The Shell Petroleum Development Company of Nigeria Limited

Group Investment Proposal

Summary Information

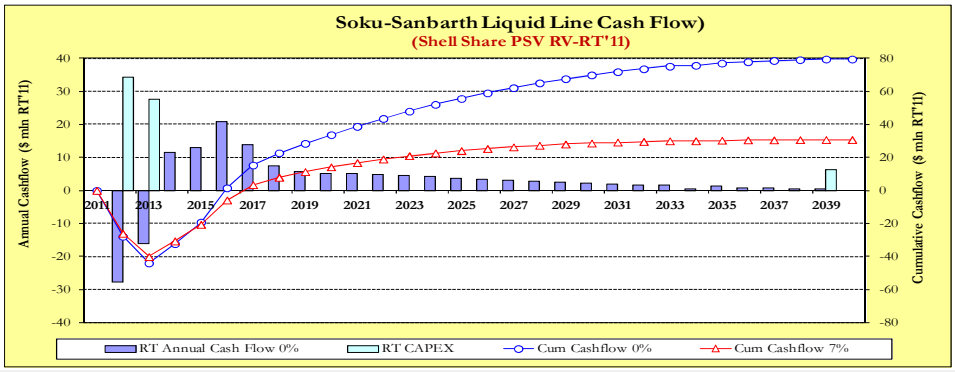
Directorate	Technical Directorate
Group equity interest	100% in SPDC, whereas SPDC is the Joint Venture (JV) operator of an unincorporated JV with a 30% interest.
Other shareholders /partners	Nigeria National Petroleum Corporation (NNPC: 55%), Total Exploration & Production Nigeria Limited (TEPNL: 10%), Nigeria Agip Oil Company (NAOC: 5%) in SPDC-JV
Amount	US$68.72 mln Shell share, MOD, 50/50 (US$229.06 mln 100% JV) plus US$6.34 mln Shell share, MOD, 50/50 (US$21.13 mln 100% JV) requested for Pre-FID element bringing the total to US$75.06 mln Shell share, MOD, 50/50 (US$250.19 mln).
Project	Soku – San Barth Liquids Pipelines

Main commitments

	Pre-FID (US$ Mln)		FID (US$ Mln)		TOTAL (US$ Mln)	
Work Element Description	**Shell Share**	**100% JV**	**Shell Share**	**100% JV**	**Shell Share**	**100% JV**
Engineering Design, Survey, Land acquisition & ESHIA	1.03	3.41	NA	NA	1.03	3.41
SD Engagement (SCD)/ Security	0.05	0.17	5.25	17.50	5.30	17.67
Project Management	0.27	0.92	4.48	14.93	4.75	15.85
Line pipe Procurement	4.99	16.63	NA	NA	4.99	16.63
Construction, Bulk/shortfall materials procurement & Commissioning	NA	NA	58.99	196.63	58.99	196.63
Total	**6.34**	**21.13**	**68.72**	**229.06**	**75.06**	**250.19**

Source and form of financing	This investment will be financed with Alternative Funding (AF) mechanism and Shell share capital expenditure will be met by SPDC's own cash flow. Formal JV partners' approval has been obtained.

Summary cash flow



Summary economics

Summary economics	NPV 7% (USD mln)	RTEP (%)	VIR 7%
Base case (RV-RT)	29.0	19.3	0.52
High CAPEX (RV-RT)	26.9	17.4	0.42

Section 1: The proposal (management summary)

This Investment Proposal requests approval of US$ 68.72 mln Shell Share (US$ 229.06 mln 100% JV) to cater for the outstanding scope of works for the Soku Liquids pipelines (12" x 22km Soku – San Barth and 10" x 4.5km Soku flowstation – Soku pipelines). A prior amount of US$ 6.34 mln Shell Share (US$ 21.13 100% JV) had been previously approved.

The costs for route survey, land acquisition, Environmental, Social and Health Impact Assessment studies, procurement & coating of line pipes had earlier been captured as Pre-FID elements for the Soku – San Barth Liquids Pipelines.

The main objectives of the projects are:

a. Unlock / safeguard NFA production from Soku and Ekulama 1&2 fields.
b. Provide and guarantee export conduit for produced condensate from Soku Liquified Gas Supply Plant (LGSP).

The Soku Liquids pipelines are described below:

- **Pipeline Number 1:** 12-inch x 22 km liquids export pipeline from Soku gas plant to Nembe Creek Trunk Line junction manifold at San Barth.
- **Pipeline Number 2:** 10-inch x 4.5 km oil pipeline from Soku flow station to Soku gas plant.

Pipeline Number 1 is required to evacuate current and future liquids (mostly condensate) production from the Soku gas plant following extensive damage to the condensate export pipeline by condensate thieves. At present, condensate is exported from the Soku gas plant by injecting it into the Eastern Gas Gathering System (EGGS-1) gas pipeline at Soku and receiving it at Nigeria Liquefied Natural Gas (NLNG) facilities. This mode of condensate evacuation takes up gas export capacity from EGGS-1 and is putting a strain on NLNG liquid handling facilities. When the Kolo Creek to Soku development and the Soku Non Associated Gas (NAG) compression system are operational, there will be an additional 28,000 bbl/d going into Soku gas plant. If this volume of liquids is injected into EGGS-1, it will take up even more gas capacity from EGGS-1 and the liquid handling facilities at NLNG will be unable to process this additional liquid production. In addition to the gas capacity issues, the agreement with the Department of Petroleum Resources prior to their approval of the condensate spiking into EGGS-1 was that a permanent condensate evacuation means will be installed by 2014. It is therefore required to find an alternative export route for the condensate from Soku to free EGGS-1 capacity and to comply with the agreements with the regulator.

Pipeline Number 2 is required to convey crude oil from Soku flow station to mix with the condensate to make it less attractive to condensate thieves. Pure condensate is very attractive to thieves and condensate mixed with crude is less so. This is part of a series of planned measures to provide security for liquid evacuation from Soku and hence security of gas supply.

The execution of the Ekulama – Soku Associated Gas Pipelines scope was formally transferred to Major Project Pipeline team following Decision Review Board (DRB) approval in Q4 2010 and based on an acceleration strategy for the works which required the decoupling the Associated Gas pipelines scope from the integrated package inclusive of the Soku Liquids pipelines. The decision was aimed at fast tracking the delivery date of the Ekulama – Soku AG Pipelines to Q4 2012, whilst technical proposals to prevent tampering of the Soku – San Barth pipelines were still being considered.

DRB & Upstream International Sub-Sahara Leadership Team (UIGLT) supported that all pipelines should be executed by a single Contract in order to get the best value from the point of synergy.

The investment proposal for the Ekulama – Soku AG pipelines had been previously approved.

The overall project expenditure phasing is summarised in the table below and the expenditure phasing has been revised to cater for the Soku – San Barth Liquids pipelines as follows:

Table 1: Project Expenditure Phasing (US$ Mln MOD 50/50)

Description	2011	2012	2013	2014	Total
12" x 22km Soku Gas Plant – San Barth Liquids Line.	9.05	106.88	87.45	8.05	**211.43**
10" x 4.5km Soku flowstation – Soku Gas Plant Line.	0	19.10	15.63	4.03	**38.76**
TOTAL	**9.05**	**125.98**	**103.08**	**12.08**	**250.19**

Section 2: Value proposition and strategic and financial context

- **Alternative to Greater Port Harcourt Swamp Line**
  The Soku – San Barth pipeline project is being progressed as the alternative to the Greater Port Harcourt Swamp Line (GPHSL) to provide export route for the oil from Soku flowstation and subsequent liquids (condensate & oil) that will be produced/evacuated from the Soku Gas Plant.

- **Permanent means of liquids evacuation**
  The GPHSL had long been rendered unusable for a myriad of factors and Soku field being strategic to the gas production & export aspiration of SPDC would urgently require the Soku – San Barth pipelines as the permanent solution to evacuate both produced oil & condensate from Soku field. Furthermore the technically feasible solution of deep burial that has been adopted to prevent bunkering and criminal intrusions of the pipelines should guarantee unhindered production availability of Soku and other associated fields.

- **Adherence to Statutory Requirement (LTO)**
  Condensate is currently being managed by spiking of condensate into the export gas stream at the Soku Gas Plant via the Eastern Gas Gathering System Phase 1 (EGGS-1) to the Nigerian Liquified Natural Gas Plant (NLNG) at Bonny based on the temporary waiver granted by the Directorate of Petroleum Resources (DPR) to SPDC, which lapses in 2014.The planned commissioning of the proposed pipeline will provide permanent solution for evacuation of the condensate liquid and also compliance with statutory requirement by end 2013.

- **Strategic Benefits to other upcoming projects**
  Furthermore the other upcoming projects such as Kolo Creek to Soku, Soku Oil Rim Development (ORD) & Soku NAG Compression will benefit from the execution of this project. In view of that, they would be impacted if the project is not accelerated as a result of the condensate management challenge. The current and temporary practice of spiking of condensate is not operationally sustainable in the long term given the fact that spiking would constrain the possibility of increased gas export via the EGGS-1 for hydraulic reasons and could negatively impact upcoming projects which require ullage in the Gas line for export to NLNG.

- **Post Flares out solution for other fields**
  Another key & significant benefit of the 12" x 22km Soku – San Barth pipeline is that post flares out deadline, outlying asset fields which export their associated gas to Soku Gas Plant for processing & export: Nembe, Santa Barbara & Ekulama may have to be shut-in for regulatory compliance reasons if a permanent liquids export solution does not come on stream.

- **Safeguard of the Soku oil rim reserves**
  Progressing the project will also ensure the release of the precious Soku oil rim reserves since the gas pressure cap will be available to sustain oil production due to the acceleration of the on-stream date of the Soku flowstation.

- **Fast track of Project Execution**
  The fast track proposal adopted is to execute the works by latching onto the existing contract E-16647 (Nembe Creek Trunkline Package A) as a variation order. The existing opportunity is premised on the fact that the contract is being used to progress the Ekulama – Soku AG pipeline works, which has similar work scope and is being executed around the same area. Other benefits that will also accrue include significant cost reduction advantage for joint execution synergy & minimised HSE risks during simultaneous construction works.

- **Additional Volumes Excluded from Economics**
  The following production volumes from STOG and other future projects are also dependent on the availability of this pipeline but were not included in the economic analysis.

Project Description	Volume (Mmboe) Shell Share
STOG	19.5
Soku NAG Compression	63.8
Kolo Creek to Soku Pipeline	64.2
Santa Barbara FOD Phase 2	24.4
Soku FOD	34.2

Summary Economics

The FID economics for the Soku Liquids pipelines (12" x 22km Soku – San Barth and 10" x 4.5km Soku flowstation – Soku pipelines) was evaluated as an enabler for the liquids from Soku and Ekulama fields[1]. The base case economics is forward-look using the 50/50 level III cost estimate and NFA expectation production forecasts for the 2 fields. The NFA value from Soku GP is based on NFA production for the liquid post-2014 condensate spiking waiver.

Economic sensitivities were carried out to estimate the value of the project at low and high CAPEX. The project was also tested against the PIB v.12, and the impact of 1.5% cost mark-up due to cost dispute with NAPIMS (Benchmark, Verify and Approve issues).

The economics grid below (Table 1) gives a summary of the economic indicators and the Profitability Chart shows the NPV7% of the project at different oil price.

[1] **The combined view of the Soku Liquid Lines and the Ekulama-Soku AG Line (capturing both the value of the liquids and the AG) is given in the appendix to this IP.**

Table 1: Economics Grid (Shell Share)

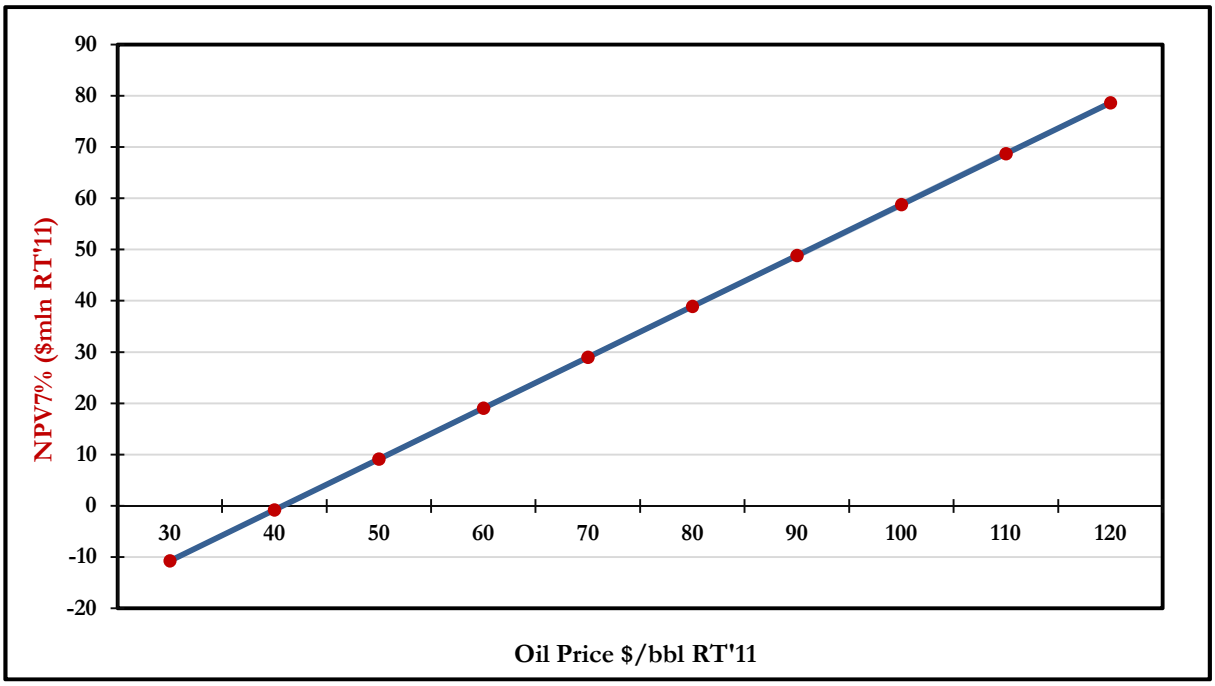
PV Reference Date: 1/7/2011	NPV (S/S $ mln)		VIR	RTEP	UTC (RT $/boe)		Payout-Time (RT)	Maximum Exposure $mln
Cash flow forward from:	0%	7%	7%	%	0%	7%		After Tax
Base case (Consolidation)								
SV ($50/bbl RT11)	38.8	9.1	0.16	11.2	15.1	17.9	2017	52.1 (in 2013)
RV ($70/bbl RT11)	74.4	29.0	0.52	19.3	15.1	17.9	2017	51.7 (in 2013)
HV ($90/bbl RT11)	109.9	48.8	0.87	26.6	15.1	17.9	2016	51.5 (in 2013)
BEP (RT $/bbl)								
Sensitivities (using RV-RT)								
High Capex (+15%)		26.9	0.42				2017	59.4 (in 2013)
Low Capex (-10%)		31.1	0.65				2016	44.1 (in 2013)
2019 License Expiry		11.1	0.20				2016	51.5 (in 2013)
With Ring Fencing		-33.1	-0.59				N/A	71.6 (in 2013)
PIB (House version)*		44.4	0.79					
1.5% Cost mark up due to BVA		21.8	0.37					

Note that the PIB evelauation is better than the PPT essentially because of lower tax rate (80% vs. PPT of 85%) and the absence of the negative impact of gas as this evaluation is based on oil only.

Key Project Parameter Data Ranges (Shell Share)

Parameter	Unit	BP10	Low	Mid	High	Comments
OPEX (MOD)	US$ mln	n/a	5.3	5.3	5.3	SCD Opex
CAPEX (MOD)	US$ mln	n/a	57.1	63.5	73.0	
Production Volume	mm boe	n/a	n/a	14.9	n/a	--
Start Up Date	mm-yy	n/a		Jan-14		

Profitability Plot: NPV7% in Shell Share RT'11



Economics Assumptions

- Oil PSV of $70/bbl RT11
- Project SCD Opex applied and treated as Opex.
- 2010 ARPR OPEX assumption, with NFA production carrying the fixed OPEX of the facilities
- Volumes of New Oil and Gas projects were excluded
- NDDC levy 3% of total expenditure
- Condensate was taxed as Oil
- Education tax of 2% assessable profit
- Facility life span of 25 years
- 10% of total project RT CAPEX treated as abandonment cost.

PIB assumptions:

- Royalty rates based on product (value) prices and production rates per PML (assumed equal to a field).
- Education tax calculated as 2% of its assessable profit and it is not deductible for CIT, but deductible for NHT.
- NDDC levy calculated as 3% of expenditure
- 20% of overseas cost is non-deductible for determination of NHT taxable income
- NHT rate is 50%
- CIT is 30% of taxable income and is not deductible from NHT
- The 3 fields have been evaluated under two scenarios; 1. As new fields with production allowances; and as 2. As existing fields without production allowances.

Section 3: Risks, opportunities and alternatives

Risk	*Planned Mitigation*
Funding constraints	Funding requirements for this project were captured under Alternative Funding (AF) in SPDC BP10 base budget. Provision for funding of some elements of the works (design, coating etc.) were captured in the 2011 JV Base budget, whilst funding for subsequent years shall be based on the Alternative Funding mechanism which has been supported by JV Partners. In the unlikely event that the project is aborted or delayed, the pre-FID investment items i.e. linepipes can be fully utilized for other future projects, as these are common project items.
Continued insecurity in the Niger Delta region	Mitigation for this risk is handled at a corporate and Nigerian National level and, if situation persists, a robust security provision/plan has been made incorporating recent experiences from projects around the same area to forestall negative impact on project schedule and Ready For Start Up (RFSU) date. Furthermore, prior to mobilization for construction works, a detailed/fit for purpose security plan will be developed in conjunction with the Security Department.

Community Issues	There is very little uncertainty in terms of local knowledge of the communities that will be traversed by the pipeline project. Effective Sustainable Development (SD) Management strategy shall be deployed to address this risk and minimise attendant delays which may lead to cost escalations. More importantly the local Contractor being proposed for execution has a very good system to manage community issues with SPDC's support. Robust SCD costs have been properly captured in the cost estimates.
Cost escalation	Though contract cost escalation due to security challenges is a key risk especially in the Niger Delta, but this risk shall be addressed by benchmarking requirements with realities on recent/similar projects, which were successfully executed during the most volatile period of 2005 – 2009. Contingency employed is 16% in the cost estimate.
Nigerian Content	Nigerian Content Development (NCD) risk in this proposal is very minimal; most of the line pipes are from surplus Shell Nigeria Gas 12-inch pipes which are in-country, whilst Nigerian Content Development management Board (NCDMB) has approved imports of shortfall line pipes. The construction/commissioning Contractor for the works (NESTOIL Nigeria Limited) is fully Nigerian owned and competent having executed and completed the NCTL. Contractor is currently engaged on the Ekulama – Soku AG pipeline and recently completed the 8" Belema delivery line replacement works with good progress.
HSE	This project will be executed using an existing contract for Nembe-Cawthorne Channel Trunk Line (NCTL) with a developed and operating HSE CASE where all HSE risks associated with pipeline construction in the swamp terrain are being managed. The risk register will be reviewed to include HSE risks that may be specific to this project.

Section 4: Corporate structure, and governance

The existing corporate structure and governance arrangements of SPDC-JV with SPDC as operator still subsist for this investment.

Section 5: Functional Support and consistency with Group and Business Standards

This proposal complies with Group Business Principles, policies and standards. Functional support for this proposal is provided by Finance, Social Performance, Supply Chain Management, HSE, Operations, Legal, Treasury and Tax functions.

Section 6: Project management, monitoring and review

There is an identified Decision Executive, Business Opportunity Manager, Project Manager and Operations Manager. The existing Major Projects decision Review Board will control any major change proposals and will monitor value delivery based on (PERT) reviews. Projects & Technology oversight will be exercised through membership of the technical DRB.

Section 7: Budget provision

The budget for this project is captured under Alternative Funding in the SPDC BP10 and budget provision made for the pre-FID elements in 2011 JV Base budget. JV Partners has supported AF funding mechanism from 2012 onwards.

Section 8: Group financial reporting impact

The financial impact of this proposal on Shell Group Financials is as indicated in the table below:

US$ Million	2011	2012	2013	2014	2015	2016
Total Commitment	**6.34**	**37.80**	**30.92**	**0.00**	**0.00**	**0.00**
Cash Flow						
SCD Expenditure	0.05	2.89	2.36			
Pre-FID Expenditure	6.29					
Capital Expenditure		34.91	28.56			
Operating Expenditure	0.19	9.49	8.94	23.41	23.76	255.52
Cash flow From Operations	3.58	(0.47)	9.92	0.18	2.46	89.84
Cash Surplus/(Deficit)	(2.76)	(35.38)	(18.64)	0.18	2.46	89.84
Profit and Loss						
NIBIAT +/-	0.18	0.79	1.56	1.58	3.38	78.53
Balance Sheet						
Avg Capital Employed	1.47	21.03	49.22	60.02	61.18	52.57

Section 9: Disclosure

Materials disclosures, if any, will be done in line with the Group and SPDC Disclosure policies and guidelines.

Section 10: Financing

The FID portion of this investment will be financed with AF funding and Shell Share of the expenditures will be funded by SPDC's own funds.

Section 11: Taxation

There are no unusual taxation features.

Section 12: Key Parameters

Approval is sought for US$68.72 mln Shell Share to complete the entire scope of the project**:** Design, Construction/commissioning, Sustainable Development, provision of security and entire scope of Project Management for the Soku Liquids pipelines (12" x 22km Soku – San Barth and 10" x 4.5km Soku flowstation – Soku pipelines).

Signatures
This Proposal is submitted to EVP, Sub-Saharan Africa for approval.

Supported by:

.....
Bernard Bos

(VP Finance Africa, FUI/F)

Date:..../..../....

For Business approval:

.....
Ian Craig

(EVP, Sub-Saharan Africa, UIG)

Date:..../..../....

.....
Initiator: Niyi Salami, UIG/T/PPL

(SPDC-UIG/T/PPL)

Date:..../..../....

Appendix 1: Combined Economics for Soku- SanBarth Liquid Lines and Ekulama Soku AG Lines

Pipeline Evaluation

Liquid Lines: SokuGP-SanBarth Manifold and SokuFS-Soku GP Liquid Lines

AG Lines: Ekulama - SokuGP AG Line and SokuFS Spur Line

Scenario 1: Combined, Cost-Only Evaluation

Indicators	Shell Share	100% JV
Headline Size (MOD, $mln)	118.3	394.4
NPV7% ($mln-RT11)*	-26.9	-89.6
NFA Volume@ Risk (Boe)	18.0	60.1
NFA Value@Risk ($mln-RT11)	58.4	194.5
VIR7%	-0.28	-0.28

Note:* NPV7% as per previous IP

Soku – San Barth Liquid Pipelines	**-14.8**
12" Ekulama - Soku & 12" Soku AG Pipelines	**-11.9**
Total ($mln, Shell Share)	**-26.8**

Scenario 2: Combined View, Evaluated as Enabler for NFA

(Assuming shut-in will be implemented if the AGS is not in place)

Indicators	Shell Share	100% JV
Headline Size (MOD, $mln)	118.3	394.4
NPV7% ($mln-RT11)	31.5	104.9
Volume (MMBoe)	18.0	60.1
VIR7%	0.32	0.32
UTC0% ($/ BOE)	12.29	12.29

NFA Volume from each facility (in MMboe)

Facilities	Shell Share	100% JV
Soku FS	0.5	1.6
Ekulama 1&2 FS	16.0	53.3
Soku GP	1.6	5.2
Total	**18.0**	**60.1**

Key Economics Assumptions

2011 PSV - $70/bbl for oil and NLNG price for gas

Gas evaluated under CITA fiscal regime with AGFA incentives.

2010 ARPR OPEX assumption, with NFA carrying the fixed OPEX of the facilities

Pipeline life of 25 years

GHV of 1150 btu/scf

*The value from STOG volume **(65 Mmboe, 100%JV)** has not been included due to non-advice of associated cost*

Potential additional volumes from key Growth Projects (Mmboe)

Projects	Shell Share	100%JV
Soku NAG Compression	63.8	212.7
Kolo Creek to Soku	64.2	214.2
Santa Barbara FOD Phase 2	24.4	81.3
Soku FOD	34.2	114.0