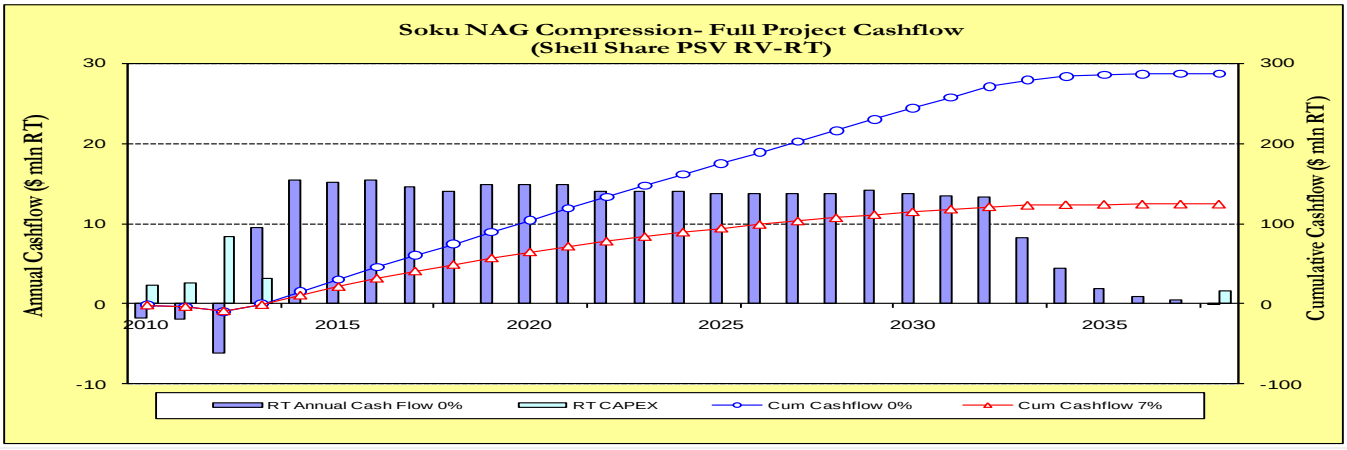
The Shell Petroleum Development Company of Nigeria Limited

Internal 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
Amount	US$4.7 mln Shell share, MOD, 50/50 of which US$4.0 mln is requested for approval in this proposal and US$0.7 mln had been approved in previous proposals.
Project	Pre-FID for Soku NAG Compression project.
Main commitments	

	(US$ Mln)	
	Shell Share	**100% JV**
FEED & Detail Design	3.0	10.0
Project Management	0.7	2.3
ESHIA	0.3	1.0
Total	**4.0**	**13.3**
Previously approved	0.7	2.3
Total	**4.7**	**15.6**

Source and form of financing	This pre-FID investment will be financed with JV funding and Shell Share capital expenditure will be met by SPDC's own cash flow. Formal JV partners' approval will therefore be obtained.
Summary cash flow	

Summary economics	At Ranking PSV ($60/bbl RT10 & $1.66/mmbtu RT10)	NPV7% ($Mln)	VIR7%	RTEP (%)
	Pre-FID (OPEX View)	-2.6	N/A	N/A
	Pre-FID (CAPEX View)	-0.5	-0.14	N/A
	Full Project-Base case	124.1	8.48	82.1

Section 1: The proposal (management summary)

1.1 Management Summary

This Pre-FID Investment Proposal requests approval for funding of US$4.0 mln (Shell Share) to progress the Front-end Engineering Design, Detailed Engineering, Environmental, Social and Health Impact Assessment studies and procurement of a new inlet manifold, which is schedule critical for the Soku NAG compression project.

This project is an integral part of the Soku Oil and Gas Development, as captured in the Field Development Plan and its addendum. The project will develop 996 Bscf of gas and 16.7 MMstb of associated condensate at low incremental cost. This will be achieved through the re-wheeling of one of the three existing Soku associated gas compressors for NAG compression duty with a capacity of 200 MMscf/d. This development plan fits into SPDC's strategy of optimally developing key assets to the technical limit.

FEED and detail engineering design are required to further develop the basis for design to enable the placement of key purchase orders including that for re-wheeling the compressor, and to prepare the invitation to tender work package for construction. Compressor vendor and installation contractor quotations are required for the final investment decision.

1.2 Previous proposals

In 2006, a pre-FID investment proposal (IP) of $0.7 mln (Shell Share) was approved for the Front End Engineering Designs (FEED) of project. This FEED was for a new compressor and will need to be revised for the re-wheeling opportunity.

1.3 Project Background

The Soku NAG Compression project is one of the "Keep Soku Full" projects but was parked in 2007 at the completion of FEED due to lack of funding. A team was recently set up in the NLNG Supplies Team to re-start the project. The design of 2007 was completed on the basis that a new NAG compressor is required. However, a recent review based on the BP09 AG forecasts of the fields (Nembe, Ekulama, Soku, Santa Barbara) feeding the 3 x 65 MMscf/d Soku AG compressors show that two of the AG compressors are capable of handling the AG production in the foreseeable future. As such one compressor is spare and available for retrofitting for NAG compressor service as anticipated in the original gas plant design.

Siemens (the compressor manufacturer) have confirmed the technical feasibility.

The preliminary estimated yearly expenditure phasing for the re-wheeling concept is indicated in Table 2 below.

Table 1: Yearly estimated expenditure (FUS$ mln)

	Pre-2010	2010	2011	2012	2013	Total
Total 100% JV (FUS$ mln)	2.3	7.5	10.0	30.0	11.3	**61.1**
Total Shell Share (FUS$ mln)	0.7	2.3	3.0	9.0	3.4	**18.3**

Section 2: Value proposition and strategic and financial context

2.1 Justification for Pre-FID Expenditure

The proposed Pre-FID expenditures are required to mature the project to enable placing purchase orders for the key long lead items, which is the new gas inlet manifold and well testing facilities - early placement of this purchase orders is critical to realizing the project schedule. This manifold will be specified such that it can be used for other projects if FID for this project does not materialize, which is very unlikely. In addition completing the front-end engineering design and detailed engineering will facilitate development of the construction work packages in preparation for construction tendering.

2.2 Production and Reserves

The Soku Compression Development will develop 996 Bscf of gas and 16.7 MMstb of condensate and will essentially help to keep the Soku gas plant full. The production forecast from the development is shown in the Figure 1 below:

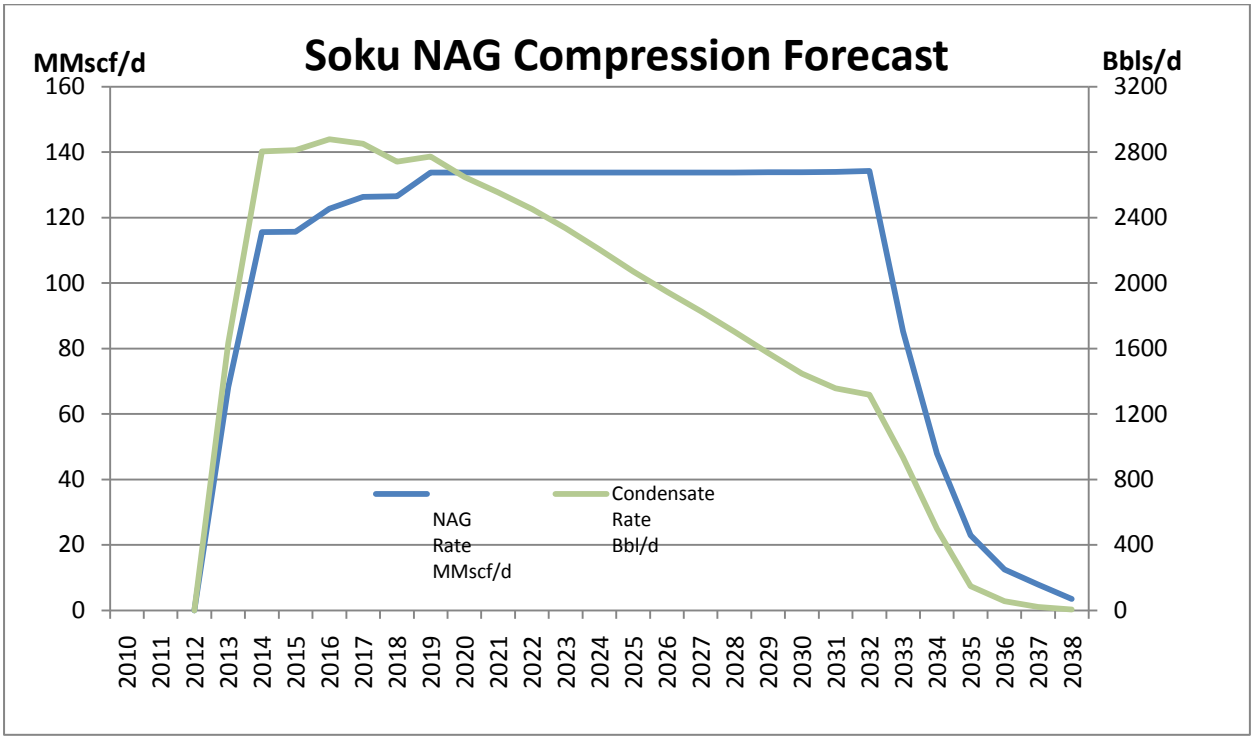


Figure 1: Soku NAG Compression production forecast

Summary Economics

The economics for pre-FID IP was evaluated on a forward-looking and cost only basis, as the full value of the project would only be achieved on full project execution post-FID. The Pre-FID spend was treated as OPEX. There is also a CAPEX view assuming the project takes FID. Sensitivity is done for the life cycle pre-FID economics which incorporates the Pre-FID spend approved in 2007.

The full project (including this IP pre-FID spend) was evaluated on a forward-look basis using 50/50 CAPEX preliminary estimates and production forecast as advised by the project team.

Sensitivities evaluated include high CAPEX, 1 year schedule delay as well as license expiry date of 2019.

Additional scenarios modeled were the effect of proposed PIB legislation and life cycle economics.

Results are provided in the tables below:

Table 2: Economics Grid –Pre FID

PV Reference Date: 1/7/2010	NPV (S/S $ mln)		VIR	RTEP	UTC (RT $/boe)		Payout-Time (yyyy)	Maximum Exposure $mln (RT)
Cash flow forward from: 1/1/2010	0%	7%	7%	%	0%	7%		AT
OPEX View								
SV ($50/bbl RT10)	-2.7	-2.6	N/A					
RV ($60/bbl RT10)	-2.7	-2.6	N/A	N/A	N/A	N/A	N/A	2.8 (2011)
HV ($80/bbl RT10)	-2.7	-2.6	N/A					
Sensitivities on OPEX (using RV RT)								
Pre-FID Life Cycle Economics*		-3.5	N/A				N/A	3.5 (2011)
CAPEX View								
SV ($50/bbl RT10)	-0.5	-0.5	-0.14					
RV ($60/bbl RT10)	-0.5	-0.5	-0.14	N/A	N/A	N/A	N/A	2.0 (2010)
HV ($80/bbl RT10)	-0.5	-0.5	-0.14					
Sensitivities on CAPEX (using RV RT)								
Pre-FID Life Cycle Economics*		-1.4	-0.36				N/A	2.7 (2010)

**Includes Pre-FID cost approved in 2007*

Key Project Parameter Data (Shell Share)

Parameter	Unit	BP09	Low	Mid	High	Comments
OPEX (MOD)	US$ mln	3.0	0	4.0	0.0	Pre-FID spend only
Investment Opex	US$ mln	0	0	0.0	0.0	
Sales Volume	mln boe	N/A	N/A	N/A	N/A	
Start Up Date	mm-yy	N/A	N/A	N/A	N/A	

Table 3: Economics Grid – Full Project

PV Reference Date: 1/7/2010	NPV (S/S $ mln)		VIR	RTEP	UTC (RT $/boe)		Payout-Time (yyyy)	Maximum Exposure $mln (RT)
Cash flow forward from: 1/1/2010	0%	7%	7%	%	0%	7%		AT
Base Case								
SV ($50/bbl RT10 & $1.39/mmbtu RT10)	225.3	97.2	6.64					
RV ($60/bbl RT10 & $1.66/mmbtu RT10)	286.8	124.1	8.48	82.1	2.6	3.0	2014	11.8 (2012)
HV ($80/bbl RT10 & $2.19/mmbtu RT10)	409.7	178.1	12.17					
BEP (RT $/mmbtu)					0.28	0.29		
Sensitivities (using RV RT)								
High Capex (+15%)		123.3	7.32				2015	13.5 (2012)
1 Yr Schedule Delay		113.8	7.78				2015	12.0 (2013)
License Expiry (2019)		56.9	3.89				2014	11.8 (2012)
1.5% Additional Cost (Non-Deductible Expense)		123.1	8.29					
PIB sensitivity for base case-IAT Version		113.9	7.78					
PIB sensitivity for base case-Alternate Version		121.3	8.29					
Life-Cycle Economics		123.6	8.44				2018	12.3 (2012)

Economics Assumptions

- 31/12/2009 ARPR (Annual Review of Petroleum Resources) Variable OPEX were used

- SPDC Generic fixed OPEX was used as follows:
    - Gas fixed OPEX is 2% of cum CAPEX
- Condensate is treated as oil
- GHV of 1150 btu/scf for gas to NLNG
- Associated Gas Framework Agreement (AGFA) Fiscal incentive applied.
- NDDC levy of 3% total expenditure
- Education tax of 2% assessable profit
- Abandonment cost is estimated at 10% of total project RT CAPEX

PIB Version 4.2 Assumptions

- PIB start year is 2010
- Royalty rates based on product (value) prices and production rates per PML (assumed equal to a field). Royalty rates are designed to be higher for easier and bigger producing assets.
- NHT depreciation schedule is 4x20%, 19% for qualifying expenditure.
- No capital investment credit/allowance (ITC or ITA) or uplift is granted under the PIB
- NHT rate is 50% for onshore and shallow water, and 30% for frontier acreages and Deep Water.
- NHT amount is the lesser of applicable tax rate multiplied by the taxable income and 2% of total revenue.
- CIT depreciation schedule is 3x25%, 24%, for qualifying expenditure.
- CIT is 30% of taxable income and is not deductible from NHT
- 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 corporate budget (Expex+Capex + Opex)
- Flaring penalty is calculated at $4mln/Btu MOD flat and it is not tax deductible for both CIT and NHT
- Withholding tax is applicable at a rate of 7.5%
- 20% of overseas cost is non-deductible for determination of NHT taxable income
- Cost that are not benchmarked, verified and approved are not tax deductible

Section 3: Risks, opportunities and alternatives

3.1 Risks and Mitigation Plans

Risk	*Planned Mitigation*
Funding constraints	Pre-FID funding requirements will be met through the usual JV funding arrangements.
Continued insecurity in the Niger Delta region	Mitigation for this risk is handled at a corporate and Nigerian National level and, if situation persists could negatively impact the cost, project schedule and first gas date. However, prior to mobilization for construction works, a detailed security plan will be developed in conjunction with the Area Security Advisor – Major Projects
Community Issues	The Soku facilities are located in an area claimed by three major communities (Oluasiri, Elem-Sangama and Soku) in the two adjoining states of Rivers and Bayelsa. General Memorandums of Understanding (GMoU) have been signed with all three communities.

Cost escalation	Bid price escalation is now frequent in drilling and facilities tenders due to Nigeria specific issues including Niger Delta security situation. The cost estimates will be fully benchmarked including an ESAR review prior to DG4.
Nigerian Content	Risks associated with this bill is incorporated as part of the risked contingency but will be further evaluated at FID stage.
Tax proposals in the Petroleum Industry Bill	The PIB is being read in the National Assembly. The current interpretation is that if enacted as drafted, it would have a major negative impact on the upstream project's economics and threaten continued investment in the gas supply projects required to sustain midstream revenues. A specific guarantee was obtained from NNPC that the existing gas fiscal terms will continue for NLNG Trains 1-6 supply projects. However, confidence is not high that existing tax agreements and assurances from the Government can be relied on to protect against the effects of policy changes. The PIB sensitivity included in the economics summary table assume this guarantee will not protect the project. PIB fiscal changes are not expected to apply to NLNG's own business, although there is clearly a risk of further fiscal assault.

3.2 Opportunities

The project is already taken the opportunity of re-wheeling an existing compressor rather than buying a new compressor, which offers cost and schedule savings.

3.3 Alternatives

SPDC has committed to supply NLNG (Trains 1 to 6) for a 20-year period and gas supplies will come from the portfolio of fields connected to the NLNG gas supply pipelines. The Soku NAG compression project represent one of the low UTC projects in SPDC portfolio, although there are other gas supply projects under development including Awoba, Bonny minor reservoirs, and other projects are at early stages of maturation.

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

This project has been matured in line with the Opportunity Realization Process (ORP) and has undergone all necessary Value Assurance Reviews. DG3 was held in June 2006 and the management of project is fully handed over to SPDC Major Projects. The NLNG Supplies project team is executing the project in order to capture lessons-learnt from similar developments. There is an identified Decision Executive, Business Opportunity Manager, Project Manager and Operations Manager. The existing NLNG Supplies Project Delivery Advisory Board (PDAB) will control any major change proposals and will monitor value delivery based on regular (PERT) reviews. Projects & Technology oversight will be exercised through membership of the Project Delivery Advisory Board.

Section 7: Budget provision

The budget for the 2010 pre-FID works has been approved at DEVCOM and is in the SPDC JV base budget for 2010.

Section 8: Group financial reporting impact
The Financial impact of this activity on Shell Group Financials is as indicated in the Table below:

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 will be financed with JV funding and Shell Share capital expenditure will be met by SPDC's own cash flow.

Section 11: Taxation
The main tax risk related to this proposal is the enactment of the Petroleum Industry Bill (PIB), included as sensitivity in Table 2.

Section 12: Key Parameters
Approval is sought for additional US$4.0 mln (Shell Share) for FEED and detail design for the project bringing the aggregate Pre-FID expenditure on the project to US$4.7 mln (Shell Share).

Section 13: Signatures
This Proposal is submitted to GM Onshore/Shallow Offshore Projects for approval.

Supported by:

.....
Rob van Velden
(SPDC Finance Director, FUI/FB)
Date:..../..../....

For Business approval:

.....
Andrew Birch
(GM Onshore/Shallow Offshore Projects, UIG/T/P)
Date:..../..../....

Initiator: Ikenna Nwosu, UIG/T/PG

Appendix 1: Details and Cost Estimate (MOD 100% JV) for the full scope (base case) of the Soku NAG Compression project.

The cost estimate for this project base case concept is preliminary and a detailed review will be done during FEED when the material takeoffs will be fully developed.

The breakdown of the current base case estimate is as follows.

Base Estimate Value		
Facilities Soku - Eng & Procurement		15.00
Facilities Soku - Const & Commiss		17.00
Integration with Exisiting Facilities		3.00
SILS		1.00
	sub-total	**36.00**
SCD		2.00
FEED		3.10
	sub-total	**5.10**
PMT		10.00
Total		**51.10**
P50 Contingency		10.00
Sub-Total		**61.10**