’s and Senegal’s coasts allow the development of an LNG harbor, both countries would understandably want these developments to be done on their land to boost employment, and other local content. If only one country has the coastal conditions needed to host LNG infrastructures, it would be important to identify ways to balance the positive externalities associated with LNG development for the two countries. This is all the more important indeed that—as many neighboring countries around the world—Mauritania and Senegal experienced disputes regarding their borders. Tortue development is an opportunity to confirm that transnational disputes belong to the past, but it would be naïve to ignore the fact that it also carries risks of disagreements and conflicts between the two countries.

21. The need for effective cooperation between Senegal and Mauritania in the development of the transnational resource should be a critical factor in the selection of a project concept. The floating solution contemplated for Tortue



development has certain advantages in that it prevents only one country benefitting from local infrastructure development, while the other would not. Typically, a small-scale FLNG project does not take as long to construct and should be cheaper than a land-based project. The use of a converted LNG carrier may further reduce construction time and cost. There are, however, downsides to using a floating solution, the most obvious being that floating solutions generally require highly specialized labour and thus generally come with no local content. Another key issue is technology risk, given that the FLNG industry is not as mature as traditional onshore LNG facilities. This risk is further amplified if novelties are utilised, such as the rental of converted LNG carriers. The use of a lease or charter party arrangement has certain similarities with a tolling model, but often under a tolling structure the midstream Project Company will be owned by the upstream concessionaires or their affiliates rather than being an independent third party. If a purely third party arrangement is used, then the governments will need to bear in mind that their respective control over (and access to) the facility is one step further removed. In this context, the governments might wish to seek additional protections, or assess the availability of alternative solutions in the market should the existing lease be brought to an end for any reason. Other FLNG-specific issues that need to be borne in mind include the need for additional scheduling flexibility to address the fact that the facility is in a marine environment and will not have as much storage capacity as a land-based facility, and the potential for increased maintenance downtime. In addition, an FLNG does not leverage economies of scale as land-based solutions do, since onshore scale-up of LNG capacity can be addressed through the addition of liquefaction trains. Balancing these issues against the merits of a floating solution is largely a matter for the concessionaires to assess but the governments will also need to consider the potential advantages and disadvantages in deciding whether or not to approve the proposed solution. The underpinning analysis must be conducted early on in the process to avoid cases where governments refuse to move forward with a concept after its detailed engineering is finalized, and both the sales contracts and the capital costs are ready to be engaged for its execution (e.g. Arzew GL3Z in Algeria, Abadi FLNG in Indonesia).

22. Senegal also needs to proactively analyze potential LNG project structures and stand ready to complement its legal, fiscal and regulatory regime to foster the execution of an optimal solution. There are a number of ways to structure an LNG project, including an integrated model where the liquefaction project is owned and developed by the same parties involved in upstream development, and models where the liquefaction project is owned and developed separately to the upstream project, such as a tolling structure or a merchant structure. The best structure in a particular case will normally be driven by economic factors (such as ability to procure limited recourse finance and/or tax treatment). It is reasonably common to see a tolling-type structure used for LNG liquefaction projects. As this structure results in the LNG liquefaction business being separated from (and largely shielded from the risks of) the upstream and downstream business, it is generally easier to finance on a limited recourse basis using this structure. It also means that the liquefaction project will be mostly governed by separate and purpose-designed midstream contracts, taking the pressure off the upstream contracts (which are unlikely to be adequate without amendment for this purpose). One of the key issues for a government to consider is ownership of the LNG liquefaction facility. On a tolling model, for example, the LNG facility largely falls outside the scope of the PSC and so may not automatically become the property of the government. This means that if the PSC comes to an end before all the gas has been monetised, the governments may not have access to the facility to enable operations to continue. Senegal rights in this area will need to be structured in a way that is acceptable to the project lenders and in line with the country's long-term strategy.

Relationship to CPF

23. The proposed technical assistance would support the GoSN's effort to maximize the oil and gas sector's future contribution to economic growth and shared-prosperity. By implementing the activities under the proposed technical assistance, the government can: (i) enhance the legal, fiscal, regulatory, and policy framework governing the oil and gas



sector; (ii) proactively and methodically negotiate all technical, legal, commercial, and financial agreements required to final investment decisions on Sangomar, Tortue, and Teranga project developments, and; (iii) build the capacity needed to enable the Senegalese people to take full advantage of job opportunities as they become available. These activities are expected to boost investors' confidence, willingness and capacity to monetize hydrocarbon resources. Supporting private sector engagement is all the more important given that today's market conditions are challenging due to low oil and gas market prices, and that an over-supply of LNG is expected to last.

24. The project is in line with and supports the World Bank Group's Country Partnership Strategy (CPS) for Senegal (FY13-17) (Report No. 73478-SN). The CPS supports Senegal's efforts to pursue a higher growth and shared prosperity path over the medium-term. The CPS is built upon one foundation aimed at "strengthening the governance framework and building resilience", and two pillars, which seek to "accelerate inclusive growth and creating employment" (pillar 1); and to "improve service delivery" (pillar 2). By strengthening, the government's capacity to engage effectively in oil and gas project negotiations, the technical assistance ensures that the development of the hydrocarbon projects remains in line with the government strategy. The technical assistance will help ensure that the technical concepts that will be included in the screening phase include options favorable to gas-to-power, employment opportunities, and other local content that private international operators may bring to the countries.

25. As such, the proposed technical assistance will also be fully aligned with all three pillars of the National Strategy for Economic and Social Development (SNDES 2013-2017). The SNDES aims to boost "growth, productivity and wealth creation" (pillar 1) through private sector development and employment promotion, "human capital, social protection and sustainable development" (pillar 2) with a focus on sustainable capacity building as well as large-scale risk management, and "good governance, institutions, peace and security" (pillar 3).

26. Importantly, the proposed technical assistance is also aligned with the Bank's updated Governance and Anticorruption (GAC) agenda with interventions focused on strengthening governance systems and processes to enhance the predictability, credibility and accountability of the government. To do this, the proposed technical assistance will support activities that will help reduce government spending by further involving the private sector and leveraging regional and international markets. Finally, the proposed technical assistance would build-on and scale-up the government's engagement to enhance the governance of the extractive sector by complying with the Extractive Industry Transparency Initiative – the EITI is a global standard for transparency and accountability.

C. Proposed Development Objective(s)

27. Supporting the government's capacity to progress negotiations towards final investments decisions and lay the foundations for the sector's contributions to the economy through enhanced legal and regulatory framework and capacity building.

Key Results (From PCN)

28. Progress in achieving the PDO will be measured by the following key result indicators:

a) Component A: Support to hydrocarbon project negotiations

- i. Develop optimal concepts for LNG development in Grand Tortue and Sangomar based on the government's growth strategy and operators objectives and constraints (outcome)



- ii. Delineation and estimation of the transnational gas resource area, which should be unitized, based on reservoir modelling (output)
- iii. Unitization Agreement articulating how the Government of Senegal, the Government of Mauritania and the operators would jointly develop the cross-border resource in a sustainable way (output)
- iv. Identification of financing structure and sources of funds for NOC's share of oil and gas development (output)

b) Component B: Enhancement of the fiscal, legal, regulatory and policy framework

- i. Appropriate strategic and legislative documents developed for government adoption as follows (outcome):
 - Master plan for oil and gas development (output)
 - Oil and gas sector policy (output)
 - Petroleum accounting review (output)
 - Decree Law and midstream agreements for Tortue development and other supplemental legal and fiscal provision as needed (output)

c) Component C: Capacity building to support hydrocarbon project negotiation and execution

- i. Enhanced capacity to implement the fiscal, economic, legal, regulatory and policy framework governing future oil and gas sector developments (outcome)
- ii. Direct project beneficiaries trained (number) of which females (%)(outcome)

d) Component D: Information and communications campaign to engage citizens

- i. Increased capacity for stakeholder and citizens' engagement in the petroleum sector (outcome)
- ii. Fragility assessment developed (output)
- iii. Communication strategy developed (output)
- iv. Strategic Environmental and Social Assessment developed (output)
- v. Direct project beneficiaries trained (number) of which females (%)(outcome)

D. Concept Description

29. The proposed technical assistance has five components: (Component A) Support to hydrocarbon project negotiations; (Component B) Enhancement of the fiscal, legal, regulatory and policy framework; (Component C) Capacity building to support hydrocarbon project negotiation and execution; (Component D) Information and communications campaign to engage citizens; (Component E) Project management and coordination. Details on the project components are summarized hereinafter:

30. **Component A - Support to hydrocarbon project negotiations (USD 10 million):** The objective of this component is to help the GoSN engage timely and constructively with the Government of Mauritania and the operators to ensure the sustainable development of its oil and gas resources. Specific activities to be implemented under this component include:

- i. **Technical, fiscal and legal support to the negotiation of SNE development:** This activity would provide GoSN with international third-party expertise needed to ensure the timely review and consideration of all technical documents submitted by the operator, including project development concept and field development plan. The



technical support should help the government to team up with the operator in order to assess whether the non-associated gas resource in SNE could fuel a viable gas-to-power project, and—if so—how and when. In doing so, it will identify potential domestic price reforms needed to make the project feasible and the financial instruments needed to make such a project commercially viable. Commercial and legal support will be offered so that GoSN can supplement the existing PSC if needed by the operator to proceed with an investment decision. Finally, support will be provided to help the government identify the optimal participation that Petrosen should hold in these developments.

ii. **Technical, fiscal and legal, marketing, and financial support to Grand Tortue development:** This activity seeks to finance all international third-party expertise needed to advise GoSN during the negotiation of the gas and LNG projects associated with Tortue and Terranga. This would include:

- Reservoir Engineering Company to help the Government's negotiation team clear the operator's resources estimate as well as the methodology used to delineate the transnational resources, which will be subject to unitization and intergovernmental cooperation.
- Engineering companies specialized in the development of LNG solutions to help the Government's negotiation team clear the concept for the development of Great Tortue, future field development plan, and engineering studies.
- Legal and fiscal experts to help the Government complete the legal, fiscal, regulatory framework needed to progress towards FID, clear both the unitization and the intergovernmental cooperation agreement, and develop the series of operational, fiscal, marketing and financial agreements needed.
- LNG project financing expert to support government efforts to identify the fiscal impact of the various LNG development concepts, close project financing, and identify the optimal share of the national company in the LNG development and how to finance it.
- LNG marketing experts to help the Government's negotiation team clear the marketing agreements and identify optimal gas to domestic power options.

31. **Component B - Enhancement of the fiscal, legal, regulatory and policy framework (USD 2 million):** The objective of this component is to help the GoSN develop an oil and gas sector policy, and strategy. Specific activities to be implemented under this component include:

- i. **Oil and gas sector policy, strategy and action plan:** This activity intends to support GoSN's efforts to develop an oil and gas policy articulating how the country will manage its oil and gas sector (upstream, midstream and downstream), and assess the share of future oil and gas production that could be delivered to shore (gas-to-power, refining, other industry usages).
- ii. **Master Plans.** All background work needed to develop or update the sector policy and strategy, or to ensure its implementation will be financed under this project activity. This include an oil and gas master plan, which will articulate whether and how the oil and gas development of Senegal will support the power sector.

32. **Component C - Capacity building to support hydrocarbon project negotiation and execution (USD 6 million):** The objective of this component is to provide high-level training to oil and gas decision-makers; in-depth training to the staff of the NOC and the Ministries directly involved in project negotiation and in their future execution as well as:



- i. **High-level training for decision-makers:** This activity includes tailored training for ministers involved in oil and gas development projects, and the negotiating teams (including study visits to LNG production sites similar to those that could be developed in Senegal) as well as training for Parliamentarians. The latter aims to facilitate informed discussions on any amendment of the revision of the Petroleum Law or supplemental legal provision (Decree law, etc.), the upcoming unitization agreement, etc.
- ii. **Enhancing Institutional capacity to sustainably manage the oil and gas sector:** This activity will consist of developing: (i) a business plan and a strategy for human resource development for Petrosen; (ii) a strategy for training and human resource development in the various ministries that will be involved in the development of oil and gas projects (Energy, Economy, Finance, Transport, Infrastructure and Environment); (iii) a feasibility study on the development of a regional center of excellence providing training in the oil and gas professions, with a view to allowing Senegalese nationals to take advantage of job opportunities that will be created, and; (iv) Capacity Audit and in-depth training of Petrosen, the staff of the Ministry of Energy and the technical departments of the ministries that will be directly concerned.

33. Given the nature of oil and gas project developments, content of the training will remain flexible to respond promptly to progress made and government's needs.

34. **Component D - Information and communications campaign to engage citizens (USD 1 million):** The objective of this component is to support the GoSN develop and implement an information and communications campaign to engage and inform citizens early on of the steps required to develop an LNG market, the possibility of an extended period before production could commence, and the possible impacts from the project. This is necessary in order to ensure citizens adequately understand the benefits and potential impacts from LNG development to mitigate undue expectations. For example, it is important for citizens to understand that while initial bonus payments are likely to be made if development reaches a viable stage, there is no guarantee of any future payments, or similarly, that any cost recovery clauses in contracts may mean that early government revenues would be much diminished until all costs are recovered. Similarly, it would be important that the GOSN proactively engage with parliamentarians to ensure adequate level of understanding of technical issues such as the unitization agreement and other supplemental laws that the Parliament will need to approve. This component will include the following activities:

- i. **Print and visual media outreach campaigns.** Publish and disseminate crucial information on the steps required to develop an LNG market, possibility of lengthy time before production, potential impacts from the project, fiscal and monetary aspects, etc. through radio, TV, and print media outreach campaigns, in order to inform the public.
- ii. **Organization of awareness raising events.** Round tables, press conferences, conferences, workshops will be organized to increase the overall understanding of key legal and technical issues and risks associated with the management of the oil and gas sectors.

35. **Component E - Project management and coordination (USD 1 million):** The objective of this component is to support the Project Implementation Unit (PIU), which will be anchored in the office of the President in managing and coordinating the proposed technical assistance, and in building its procurement, financial management, safeguards management, monitoring and evaluation capacity through the provision of technical advisory services, training, and acquisition of goods.



SAFEGUARDS

A. Project location and salient physical characteristics relevant to the safeguard analysis (if known)

Not applicable

B. Borrower’s Institutional Capacity for Safeguard Policies

The Borrower will not be required to implement any environmental or safeguards related activities or studies. The proposed project aims to support the government’s capacity to progress negotiations towards final investments decisions and lay the foundations for the sector’s contributions to the economy through enhanced legal and regulatory framework and capacity building. The proposed project, as designed, precedes the preparation of feasibility and environmental and social studies, and final investments decisions are not anticipated to take place in the short- to medium-term. Therefore, the proposed project will develop terms of reference that outline all the requirements needed to ensure adequate preparation and understanding of the environmental and safeguards requirements necessary at actual project implementation. In addition, the terms of reference for the Master Plan for Oil and Gas Development will ensure that the Plan addresses broad environmental and social risks in the sector.

C. Environmental and Social Safeguards Specialists on the Team

Hocine Chalal, Alexandra C. Bezeredi

D. Policies that might apply

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	An assessment will be commissioned of the readiness of the Senegalese safeguards related regulatory framework to deal with current oil and gas development projects. Terms of reference will be prepared and disclosed as soon as possible which will delineate the environmental and social safeguards mitigating and regulatory measures as well as the capacity building measures that will be built in the technical assistance package for Senegal. The project precedes the preparation of feasibility and environmental and social studies, and final investments decisions are not anticipated to take place in the short- to medium-term. Therefore, the objective of this contribution is to ensure that the government is well equipped to negotiate, manage and implement the projects that will come out of this technical assistance operation.
Natural Habitats OP/BP 4.04	No	



Forests OP/BP 4.36	No
Pest Management OP 4.09	No
Physical Cultural Resources OP/BP 4.11	No
Indigenous Peoples OP/BP 4.10	No
Involuntary Resettlement OP/BP 4.12	No
Safety of Dams OP/BP 4.37	No
Projects on International Waterways OP/BP 7.50	No
Projects in Disputed Areas OP/BP 7.60	No

E. Safeguard Preparation Plan

Tentative target date for preparing the Appraisal Stage PID/ISDS

Feb 08, 2017

Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing should be specified in the Appraisal Stage PID/ISDS

The terms of reference outlining environmental and social safeguards requirements will be finalized by early February 2017 and disclosed before project appraisal.

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