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 Company (NNPC: 55%), Total: 10%, Nigeria Agip Oil Company (NAOC: 5%) in SPDC-JV
Business or Function	Upstream International (UI)
Amount	US$149.87mln Shell share, MOD, 50/50 is requested for approval in this proposal of the 100% JV estimate of US$245.74mln. US$21.13mln 100% JV had been approved in the Pre-FID proposal. This proposal includes Shell equity share (30%) of US$73.72mln and Shell's MCA commitment to NNPC of US$76.15mln.
Project	Soku – San Barth Liquids Pipelines

Main commitments

	100% JV			Shell Share (This Proposal)		
Description	**Pre-FID Proposal ($mln)**	**Current IP ($mln)**	**Total JV ($mln)**	**Current Request ($mln 30% equity)**	**NNPC MCA Carry ($mln 36.67%)**	**Total Shell Share ($mln Equity + MCA Carry)**
Pipelines CAPEX	20.04	**207.67**	**227.71**	62.30	76.15	138.45
Owners Cost (Exclusive of SCD cost)	0.92	30.29	31.21	9.09	0.00	9.09
Total CAPEX	**20.96**	**237.96**	**258.92**	**71.39**	**76.15**	**147.54**
SCD OPEX	0.17	7.78	7.95	2.33	0.00	2.33
Total 50/50 MOD	**21.13**	**245.74**	**266.87**	**73.72**	**76.15**	**149.87**

Source and form of financing	This investment will be financed with Alternative Funding (AF) and Shell share capital expenditure will be met by SPDC's own cash flow and/or the existing shareholder facility. Formal JV partners' approval of the proposed MCA (alternative funding) has been received.
Summary cash flow	Cost only evaluation. Cash flow not applicable.

Summary economics

Summary economics (RV-RT12)	NPV7% (USD mln)	RTEP (%)	VIR7%
Base	-35.7	NA	-0.25
High CAPEX	-42.1	NA	-0.25
Value at Risk	3,681.9	>50%	NA

Section 1: The proposal (management summary)

This Group Investment Proposal seeks approval for funding of $73.72mln Shell equity share ($245.74 mln, MOD, 50/50 100% JV) plus additional MCA commitment of $76.15mln bringing total Shell Share to $149.87mln for the execution of Soku-San Barth Liquids Pipelines Project.

Pre-FID elements for the Soku – San Barth Liquids Pipelines Project had previously been appropriated.

The main objectives of the projects are:

a. To guarantee oil production from Soku flow station.
b. Provide and guarantee export conduit for produced condensate & oil from Soku Liquified Natural Gas Supply Plant (Soku LGSP) and Soku flowstation respectively.

The Soku-San Barth 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 (NCTL) junction manifold at San Barth.
- **Pipeline Number 2:** 10-inch x 4.5 km oil pipeline from Soku flow station to Soku Liquified Natural Gas Supply Plant (Soku LGSP).

Pipeline Number 1 is required to evacuate current and future liquids production (mostly condensate) 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 EGGS-1 gas pipeline at Soku and receiving at 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 at Bonny. At the maturation of the Kolo Creek to Soku development and the Soku NAG compression system, there will be an additional 28,000 bbl/d going into Soku gas plant stream. 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 premise agreed with the Department of Petroleum Resources prior to their approval of the condensate spiking into Eastern Gas Gathering System – Phase 1 (EGGS-1) was that a permanent condensate evacuation means will be installed by 2014. It is therefore expedient to provide an alternative export route for the condensates from Soku to free EGGS-1 capacity and also to comply with the regulatory requirements from 2014.

Pipeline Number 2 is required to convey crude oil from Soku flow station to mix with the condensate at the Soku LGSP to make the mixture less attractive to condensate thieves downstream of the gas plant. This is part of a series of planned measures to provide security for liquid evacuation from Soku field and hence assure security of gas supply.

The liquids pipelines are currently being executed along with the Ekulama – Soku AG Pipelines as a single package to benefit from synergy of joint execution. The technical strategy has taken cognisance of other agreed technical solution of deep burial to forestall tampering by vandals.

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)

		Pre-FID	2012	2013	2014	Total (with Pre-FID)	Total (without Pre-FID)
CAPEX		20.04	103.74	88.83	15.10	**227.71**	**207.67**
CAPEX Shell Share Equity (30%)		6.01	31.12	26.65	4.53	**68.31**	**62.30**
Shell Share of CAPEX NNPC Carry (36.67%)			38.04	32.57	5.54	**76.15**	**76.15**
PMT (Shell Share)		0.28	4.82	3.65	0.62	**9.37**	**9.09**
Total Shell Share (CAPEX)		**6.29**	**73.98**	**62.87**	**10.69**	**153.83**	**147.54**
SCD - Opex		0.17	4.15	3.10	0.53	**7.95**	**7.78**
Total OPEX		**0.17**	**4.15**	**3.10**	**0.53**	**7.95**	**7.78**
Shell Share (OPEX)		0.05	1.25	0.93	0.16	**2.39**	**2.34**
Shell Share (CAPEX + OPEX)		6.34	75.22	63.80	10.85	**156.21**	**149.87**

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 liquids (condensate & oil) that will be produced/evacuated from the Soku Gas Plant. Other projects – K2S, Soku NAG compression etc will also require this pipeline for their liquids management.

- **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 pipeline as the permanent solution to evacuate both produced oil & condensate from Soku field. Furthermore the technically feasible solution of deep burial adopted to prevent bunkering and criminal intrusions of the pipelines should guarantee unhindered production availability of Soku and other associated gas streams from other fields – Ekulama, Nembe, Santa Barbara.

- **Adherence to Statutory Requirement (LTO)**
  Condensate is currently being managed by spiking 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 current and temporary practice of spiking of condensate is not operationally sustainable on the long term given the fact that spiking would ultimately constrain 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.

- **Strategic Benefits to other upcoming projects**
  Furthermore the other upcoming projects such as Kolo Creek to Soku, Soku Oil Rim Development (ORM) & 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.

- **Post Flares out AG Solution for other fields**
  Another key & significant benefit of the 12" x 22km Soku – San Barth pipeline is that post 2012 when the flares out deadline would have taken effect, 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 as well. Other benefits that will also accrue include significant cost reduction advantage for joint execution synergy & minimised HSE risks during simultaneous construction works.

Summary Economics

The Soku-Sanbarth Pipelines Project was evaluated on a forward looking basis using the 50/50 Level III cost estimates.

It is expected that the funding of NNPC share will be done via a Modified Carry Agreement (MCA) bundle including other projects which are revenue-generating projects currently in the maturation funnel. However, this is contingent on these projects taking Final Investment Decision (FID). Thus, the base case evaluation assumes no revenue available within the MCA, which will therefore only provide for tax relief of the carried Capex, but no compensation in terms of Carry Oil and Share Oil, and the consolidated value of the MCA bundle (Soku Pipelines, TNP, Awoba FOD and Nembe Creek Phase 2) was only evaluated as sensitivity.

The following sensitivities were evaluated: High and Low CAPEX, 1 Year cost delay, Life cycle economics and 1.5% mark up due to BVA (Bench marked verified and approved) issues due to NNPC cost disputes.

The protected value of the NFA and new oil production from the facilities that feed into Soku- Sanbarth Pipelines based on BP11 forecast was also evaluated. This is evaluated and presented as the value (excluding midstream) at risk in the grid. This is the worst case assumption that, the existing pipeline fails without an alternative evacuation route provided for current throughput. The detailed results of the analyses are shown in Table 2 below.

Table 2: Soku – San Barth Liquids Pipelines Economics Grid (Shell Share)

PV Reference Date: 1/7/2012	NPV (S/S $ mln)		VIR	RTEP	VTE	UTC (RT $/boe)		Payout-Time (RT)	Maximum Exposure (RT- AT)
Cash flow forward from: 1/1/2012	**0%**	**7%**	**7%**	**%**		**0%**	**7%**	**(yyyy)**	**$mln (yyyy)**
Base Case									
RV ($70/bbl RT12)*	-23.3	**-35.7**	**-0.25**	NA	NA	NA	NA		*58.6 (2012)*
Sensitivities (using RV-RT12)									
High CAPEX (P90)		**-42.1**	**-0.25**						*39.1 (2012)*
Low CAPEX (P10)		**-31.4**	**-0.25**						*51.5 (2012)*
1 Year Cost delay		**-35.0**	**-0.25**						*28.6 (2013)*
Life Cycle Economics		**-37.4**	**-0.25**						*46.4 (2013)*
1.5% cost markup due to BVA issues		**-39.2**	**-0.27**						
MCA bundle**		**112.7**	**0.14**						*207.8 (2013)*
Value at Risk***		**3,681.9**	**NA**						

* Same result applies to SV-RT and HV-RT since there is no revenue stream.

**MCA bundle-consolidated value of Soku Pipelines, TNP, Awoba FOD and Nembe creek Phase 2 under MCA assuming the other projects take FID.

*** Value of production from facilities that feed into Soku Pipeline based on BP11 forecast which is at risk if the existing pipelines fails without an alternative evacuation route provided.

Key Project Parameter Data Ranges (Shell Share)

Parameter	Unit	BP11 Provision	Low	Mid	High	Comments
Capex (MOD)	US$ mln	69.7	121.7	138.5	163.1	Change in funding mechanism (BP11 based on JV funding, but current estimates based on MCA)
Opex (MOD)_Project	US$ mln	NA	10.0	11.4	13.5	Owners cost & SCD Opex
Production Volume	mln boe	NA	NA	NA	NA	Cost only evaluation
Start Up Date	mm/yy	Oct-15	Jan-14	Mar-14	May-14	
Production in first 12 months	mln boe		NA	NA	NA	

Economics Assumptions

- Oil and Condensate prices SV-RT $50/bbl, RV-RT at $70/bbl and HV-RT $90/bbl with applicable offset.
- Domestic Gas NGMP profile and NLNG contracted price RT12.
- Gas taxed under CITA with Associated Gas Framework Agreement (AGFA) incentive.
- ARPR 31/12/2011 variable OPEX for Awoba FOD and Nembe Phase 2 was used for bundle evaluation.
- SPDC Generic Opex was used for new facilities and Value at risk.
  - Oil fixed OPEX - 3% of cum. oil CAPEX,
  - Gas fixed OPEX – 3.5% of cum. gas CAPEX
- Education Tax of 2% assessable profit
- NDDC levy of 3% total expenditure
- GHV of 1000btu/scf for Dom and 1150btu/scf for Export gas
- Flare Penalty of $3.5/Mscf was applied and is not tax deductible
- 10% of RT CAPEX assumed as abandonment cost.
- Facility life span of 30 Years.

MCA Assumptions

- Profit ceiling of 8% IRR on carried costs
- Current agreement for recovery of carry costs is maintained
- OPEX and PMT not carried under current MCA arrangement.
- All costs on the MCA would be recovered through cost oil.

Section 3: Risks, opportunities and alternatives

Risk	*Planned Mitigation*
Funding constraints	The base proposal is to fund the project by Alternative Funding (AF). Consistent engagements with NAPIMS have yielded formal approval, whilst approval is now dependent on Shell.
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 is already in place incorporating recent experiences from projects around the same area (NCTL & EGGS-2) to forestall negative impact on project schedule and first oil date. A detailed/fit for purpose security plan is already in place to manage this uncertainty.
Community Issues	There is very little uncertainty in terms of local knowledge of the communities that will be traversed by the pipeline project. Effective 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 track record/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 10% in the cost estimate.
Nigerian Content	NCD risk in this proposal is very minimal as line pipes have already been procured and coated. The construction/commissioning Contractor for the works (NESTOIL) is fully Nigerian owned and competent having executed and satisfactorily completed the NCTL and 8" Belema delivery line replacement works.

Section 4: Corporate structure, and governance

This project fits within the existing SPDC corporate structure and governance. Consequently, it will comply and respect all relevant and existing governance.

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

Budget provision was made for PRE-FID elements in JV Base budget for 2011. Subsequently at FID, the project budget requirement will be from the alternative funding tranche. In line with current AF agreements, it is expected that project FID OPEX and Project Management cost will continue to be funded via regular JV budgetary process mechanism.

Section 8: Group financial reporting impact

There are no unusual accounting issues related to this GIP. Expenditure related to the project will be accounted for in line with Group Policy. The financial impact of this proposal on Shell Group Financials is as indicated in the table below:

US$ mln	Prior Years	2012	2013	2014	2015	2016	Post 2016
Total Commitment	6.3	75.2	63.8	10.8	-	-	-
SCD OPEX	-	1.2	0.9	0.2	-	-	-
Pre-FID	6.3	-	-	-	-	-	-
Cash Flow							
Capital expenditure	-	74.0	62.9	10.7	-	-	-
Cash Flow from Operations	-	12.0	23.5	25.6	25.2	24.6	17.8
Cash Surplus/(Deficit)*	-	- 62.0	- 39.4	14.9	25.2	24.6	17.8
Profit and Loss							
NIBIAT +/-	-	2.7	0.1	- 1.4	- 1.8	- 1.8	- 15.5
Balance Sheet							
Average Capital Employed	-	32.3	84.4	95.9	74.3	47.6	5.5

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 Pre-FID portion of this investment has been financed with JV funding. It is expected that financing for the main project scopes shall be through the MCA funding mechanism. Formal sign-off is being finalized with JV partners. However, it is planned to make commitments upon NAPIMS approval of MCA figures.

Section 11: Taxation

There are no unusual Taxation features.

Section 12: Key Parameters

Approval for the total headline size of $149.87mln Shell Share ($245.74mln 100%JV) 50/50 MOD for the execution of Soku – San Barth Liquids Pipelines Project. This value is made up of $73.72 mln Shell equity and $76.15mln MCA carry commitment.

Signatures

This Proposal is submitted for approval.

Supported by:

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Bos, Bernard (SEPA-FUI/OG)

Date ..../..../....

Supported by:

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Henry, Simon (Chief Financial Officer)

Date ..../..../....

For Business Approval:

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Brekelmans, Harry

EVP, UI Operated

Date ..../..../....