

Group Investment Proposal

Summary information

Business unit and company	Shell Petroleum Development Company of Nigeria Limited (SPDC)																																																																	
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	Nigerian National Petroleum Corporation (NNPC: 55%), Total E&P Nigeria Ltd (10%), and Nigerian Agip Oil Company (NAOC: 5%)																																																																	
Business or Function	Upstream International (UI)																																																																	
Amount	This IP seeks approval for further Shell Equity Investment of US\$ 507.6million MOD 50/50 (CAPEX- US\$ 503.1million and OPEX- US\$ 4.5million). Previously, US\$ 359.4million (Shell Equity) was approved on GIP 21-11.07 out of which US\$ 40.4million is unspent and will be added to requested amount to make up the US\$ 548.0million required for project completion. With this proposal, total Shell Equity Investment in the project becomes US\$ 867.0million of which US\$ 319.0million is sunk cost.																																																																	
Project	Forcados Yokri Integrated Project (FYIP)																																																																	
Main commitments	<table><tr><th rowspan="2">Description</th><th colspan="3">100% JV (\$'mIn, MOD)</th><th colspan="2">Shell Share (\$'mIn, MOD)</th></tr><tr><th>Previous IP</th><th>Incremental IP</th><th>Total JV</th><th>Incremental</th><th>Total Shell Share</th></tr><tr><td>Oil Facilities</td><td>434.9</td><td>600.8</td><td>1,035.7</td><td>180.2</td><td>310.7</td></tr><tr><td>AG Gathering & Gaslift Facilities</td><td>448.0</td><td>763.5</td><td>1,211.5</td><td>229.1</td><td>363.5</td></tr><tr><td>Drilling/Completion/Recompletion</td><td>150.0</td><td>141.1</td><td>291.1</td><td>42.3</td><td>87.3</td></tr><tr><td>Owners Costs (excl SCD & Training)</td><td>121.1</td><td>13.3</td><td>134.4</td><td>4.0</td><td>40.3</td></tr><tr><td>Contingency (50/50)</td><td>37.4</td><td>158.2</td><td>195.6</td><td>47.5</td><td>58.7</td></tr><tr><td>Project OPEX (SCD & Training)</td><td>6.5</td><td>15.1</td><td>21.6</td><td>4.5</td><td>6.5</td></tr><tr><td>SUB TOTAL (50/50 MOD)</td><td>1,197.9</td><td>1,692.1</td><td>2,890.0</td><td>507.6</td><td>867.0</td></tr><tr><td>Overrun Allowance to 90/10 MOD</td><td>13.0</td><td>260.4</td><td>273.4</td><td>78.1</td><td>82.0</td></tr><tr><td>TOTAL (90/10 MOD)</td><td>1,210.9</td><td>1,952.5</td><td>3,163.4</td><td>585.7</td><td>949.0</td></tr></table>	Description	100% JV (\$'mIn, MOD)			Shell Share (\$'mIn, MOD)		Previous IP	Incremental IP	Total JV	Incremental	Total Shell Share	Oil Facilities	434.9	600.8	1,035.7	180.2	310.7	AG Gathering & Gaslift Facilities	448.0	763.5	1,211.5	229.1	363.5	Drilling/Completion/Recompletion	150.0	141.1	291.1	42.3	87.3	Owners Costs (excl SCD & Training)	121.1	13.3	134.4	4.0	40.3	Contingency (50/50)	37.4	158.2	195.6	47.5	58.7	Project OPEX (SCD & Training)	6.5	15.1	21.6	4.5	6.5	SUB TOTAL (50/50 MOD)	1,197.9	1,692.1	2,890.0	507.6	867.0	Overrun Allowance to 90/10 MOD	13.0	260.4	273.4	78.1	82.0	TOTAL (90/10 MOD)	1,210.9	1,952.5	3,163.4	585.7	949.0
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Reserves/Resources	This project is aligned with SPDC's strategic goals and priorities by maturing economic truncated 2P reserves of 89.91 MMstb of oil and 55.73 Bscf of gas (Shell Share) and 1P reserves of 55.65 MMstb of oil and 11.56 Bscf of gas.																																																																	
Production	Oil production from this project peaks at 69.6 Mbopd (with incremental being 47 Mbopd) of oil and associated gas production of 54.5 MMscf/d (33.2 MMscf/d of NAG and 21.3 MMscf/d of AG) by 2015; thus contributing to SPDC's gas supply to DomGas.																																																																	
Source and form of financing	This investment will be financed through cash call from JV Partners or MCA funding where supported by JV Partners. Shell Share of the investment will be financed with SPDC own generated cashflow or borrowed funds.																																																																	
Summary cash flow	<div><p>Forcados Yokri Integrated Project forward looking Cashflow (Shell Share PSV HV-RT12)</p><p>Legend: RT Annual Cash Flow 0%, RT CAPEX, Cum Cashflow 0%, Cum Cashflow 7%</p></div>																																																																	

Summary economics		NPV7% (US\$ mln)	VIR7%	RTEP (%)
	Base Case HV-RT12	486.4	1.03	>50
	Base Case RV-RT12	340.4	0.72	39

Section 1: The proposal (management summary)

The Forcados Yokri Field, located some 50 km South-West of Warri in the Western Niger Delta (OMLs 43 and 45) commenced oil production in 1970. The Forcados Yokri Integrated Project (FYIP) was initiated to redevelop the field in late 1990s. With FID in 1999, the scope covered development of a total expectation reserves of 292 MMstb (proved reserves of 201 MMstb) of oil and 92 Bscf (proved reserves of 52 Bscf) of gas from 25 new oil wells, 1 sidetracked oil well and gaslift of 62 existing drainage points, installation of replacement flowstations, gas gathering & export plant at North Bank, Forcados Terminal Power upgrade and field wide electrification network.

The new FYIP oil and gas facilities have combined installed capacities of 265 Mb/d and 110 MMscf/d respectively. This is broken down into **OIL:** New Estuary Flowstation (120 Mb/d); North Bank Flowstation (45 Mb/d); South Bank Flowstation (40 Mb/d processing but 160Mb/d pumping capacity to cover Estuary production); Yokri Flowstation (60 Mb/d) and for **GAS:** Yokri (2MMscf/d), South Bank Flowstation (20MMScf/d), and the Central Processing Facility-CPF (110MMscf/d). However, the Main Export Compressor is sized for 230 MMscf/d, originally to cater for gas production from Odidi, but will now handle SSAGS project gas.

With the installation of the facilities nearing completion in Feb 2006, the project site was impacted by effects of militant insurrection in the Niger Delta. Project execution was stalled and assets were abandoned in a hurry without preservation. The completion status before site evacuation was:

- Drilled 25 new wells and 1 sidetrack (one well was found wet)
- Hooked up 12 wells and producing since 2003.
- North Bank Central Compression Plant -CCP (230mmscf); Installation 95% completed.
- South Bank Flowstation(160Mbopd): Installation 95% completed. Commenced pre-commissioning.
- Estuary Flowstation(120Mbopd): pre-commissioning completed.
- North Bank Flowstation (45Mbopd): 90% completed
- Forcados Yokri Flowstation(60Mbopd): 80%
- Forcados Terminal Power upgrade; pre-commissioning completed.

However, the partially installed assets have either being vandalized, become obsolete and/or deteriorated due to lack of preservation.

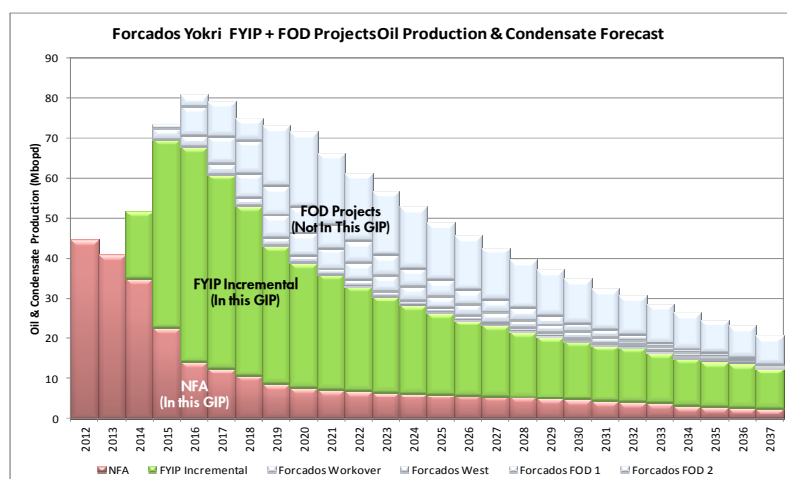
Revised Project Objectives

The project was initially planned to export associated gas to Nigerian Liquefied Natural Gas (NLNG) via Offshore Gas Gathering System (OGGS). With the Government drive for increase in Domestic gas production, backed-up with funding and contracting enablers, a new opportunity emerged to complete the FYIP redevelopment as a domestic gas supply hub (DomGas). This DomGas supply requirement imposes additional scope for gas processing (HCDP & recompression), fiscal metering and the drilling of a Non Associated Gas (NAG) well to develop gas reserves in the field. Shell's divestment from OML-42 also introduced a scope to construct a new 18" x 5.5km Odidi – Escravos Lagos Pipeline (ELPS) pipeline link to provide route to the ELPS.

The original FYIP scope required the extension of decks for installation of gaslift facilities and electronic automation control units. Significant structural degradation during the period of absence coupled with damage from explosives and actions of illegal oil bunkering on some of the structures have impacted the feasibility of the upgrade plan. Furthermore, a number of the associated bulklines have corroded, with circa 60% now out of service. These offshore infrastructures will now be renewed with all 18 existing offshore clusters and 93km out of the 122km of 6inch bulklines earmarked for replacement as part of FYIP. These

will be rationalized further when ongoing studies for Forcados West/Further Oil Development (FOD) opportunities are completed and currently marginally economic clusters role in this development can be confirmed.

Further Oil development opportunities excluded from this GIP include scope for further Infill Drilling/Workover of 19 oil wells plus maturation of IOR Water Injection project to develop some additional 2P of 50 MMboe SS and generate additional production of some 30 Kbopd (10 Kbopd SS) by 2019. These activities will be a subject of a separate GIP once the NNPC alternative funding solutions for oil development are confirmed.



Contractors have mobilized for the original scope completion and the execution of new items with a Target First Gas of May 2014 premised on start-up of the CPF, intake of AG from any of the flowstation(s) and gas export to either Domgas via ELPS or NLNG via OGS pipeline.

Inspection of the abandoned assets has commenced in the flowstations and CPF/CCP. Findings so far show that most of the electronic systems require replacement while mechanical equipment needs overhaul to restore their functionality, consequently restoration works have started in earnest. The delivery of long lead items for the DomGas supply component is the most schedule-critical activity and drives the On Stream Date (OSD) for the project.

Schedule for some of the key project activities:

Activity	Schedule		
	Target Date	P50 Date	P90 Date
Revised GIP	31-Mar-12	25-Apr-12	15-May-12
First Gas	12-Oct-13	08-May-14	12-Feb-15
Phase-2 Complete	07-Feb-15	02-May-15	20-Feb-16

Cost Growth

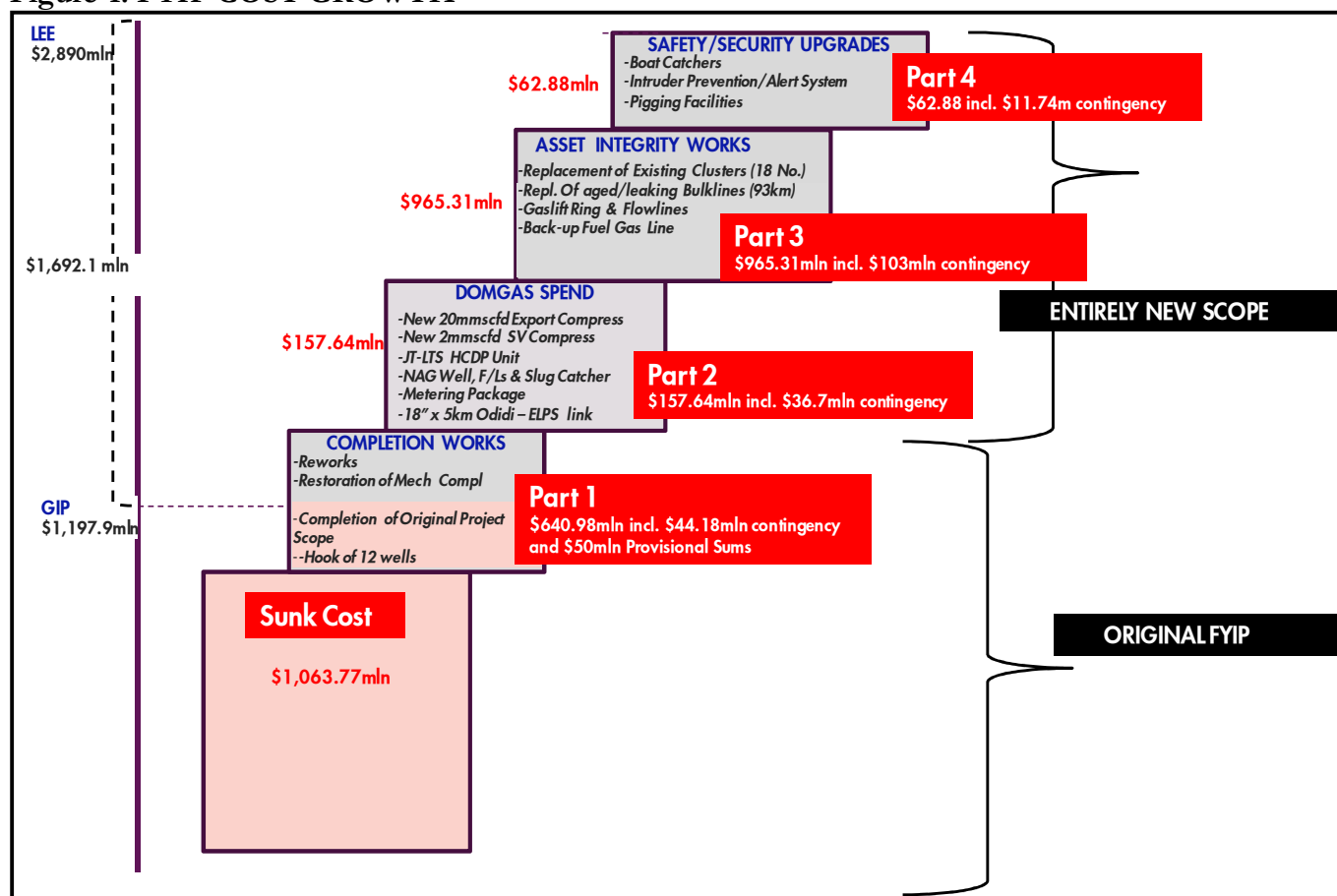
The FYIP Group Budget Proposal of US\$783.2 million (50/50 estimate, US\$235 million Shell Share) was first considered sound in 1999. Subsequent GIP revision in November 2007, resulted in budget approval of US\$1,197.9 million (50/50 estimate US\$359.4million Shell Share) to complete and commission the facilities.

The costs have escalated from the 2007 GIP approval mainly due to the above changes in project objectives and scope. Fig-1 below shows the details of significant changes.

The original project scope to realize flares down in the node, including spends to reinstate functionality of degraded and/or vandalized partially built items, has a completion cost estimate of US\$640.98million (inclusive of US\$ 44.08million contingency & \$50million Provisional Sums). See PART-1 in figure-1 below. Taking into account the cost already sunk, this will bring completion cost for original FYIP project to \$1,704.18million relative to the current IP of \$1,197.9million.

The scope for Domgas Supply, Estuary Cluster Integrity Restoration and Critical Safety components (PARTS-2, 3, & 4 in Figure-1 below), which were all not in the original project objectives account for US\$ 1,185.83million (inclusive of US\$ 151.42million contingency) of this request.

Figure-1: FYIP COST GROWTH

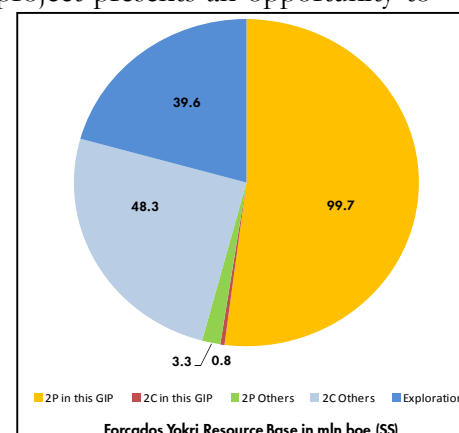


This investment proposal is to cover increase from \$1,197.9million (US\$359.4million Shell Share) to US\$2,890 million 50/50 (US\$867 million Shell share) a net increase of \$1,692.1million (141.25%), in the capital required to complete the original scope as well as execute new scope of the project.

Section 2: Value Proposition and financial context

The FYIP project provides new oil and associated gas handling infrastructure thereby safeguarding oil production from the field and ensuring compliance with Shell Group requirements. As reframed, it will contribute to Federal Government Flares Out target and enable SPDC meet its supply obligations to DomGas by developing and producing NAG reserves in the field. The project presents an opportunity to renew offshore estuary cluster infrastructure which have become severely deteriorated with increased HSSE exposure to operations and several wells closed-in on bulkline failures.

Failure to complete the project will mean that the remaining booked reserves(99.7MMboe-Shell Share), other planned 'medium term' development activities under maturation in the field with contingent resource development of some 50 MMboe-Shell Share, and longer term development prospects will be regretted and SPDC may also prejudice its ability to obtain renewal of the license which expires in 2019. These planned 'medium term' activities include Forcados West Development, Forcados Workovers and Forcados Further Oil Development.



Summary Economics¹

The economics for the Forcados Yokri Integrated Project (FYIP) IP was carried out on a forward-looking basis using the project 50/50 level III cost estimate and the associated production forecast from the project team. The base case was evaluated using Latest Estimate (LE) costs and PSV-HV.

Among others, sensitivities on Capex, reserves, PIB, were carried out on the base case to determine the value of the project under different scenarios. The summary economic indicators together with the sensitivities and risk and uncertainty are shown in table 2 below.

The project is very robust at all the PSVs. Even with a consideration for an unlikely situation of license not being renewed post 2019 the project base case is still robust. More than 50% of the value is achieved within current license period due to the initial high production volumes.

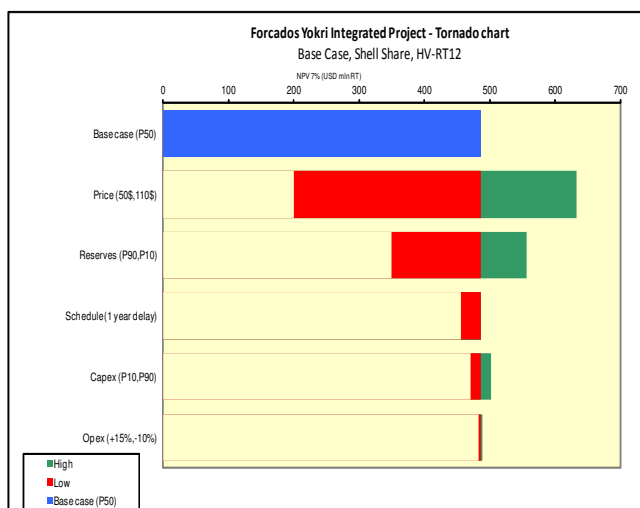
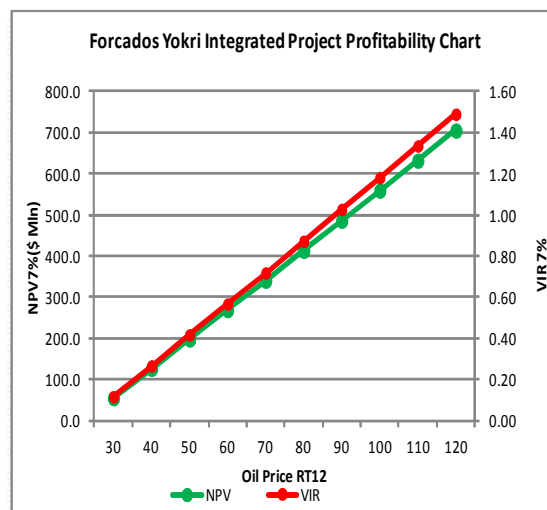
Risk and uncertainty analysis was also carried out for the project base case. The NPV probability density function (PDF) curve is shown in Appendix 4.

Table 2: Economics Grid

PV Reference Date: 1/7/2012	NPV (S/S \$ mln)		VIR	RTEP	VTE	UTC (RT \$/boe)		Payout-Time (RT) (yyyy)	Maximum Exposure (RT- AT) (\$mln (yyyy))
Cash flow forward from: 1/1/2012	0%	7%	7%	%		0%	7%		
Base Case									
SV (\$50/bbl & NGMP based gas price)	463.6	199.7	0.42	25	0.80	9.0	10.6		
RV (\$70/bbl & NGMP based gas price)	712.3	340.4	0.72	39	1.58	9.0	10.6		
HV (\$90/bbl & NGMP based gas price)	969.9	486.4	1.03	>50	2.67	9.0	10.6	2016	177.5 (2014)
BEP* (RT \$/bbl)						13.1	22.2		
Sensitivities (using HV-RT12)									
High CAPEX (P90)		468.4	0.87					2016	229.7 (2014)
Low CAPEX (P10)		501.8	1.22					2015	143.2 (2013)
High OPEX (+15%)		482.9	1.02					2016	178.3 (2014)
Low OPEX (-10%)		488.7	1.03					2016	177.0 (2014)
High Reserves (P10)		556.7	1.18					2015	162.1 (2014)
Low Reserves (P90)		349.6	0.74					2016	207.7 (2014)
License expires in 2019		289.4	0.61					2016	177.5 (2014)
Life Cycle Economics		519.8	0.45	30	1.05			2015	143.6 (2014)
Project with ring fencing		484.1	1.02					2016	95.5 (2013)
Production starts in 2014		392.6	0.83					2016	274.6 (2014)
1-Yr Production delay		457.3	0.97					2017	176.5 (2015)
1.5% cost markup due to BVA issues		455.2	0.92						
Project under MCA		476.0	0.46						
All Capex from 2014 onwards funded under MCA		482.1	0.65						
PIB IAT_v9		438.4	0.93						
PIB House_v12		563.1	1.19						
Additional Uncertainty and Risk Analysis - using HV (only required for proposals > \$ 300 mln S/S)									
NPV(P10)		558.4	1.18						
NPV(P90)		339.0	0.70						
EMV at HV / eVIR at HV		466.0	0.98						
Probability of NPV > 0 at HV		100%							
Dispersion = EMV / (NPVP10-NPVP90) at HV		2.1							

*Corresponding gas price is 14% reduction of the domestic gas profile

¹ Economics based on post ESAR dataset.

**FYIP Tornado Plot.****FYIP Profitability Plot****Key Project Parameter (Shell Share)**

Parameter	Unit	BP11 Provision	Low	Mid	High	Comments
Capex (MOD)	US\$ mln	727.4	470.3	542.3	615.8	Change in project objectives and scope
Opex (MOD)_Project	US\$ mln	NA	5.7	5.7	5.7	SCD OPEX and training costs A significant OPEX amount was spent in previous IP (Community project and related activities already met)
Production Volume	mln boe	101.0	85.2	109.2	123.6	Change in project objectives and scope 9% of the volume produced is gas
Start Up Date	mm/yy	Sep-13	Feb-14	May-14	Feb-15	The BP11 first Gas date of September 2013 was based on a schedule risk analysis performed before award of the Offshore Flares Down contract DG3, without the benefit of input from the offshore installation contractor
Production in first 12 months	mln boe		4.4	5.2	5.4	5% of the total volume produced

Economics Assumptions**Base case**

- Oil PSVs of \$90/bbl @HV-RT12 with appropriate offset applied.
- Gas sales to domestic market Aggregate Domgas PSV (based on NGMP framework as at 21/03/2012).
- Oil taxed under PPT (PPT tax rate of 85%).
- Gas taxed under CITA with Associated Gas Framework Agreement (AGFA) incentive.
- ABCM OPEX provided by the project team.
- SCD provided by the project team.
- Education Tax of 2% assessable profit.
- NDDC levy of 3% total expenditure.
- GHV of 1000 btu/scf.
- Flare Penalty of \$3.5/Mscf was applied and is not tax deductible.
- Abandonment cost is estimated at 10% of total project RT CAPEX.

PIB and MCA economics assumptions are shown in Appendix-3

Section 3: Risks, opportunities and alternatives

The principal risks associated with this proposal and key mitigation measures are as follows:

1. Scope Reduction Potential:

The FYIP completion scope and associated schedule estimate defined in this GIP has been developed on a 'worst case' scenario philosophy with robust provisions for scope creep from asset integrity inspections. Major overhaul of equipment packages, factory refurbishment of control systems, workshop repairs/re-calibration for instrument and valves, and replacement of all electronics etc, have been assumed. All 18 offshore Cluster Jackets and 93km of Bulklines (streamlined to 122km to align with current production forecast) have been considered for replacement. **Opportunity:** There is a significant cost saving opportunity relative to the GIP request, given the following;

- The actual refurbishment, replacement and/or repair scope will be determined by the inspection and technical integrity verification program being implemented using OEM Vendors and specialist NDT service providers.
- Marginally economic offshore clusters (5 in number, with VIR's of 0.15 to 0.34) and 30km currently producing bulklines of suspect integrity are included in the completion estimate covered by this request.

The \$190million included in the estimate for these items could potentially be saved if the scope is not executed. This amount shall be held in Management Reserve and disbursed under control of SEPA-UIG.

2. Project Funding by Venture Partners:

NNPC's share of Project funding is ring fenced in the Domgas/IPP budget of the Federal Government of Nigeria for domestic gas supply projects with special enablers for expedited contract approvals. With the inclusion of another major infrastructural development project like SSAGS in this basket, there is a risk that adequate funding allocation to support delivery at planned pace might be challenging. NAPIMS may also demand that Asset Integrity works (Offshore phase-2 works) be funded under the MCA arrangement **Mitigation:** The Domgas projects are considered priority in SPDC's portfolio over the next 2years (60% of capital budget). Economic sensitivity evaluation of the entire project under MCA funding scenario shows that it remains viable with slight reduction in NPV7 (\$486mln to \$476mln) SS, but the VIR7% drops significantly from 1.03 to 0.46. Two additional clusters also become marginally economic.

3. Non-availability of Domgas Funding

The project economics rely on the availability of ring-fenced Domgas funding from NNPC. There is a risk that NNPC may consider that this is an expensive project for only relatively little gas and hence they may prefer to invest Domgas funding elsewhere. **Mitigation:** Other potential supply sources in the West include SPDC SSAGS (2015), CNL Okan (2015+), Exxon Bosi/Erha (2017+), NPDC Odidi (2018+) and SPDC Okpokuno (2018+) but these do not fully meet the projected demand growth and they are all high cost projects. Furthermore, the timing of project's OSD fills a critical supply gap which the Government recognises and values.

4. Impact of year by year Budget Approval by NNPC

The absence of a formal project funding approval at FID from NNPC means that funding requirement are subject to the annual budget approval cycle with a risk that full funding is not guaranteed over the project period. **Mitigation:** It is important to leverage the priority NNPC has placed on the project as a Domestic gas supplier to demand for the appropriate funding levels during the annual budget approval cycles. Furthermore past experience has shown that approval of the EPC contracts by the NNPC Board represents a form of commitment to meet annual funding requirements, and there is no precedent for NNPC failing to fund contracts after they have been approved by their Board.

5. NNPC Contract Award Approvals

The approved plan for FYIP completion is premised on award of remaining contracts ahead of securing full NAPIMS/NNPC approvals using the Shell LDL framework with related cost recovery exposure. **Mitigation:** SPDC has maintained close and regular engagement with NAPIMS to ensure common understanding of project priorities and urgencies. There is a high chance of NNPC GEC / Board approvals for proposal that have passed and obtain the endorsement of the NAPIMS Contract Review Committee (CRC), which in most cases are given in a timely manner. Against this background the

proposal is to secure Shell LDL approval to award the contracts once NAPIMS CRC endorses the award approvals to NNPC GEC / Board. The two contracts (subsea cable procurement and Offshore Phase-1 contracts) awarded on 2011 using this strategy have subsequently been approved by NNPC/NAPIMS.

6. Subsurface Uncertainties:

These are considered minimal based on well data. All 25 wells in the revised scope have already been drilled. Only one was found wet, while others were on prognosis. However, pressure depletion in the major reservoirs (D5.000 and D6.000) is a concern. **Mitigation:** Production forecast and reserves estimates have considered the pressure depletion issues and studies have already being initiated for introduction of Water Injection for the purpose of pressure maintenance in the Forcados Yokri Field in the future.

7. Licence Expiry in 2019

The OMLs (43 & 45) expires in 2019. There is a risk that some of the investment value will be lost if the licences are not renewed. **Mitigation:** A sensitivity has been included in the Economics to show that payout period occurs before the licence expiry date of 2019 under JV and MCA funding scenarios. In a recent letter from the Group Executive Director (GMD) to the ECMB, NNPC has expressed desire to have the FYIP project accelerated in support of the Government's Domestic Gas supply programme. SPDC will attempt to leverage the Government's enthusiasm for the FYIP project in negotiations for licence renewal.

8. Crude Theft

An estimated 7 to 10% of crude production in the SPDC Western Division is currently lost due to bunkering, and therefore the oil volumes from the project could be reduced due to theft. **Mitigation:** A thorough review of additional security measures to combat oil theft will be conducted.

9. Constrained Domestic Gas Pipeline Capacity

There is a risk that the gas export route to the Domestic gas market may be constrained by lack of ullage in ELPS. **Mitigation:** The FYIP production facilities and export pipeline system have been designed to allow the associated gas to be routed to NLNG via OGGS, in the event that the Domgas export route is not available.

10. NCD Act Implementation

Nigerian Content Directive (NCD) Act compliance requirements could result in project cost and schedule overrun due to limited in-country material manufacturing capacity and capability. **Mitigation:** A detailed NCD compliance Plan has been developed and is undergoing review by Nigerian Content Development and Monitoring Board (herein after referred to as Board). The Board is being engaged and have already granted waivers to procure the subsea fibre optic cables and Line pipes outside Nigeria.

11. Social Performance

- **Security situation in SPDC West operational area:** Though improved, , there remains a risk of project delay from security related incidents, particularly offshore, where pirates, armed youths and armed gangs still operate regularly. **Mitigation:** A security risk assessment with mitigation plans is in place to reduce security risks to ALARP. In addition, the FYIP has been integrated into the overall Swamp-1 and Forcados Terminal security arrangements and a dedicated Security Adviser for Major projects resourced to ensure learning from other projects AFAM, Gbaran Ubie, NCTL etc, are imbibed. Despite these mitigations, a major security incident with significant schedule and cost impacts cannot be ruled out given the requirement to rely on Government Security Agencies.
- **Sustainable Development:** Global Memorandum of Understanding (GMOU) for the Ogulagha Cluster is yet to be finalized and deployed with risks to work disruption. **Mitigation:** A Project MOU has been finalized along the lines of the GMOU framework and is being used to manage community interfaces.

The community power and water supply network project funded from FYIP SCD budget is largely complete while the 5km road and fish pond projects are yet to be executed. **Mitigation:** Completion

of these projects and tie-back to the new production facilities for interdependency is in FYIP's plan. Other legacy projects with the communities have been migrated into the GMOU and NGN300million (US\$ 2million) funding released for implementation.

- **HSE Management:** HSE Management is being implemented in line with requirements of the SPDC Major Projects & Engineering HSE Management System (adapted from the Group HSE Management System). The criticality of ensuring that residual project risks at Hand-Over to Operations is ALARP given the mis-aligned phases of various aspects of the project is well understood and a comprehensive review is planned as part of the New Onshore Scope detailed design.
- **Environmental Management Plan (EMP):** Some of the social impact mitigation activities of the EMP are yet to be implemented and could potentially be a source of strife/agitation from the communities. **Mitigation:** FYIP has to date provided agency employment for 28 Indigenes and plans are being finalized for trade skills acquisition training provision to 80 other indigenous youths. Other human capital empowerment programmes in the EMP are being reviewed for implementation.

Key Opportunities

- **Opportunity for Further Oil Development**

The proposal protects the 33 kpd production from the field, unlocks some 10kbd currently locked in potential as well as provides the leverage for further oil development.

Alternatives Considered: The considered alternative is not to complete the FYIP. This will mean NFA production of some 33kpd will be shut in, the reserves development programme will be suspended and 332.4 MMstb (100%) booked reserves will be de-booked. The field comes up for license renewal in 2019, non execution of the programme and a shut-in of the field may result in SPDC relinquishing the acreage.

- **Exploration scope and Future development**

Further development opportunities exist in the Forcados Yokri field that will benefit from the installed facilities by FYIP. These opportunities include Forcados Workover, Forcados west and Forcados FOD projects. These projects will provide access to some additional 178.3 MMstb when delivered.

In the long term, over 200 MMboe near-field exploration prospects exist and are currently being matured by the exploration team. These prospects include Forcados North, OML43_WFN01, Forcados Deep, Forcados Northwest and Ogulagha.

Section 4: Carbon management

The purpose of this project is to limit green house gas emissions to the environment. Being already in late execution, the opportunity to register the Project under the Clean Development Mechanism (CDM) in order to access an income stream from tradable Certified Emissions Reduction Certificates (CERTS) cannot be initiated. However, the project will help in promoting associated gas utilisation in Nigeria.

Section 5: 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 6: 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, Sustainable Development, Supply chain management, HSE, Operations, Legal, Treasury and Tax functions.

Section 7: Project management, monitoring and review

Project execution has progressed in accordance with the Opportunity Realization Process and Shell Global Processes. Critical positions for project delivery have now been fully resourced after an initial challenge with attracting talent when future status of project was still uncertain. A dedicated project team is managing day-to-day activities under supervision of the GM Projects with Project Services Support from the SODA Matrix Organization. Overall project progress is monitored by DRB. GM Projects reports progress to VP Technical UIG who is providing support, challenge and oversight on the FYIP Project from the regional end. As a

Flagship project, this project falls under the auspices of PTM. The 'Fact Sheet' supporting the projects latest cost and schedule view, has been reviewed and endorsed by PTE/S.

Section 8: Budget provision

The estimated total funding for FYIP project is approximately \$2.890billion (MOD), of which \$1.063.5billion is already sunk. The project is funded under the IPP/DomGas Portfolio of projects which enjoys priority, ring fenced budgetary allocation from NAPIMS. The project is in the JV Base Plan for BP11 and will remain a feature in BP 12, BP13 and BP 14 submittals. The expenditure figures are updates to BP11 reflecting the final outcome of ESAR4 concluded in March 2012.

Provision made for budget in BP11 covers the requirement for the year 2012. The additional budget to cover the requirements for 2013, 2014 and 2015 has been re-phased in line with re-scheduled activities and 2013 will be requested as part of the BP12 and future year's budget allocation discussions with Partners.

FYIP CAPEX PHASING (US\$, 'mln)

ACTIVITIES	Prior 2010	2010	2011	2012	2013	2014	2015	2016	Total
WELLS	142.0		-	-	33.1	80.0	36.0		291.1
OIL FACILITIES & INFRASTRUCTURE	368.7	5.5	47.1	173.0	226.3	256.0	173.7	69.5	1,319.6
GAS INFRASTRUCTURE	454.4	7.0	36.2	145.6	302.6	174.0	137.9	-	1,257.7
PROJECT OPEX (SCD & TRAINING)	2.6	-	0.0	6.5	5.8	5.5	0.7	0.5	21.6
TOTAL	967.8	12.5	83.2	325.1	567.7	515.4	348.3	70.0	2,890.0

Section 9: Group financial reporting impact

The impact of this Investment Proposal on Shell Group Financials is shown in the table below (commitment phasing and expenditure are Shell Share (50/50) MOD on the project's base case at \$90/bbl HV-RT 1/7/2012):

US\$Mln	2012	2013	2014	2015	2016	Post 2016
Total Commitment	97.5	170.3	154.6	104.5	21.0	
Cash Flow						
SCD Expenditure	2.0	1.7	1.7	0.2	0.2	
Pre-FID Expenditure						
Capital Expenditure	95.6	168.6	153.0	104.3	20.9	
Operating Expenditure	20.6	23.2	18.4	16.9	15.3	478.1
Cash flow from Operations	12.6	70.1	127.6	163.4	179.5	1505.6
Cash Surplus/(Deficit)	-83.0	-98.5	-25.4	59.2	158.7	1505.6
Profit and Loss						
NIBIAT +/-	36.7	37.1	58.4	81.1	87.4	1333.9
Balance Sheet						
Avg Capital Employed	59.8	187.5	297.2	350.1	325.4	127.9

Section 10: Disclosure

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

Section 11: Financing

Shell's share of the capital expenditure will be met by SPDC's own cash flow and the existing shareholder facility with Shell Petroleum Company Limited ('SPCO') if required.

Section 12: Taxation

There are no unusual taxation features at this stage

Section 13: Key Parameters

The following is the main aspect of this proposal:

- Approval of US\$ 507.6million MOD 50/50 composed of CAPEX-US\$ 503.1million and OPEX-US\$ 4.5million to be added to US\$40.4million unspent sum from GIP 21.11.07 to fund completion of the revised scope of the Forcados Yokri Integrated Project (FYIP).
 - This additional cost brings the overall FYIP cost to US\$ 867.0million, Shell share.
 - The additional costs will be financed with JV funding and Shell share of the expenditure will be met by SPDC's own cash flow and/or the existing shareholder facility/loan facility with SPCO.
- GIP Request is premised on a 08-May-2014 (P50- OSD) First Gas Export to either Domgas or NLNG from the CPF with gas intake from any of the flowstations.

Section 14: Signatures

This Proposal is submitted to UI for approval.

Supported by:

For Business Support:

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Henry, Simon P RDS-ECSH

.....
Brown, Andrew RD RDS-ECMB,

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

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

Business Approval

.....
Voser, Peter R RDS-CEPV

Initiator: Toyin Olagunju, SPDC-UIG/T/P

Appendices:

- 1) PIB and MCA assumptions
- 2) NPV7 probability density function (PDF) curve

Appendix-1: PIB and MCA Economics Assumptions.

PIB Assumptions (House Version)

- No production allowance used in analysis.
- CIT is 30% of taxable income with a depreciation schedule of 3x25%, 24% for qualifying expenditure and it is not deductible for NHT calculation
- NHT is 50% with a depreciation schedule of 4x20%, 19% for qualifying expenditure.
- 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
- 15% cost overseas applied.

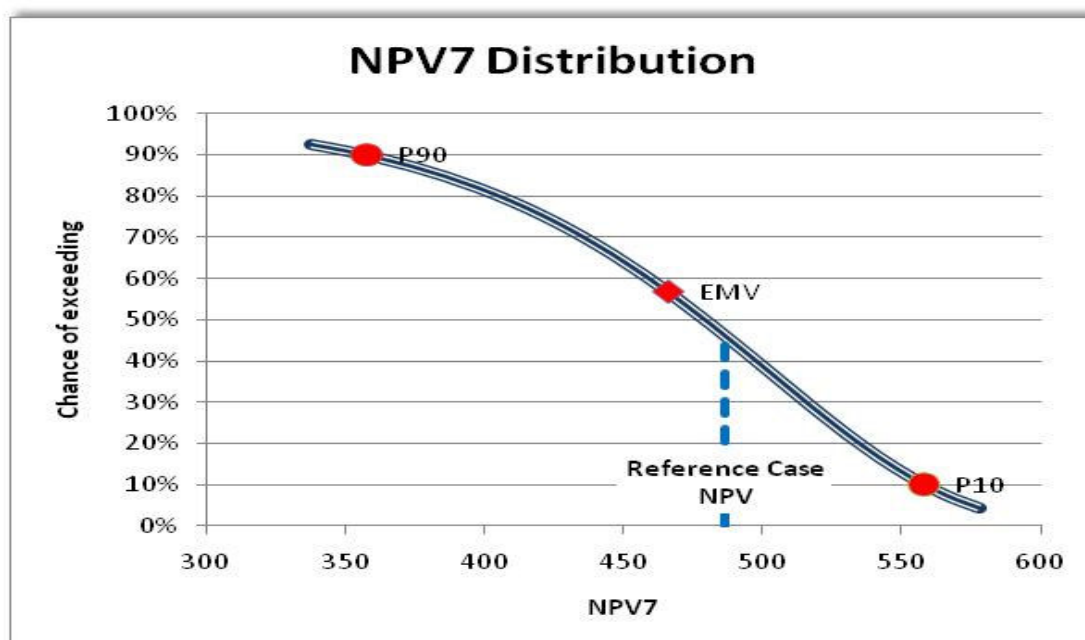
PIB Assumptions (IAT version)

- No production allowance used in analysis
- NHT depreciation schedule is 4x20%, 19% for qualifying expenditure.
- No capital investment credit/allowance (ITC or ITA) or uplift is granted under the PIB
- 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 & is not deductible for CIT, but deductible for NHT.
- NDDC levy calculated as 3% of expenditure
- Withholding tax is applicable at a rate of 7.5%
- 20% of overseas cost is non-deductible for determination of NHT taxable income.

MCA Assumptions

- All FYIP costs on the MCA would be recovered through cost oil.
- Profit oil ceiling of 8% IRR on carried costs
- Current agreement for recovery of carry costs is maintained
- \$91.69/bbl – oil at PSV HV-RT in 2012 for HV MCA Economics
- OPEX not carried under current MCA arrangement.

Appendix 2: NPV probability density function (PDF) curve



The reference case has no probability of achieving NPV7<0. The EMV being higher than the reference case is attributable mostly to the skewness of the P10 and P90 reserves.