

## 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	Upstream International (UI)																																																														
Amount	US\$607mln Shell share, MOD, 50/50 is requested for approval of the 100% JV estimate of US\$947mln. The proposal includes Shell equity share (30%) of US\$284mln and Shell’s MCA commitment to NNPC of US\$323mln of which US\$80mln 100% JV has been approved in a Pre-FID investment proposal.																																																														
Project	Trans Niger Pipeline Loopline (TNPL) Project																																																														
Main commitments	<table><tr><td></td><td colspan="3">100% JV</td><td colspan="3">Shell Share</td></tr><tr><td>Description</td><td>Pre-FID Proposal</td><td>Incremental IP (\$mln)</td><td>Complete Budget (\$mln)</td><td>Incremental IP and Pre-FID</td><td>NNPC MCA Carry (\$mln)</td><td>Complete Budget (\$mln)</td></tr><tr><td>Pipelines CAPEX</td><td>73</td><td>796</td><td>869</td><td>261</td><td>323</td><td>584</td></tr><tr><td>PMT Cost</td><td>7</td><td>53</td><td>60</td><td>18</td><td>-</td><td>18</td></tr><tr><td>Total CAPEX</td><td>80</td><td>849</td><td>929</td><td>279</td><td>323</td><td>602</td></tr><tr><td>SCD OPEX</td><td>-</td><td>17</td><td>17</td><td>5.19</td><td>-</td><td>5</td></tr><tr><td>Total 50/50 MOD (Excluding capitalized interest)</td><td>80</td><td>867</td><td>947</td><td>284</td><td>323</td><td>607</td></tr><tr><td colspan="7">Note: Capitalized interest on SS and MCA Carry is \$58.6mln</td></tr></table>								100% JV			Shell Share			Description	Pre-FID Proposal	Incremental IP (\$mln)	Complete Budget (\$mln)	Incremental IP and Pre-FID	NNPC MCA Carry (\$mln)	Complete Budget (\$mln)	Pipelines CAPEX	73	796	869	261	323	584	PMT Cost	7	53	60	18	-	18	Total CAPEX	80	849	929	279	323	602	SCD OPEX	-	17	17	5.19	-	5	Total 50/50 MOD (Excluding capitalized interest)	80	867	947	284	323	607	Note: Capitalized interest on SS and MCA Carry is \$58.6mln						
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Source and form of financing	This investment is part of the Trans Niger Pipeline Loopline (TNPL) MCA 2 Projects bundle and Shell share of capital expenditure will be met by SPDC’s own cash flow.																																																														
Summary cash flow	Cost only Project. Cash Flow chart not applicable.																																																														
Summary economics	Summary economics (RV-RT12)		NPV7 (USD mln)		RTEP (%)		VIR7																																																								
	Base		-131.6		NA		-0.27																																																								
	High CAPEX		-159.1		NA		-0.27																																																								
	Value at Risk		3,683.3		>50%		NA																																																								

**Section 1: The proposal (management summary)**

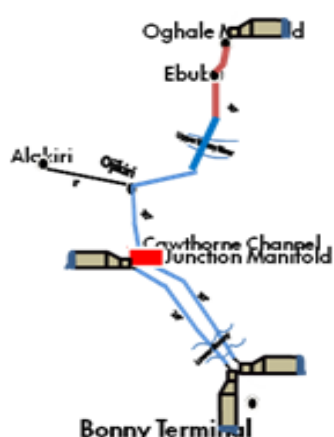
The Group Investment Proposal seeks approval for funding of \$284mln Shell equity share (\$947mln, MOD, 50/50 100% JV) plus additional MCA commitment of \$323mln bringing total Shell Share to \$607mln. A Pre-FID IP had been previously approved for US\$80mln 100% JV of which \$73mln 100% JV is capitalised for MCA funding. This proposal therefore seeks additional funding of Shell Share \$583mln for the execution of Trans Niger Pipeline Loopline (TNPL) Project.

The TNPL project will support SPDC continuous freedom and license to operate whilst enabling the evacuation of 180kb/d of SPDC JV and other Operators (including circa 127kbl per day of SPDC Land East production) and 267kboe per day of gas from Gbaran, Agbada (under construction), Okoloma and Alakiri gas plants including third party production to Bonny terminal. This new line passes through an alternative route from the existing Trans Niger Pipeline (TNP) thus providing opportunity for the remediation of existing TNP right of way which has been devastated by activities of crude oil illegal bunkerers, thieves and saboteurs. The evacuation of condensate from Gbaran Ubie and the other gas plants ensures gas supply to NLNG and support Afam Power plant (650MW) that remains a major agenda of the Federal Government.

The need to loop the TNP was identified early 2007. The project Contract Strategy was approved by the SPDC Major Tender Board and the Group Project Contract Board respectively. A VAR4 and Estimate & Schedule Assurance Review (ESAR) were held from 30th of May to 3rd of June 2011.

## Project Scope

To mitigate the risk of schedule elongation, the project shall be let in three Engineering, Procurement and Construction (EPC packages) to three different Contractors thus:



**Package1:** This shall cover the first 30" x 12.5km Ogale to Tie-in Point 1 (Eleme/Ogu Bolo) all land terrain.

**Package2:** This shall cover the second 30" x 25.5km Tie-in Point 1 (Eleme/Ogu Bolo) to Cawthorne Channel Junction Manifold and the 8" x 2.4km Alakiri-Ojokiri spurline all swamp terrain.

**Package3:** This shall cover the third 30" x 20km leg and the 24" x 20km loop leg from Cawthorne Channel Junction Manifold to Bonny Oil & Gas Terminal all swamp terrain.

An earlier Pre-FID cost of US\$80mln (100% JV) was approved to cover the following scope:

- Front End Engineering Design (FEED) - *Completed*
- Survey – *Completed*
- Land Acquisition – *in progress, to be completed by Q1/13*
- Environmental, Social, Health Impact Assessment (ESHIA) – *Awaiting Regulators' approval*
- Project Management Cost – *ongoing*
- Procurement of Long Lead Items (LLIs) – *50% of linepipes ordered overseas have been delivered and coating commenced. Commenced receipt of the second half ordered in-country, to be completed by Q1/13.*

## Target

Contingent upon GIP approval and Funding being in place by March 2013, On-Stream Date aspiration for P10, P50 (Promise) and P90 are January 2016, July 2016 and January 2017 respectively.

## Funding

The estimated total cost for the TNPL project is \$947mln (MOD, 100%) split into \$80mln (MOD, 100%) Pre-FID approval and \$867mln (MOD, 100%) current proposal. This total project cost consists of a total CAPEX of \$869mln (MOD, 100%), PMT Cost of \$60mln (MOD, 100%) plus SCD OPEX cost of \$17mln (MOD, 100%). Apart from Shell equity share funded by company cash-flow, NNPC share of funding will be via a Modified Carry Arrangement whilst Total & ENI will provide own funding. The project cost and funding strategy has been agreed with NAPIMS and formal approval has been received.

As part of MCA bundles, TNPL is bundled with Awoba FOD, Nembe Creek Phase 2 and Nembe Sidetrack projects.

The total project expenditure and phasing is shown below. These figures have incorporated all recommended action from the final outcome of VAR4 and ESAR4 concluded in June 2011.

**Table 1: Expenditure Phasing (100% JV, US\$ mln MOD 50/50)**

Cost Phasing (FUS\$mln)							
	2010-2012	2013	2014	2015	2016	2017	Total
	Pre-FID	Incremental					
CAPEX	73	152	252	211	138	43	869
PMT	7	9	17	15	10	3	60
Total CAPEX	80	161	269	226	148	46	929
CAPEX Shell Share Equity	24	48	81	68	44	14	279
SCD - Opex	0	4	5	4	3	1	17
OPEX Shell Share Equity	0	1	2	1	1	0	5
MCA Carry	27	56	93	78	53	17	323
Total Share Share	51	105	175	147	98	30	607
Total 100% JV	80	165	274	230	151	47	947
Percentage	8%	17%	29%	24%	16%	5%	100%

\* Budget for 2017 is to cater for payment of retention fees, demobilisation milestone and PMT for contracts and project closure

**Section 2: Value proposition and financial context**

SPDC declared an emergency action on TNPL and was duly supported by NAPIMS and other JV partners due to the following:

- The level of environmental degradation resulting from oil theft and illegal bunkering on the existing TNP 24" and 28" pipelines
- Routine maintenance has not been allowed in the past nineteen years due to socio-political crises on the sections of existing TNP that goes via Bomu axis (within Ogoni land).

Indeed, aside potential HSE and social risks, a failure of the existing line will result in deferred oil volumes, condensate and gas production and loss of revenue over a three to four year re-construction period should this loopline not be constructed. The value at risk from greater Port Harcourt oil production and gas production from Gbaran and Okoloma translates into NPV7% of US\$3,683.3 mln (Shell Share).

**Summary Economics**

The TNPL Project was evaluated on a forward looking basis using the 50/50 LE cost estimates.

It is expected that the funding of NNPC share will be done via a Modified Carry Agreement (MCA); consequently the economics evaluation has been based on the 2008 MCA structure. The TNPL project is in the same MCA bundle with Awoba FOD, Nembe Phase2 and Nembe Sidetrack 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 (TNPL, Nembe Creek Phase2, Awoba FOD and Nembe Sidetrack) was only evaluated as sensitivity.

The following sensitivities were evaluated: Project funded under JV, high and low CAPEX, 1 year project delay, life cycle economics and 1.5% mark up due to BVA (Bench marked verified and approved) issues due to NNPC cost disputes.

The PIB sensitivity was also evaluated. It shows a reduction in value due to decrease in tax credit from expenditure due to decrease in oil tax rate. Also, PIB provisions will not affect or impact the cost recovery of the MCA tranche.

The protected value of the NFA from the facilities that feed into the TNPL based on BP12 forecast was also evaluated. This is evaluated and presented as the value (excluding midstream) at risk in the grid. This is the worst case scenario that, the existing pipeline fails without an alternative evacuation route provided for current throughput.

**Table 2: Trans Niger Pipeline Loopline (TNPL) 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)
<b>Base Case</b>									
RV (\$70/bbl RT12)*	-114.9	-131.6	-0.27	NA	NA	NA	NA		275.9 (2015)
<b>Sensitivities (using RV-RT12)</b>									
Project funded under JV		-67.8	-0.30						
High CAPEX (P90)		-159.1	-0.27						
Low CAPEX (P10)		-110.3	-0.27						
1 Year project delay		-120.5	-0.27						
1.5% cost markup due to BVA issues		-146.6	-0.27						
MCA bundle**		120.1	0.14						
PIB		-330.5	-0.45						
Value at Risk***		3,683.3	NA						

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

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

\*\*\* Value of production from facilities that feed into TNP based on BP12 forecast which is at risk if the existing pipelines fails without an alternative evacuation route provided.

**Key Project Parameters Data Ranges (Shell Share)**

Parameter	Unit	BP12 Provision	Low	Mid	High	Comments
Capex (MOD)	US\$ mln	598	478	598	699	Based on LE cost estimates
Opex (MOD)_Project	US\$ mln	5	4	5	6	SCD Opex
Production Volume	mln boe	NA	NA	NA	NA	Cost only evaluation
Start Up Date	mm/yy	Jun-16	Jan-16	Jun-16	Aug-16	
Production in first 12 months	mln boe		NA	NA	NA	

**Section 3: Risks, opportunities and alternatives**

The key risks identified in the project are as follows:

**Threats****Road/Marine Transport Incidents (E, O)**

The project involves considerable movement of personnel and materials (linepipes, equipment, etc). The linepipes from SCC Abuja would be moved via road to the coating plants and to site mainly by marine transport. **Mitigation:** Logistics Infrastructure and Risk Assessment was conducted for land and marine routes and a comprehensive Logistics Execution Plan has been developed for the project. A Logistics workshop facilitated by corporate team will be held to assess Contractor's plans for movement of materials and personnel.

**Water Pollution and Turbidity (P, E)**

TNPL project shall cross 19 creeks/rivers along its Right of Way including heavy marine movements of barges and boats. **Mitigation:** The project has actively pursued the use of Horizontal Directional Drilling (HDD) in lieu of traditional dredging methods for river crossing. This would significantly reduce the environmental impact of the pipeline laying activities on the fauna and flora. Effluent discharge from houseboats shall be strictly monitored in accordance with the Project EMP. In general, during detail design, the Contractor will be required to demonstrate how risks would be managed through a Construction HSE Case.

**Security Risks (P, E)**

The project is located in the swamp of the Nigeria Delta and security issues are particularly significant in these areas, highlighted by cases of hostage taking, and armed attacks and sabotage of, especially, pipeline systems. **Mitigation:** A Security Plan would be agreed and signed off by Corporate Security prior to commencement of site activities. All work will be done according to the approved security plan under the oversight of the Corporate Security team.

**Social Performance/Community Issues (P, E)**

There is a risk of community agitations outside agreed GMOU terms that could lead to delay and cost growth. **Mitigation:** Global Memorandum of Understanding (GMOU) is the corporate platform for managing community interface as well as delivering benefits to communities. Currently, SPDC has no functional steady-state GMOU covering the project area; however, arrangements have reached an advanced stage to establish GMOUs for Okirika and Bonny Clusters so as to extend GMOU coverage across the project area. The social/non technical risks associated with the project will be mitigated in line with the HSSE&SP framework by delivering a robust social investment plan, impact mitigation and stakeholder engagement. SCD costs have been properly captured in the cost estimates in the GIP and contractors being proposed for the project execution will be required to submit an approved Community Affairs Plan that will guide their interface with the impacted communities in project area. In addition, adequate resources, including the active support of the host-Asset Community Relations Team and Community Relations service contract, will be provided by the project for proactive management of community issues throughout the project duration.

**Delayed NNPC Award Approvals for EPC Contracts (C, E, P)**

Three contracts are proposed to be awarded within Q2 2013 (1st April 2013) – one for each package. The commercial tendering has been completed and NAPIMS has proposed an award recommendation different from

SPDC's position for approval. SPDC is actively engaging NAPIMS/NNPC to ensure alignment of views such that award is based on commercial and technical considerations in the overall interest of the JV. Approval protocols within NAPIMS/NNPC can take up to 6 to 12 months to process. **Mitigation:** NNPC has recognised TNPL as a project for emergency execution and is fully aligned with the project's objectives. Historically 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 Local Decision Limit (LDL) approval to award the contracts once NAPIMS CRC endorses the award approvals to NNPC GEC/Board.

### **Crude Theft and Illegal Bunkering (P, T)**

Significant increase in the levels of sabotage and crude theft from pipelines in the Niger Delta remains a challenge. **Mitigation:** The pipelines will be buried to 4.5m depth (against conventional 1.2m depth) and partially covered 1m above the pipes in all swamp terrains, with 3m water column above for boats patrol & surveillance and installation of protective reinforced concrete slabs on land. Other protective measures include installation of intruder detection and leak detection system along the entire pipeline length and installation of Security Outpost along RoW for prompt response to intrusion alarm.

### **Lower Bonny River Crossing with HDD (T, C)**

Contrary to SPDC's award recommendation, NAPIMS' has insisted on award of the most technically challenging Package to a Contractor with least technical experience whose proposals to use Horizontal Directional Drilling (HDD) methodology, which is untested for the circa 4km Lower Bonny River crossing (3.6km river width and 400m approach) remains a concern. **Mitigation:** JV intervention would be made at two trigger points as surmised below:

- i. Trigger point One – Failure to obtain a certified HDD design from a third party Certification Agency (Lloyds, DNV or Bureau Veritas), JV will decide to move on to a conventional method.
- ii. Trigger Point Two – Where the Contractor is unable to execute the HDD crossing successfully, JV will decide to revert to a conventional method.

The schedule and cost impacts of switching to conventional river crossing methodology have been built into the project estimates. Allowance for these back-up measures is included in the project contingency. PMT plans to address this risk proactively by agreeing this strategy upfront before contract award. Engagements are ongoing with stakeholders.

### **Funding (C, E)**

The base proposal is to fund the project by Alternative Funding (AF). The cost estimates are now agreed with JV partners following opening of the commercial bids for the EPC Contract. In the meantime, we have received MCA (AF) funding approval from NAPIMS. It is therefore now realistic to progress with interim award of contract ahead of formal NNPC Board approval, provided Total and ENI commit to honouring their bills. **Mitigation:** Project team to continue providing all needed support/data necessary for speedy approval now that costs are agreed and Fact Sheet has received functional support at the center.

### **Ogoni Issue (P)**

Although the TNPL pipeline does not traverse the Ogoni communities, there are misconceptions that the Ogale community is under the Ogoni principalities. This has been repeatedly refuted by the entire Eleme Kingdom (to which Ogale belongs) and Government representatives. It is clear though that any perceived E&P activities in Ogoni by SPDC will result in a negative media backlash for SPDC. **Mitigation:** Engagements with Rivers State Government and community leadership have confirmed that the project route does not traverse Ogoni land. However the project team is closely monitoring activities of all organized groups that may impact the project. Active sensitization and visits to community leaders in the areas along with the support of the State Government is being maintained. All the impacted communities have refuted any form of association with Ogoni principalities. Despite all these mitigation measures, should this threat happen, then it would be considered a security case and will be handled accordingly.

### **Cost Recovery (E)**

Within same MCA bundle with TNPL, Nembe Creek Phase 2, Nembe Sidetrack and Awoba FOD are the revenue generators. Should these other projects not be sanctioned timely or come on stream as planned, it will weaken the capacity for cost recovery. **Mitigation:** Awoba FOD, Nembe Sidetrack and Nembe Creek Phase2

have received approval from the NAPIMS Board on final cost numbers for AF funding. These projects are mature enough to support TNPL pipelines with minimal risk of recovering the funds used for these projects. Current projections are that FID would be given for the projects by January 2013. However, these portfolios of projects are being managed within same directorate and therefore receiving similar attentions.

## Opportunities

### Improve Competition & NCD Compliance By Using New Local Contractors (C, P)

TNPL has provided opportunity for a number of new entrants (local EPC contractors) to SPDC pool of contractors, albeit may require additional level of intervention. Strategy and cost provisions for these additional requirements have been made.

### Crossing of Major River with HDD Technology (T)

Traditional methods of crossing rivers have serious impact on marine traffic, economic activities (fishing is a major stay of the locals), and increases turbidity of the waters (which is drunk by the communities). **Enhancement:** SPDC is continuing to support all initiatives towards the use of HDD for all the river crossings on the project apart from the 3.6km lower Bonny River crossing which is considered rather challenging as it would be testing the limit of current HDD technology. Provision has been made in the contract for third party certification of the design and installation of the lower and upper Bonny River crossing by Lloyds, DNV or Bureau Veritas which would also provide an opportunity for knowledge transfer particularly for the local contractors.

## Alternatives

1. Continue to produce through the existing TNP: **Rejected:** The existing line already has questionable integrity which is not fully verified and has been damaged at various sections by saboteurs.
2. Replace the TNP along same Right of Way: **Rejected:** This is not recommended as the new line will be faced with same exposure to oil thieves. It will also not support SPDC's plan to remediate the existing TNP RoW following UNEP report of Ogoni spill.
3. Lay the TNP Loopline through Bonny River to reduce exposure to saboteurs and oil thieves: **Rejected:** Requires additional pipelines from Alakiri and Cawthorne Channel through the swamps, greatly diminishing the net positive effect of a river route on environmental footprint and sabotage/illegal bunkering. The possibility for future tie-ins as well as operational flexibility will be lost. SCAN report shows that there are no further benefits in the river lay route.

## Section 4: Carbon management

The project does not directly support carbon management. No equipment installed in the project is expected to contribute to CO2 emission. However, it is a key enabler for the Gbaran Ubie and Okoloma Gas plants which currently recover associated gas that would otherwise have to be flared.

## 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, Controllers and Tax functions.

## Section 7: Project management, monitoring and review

This is a "P&T executed" project to be delivered by the UIG/T/PP Major Projects team. The ORP compliant governance structure is in place, including a project specific DRB, DE and BOM. A Project Control and Assurance Plan (PCAP) has been approved to define the applicable controls for the EXECUTE phase. The Fact Sheet supporting the project's latest cost and schedule view has been reviewed and endorsed by PTE/S.

As a schedule-driven project, adequate Top Quartile plan has been developed with support from the centre covering activities to keep Front-End Loading (FEL) index to better-than-industry average at FID based on IPA benchmarking exercise undertaken in July 2011. Productivity parameters and targets have also been set for TNPL based on estimated resource-loaded schedule to derive execution rate that will beat regional benchmark of NCTL though the deep-burial concept will pose a tougher challenge to achieve. Enabling strategies include award of three contracts (one each to 3 different contractors) with parallel work execution and the deployment of six spreads across the pipeline corridor (2 spreads each per contractor). TNPL looks to achieve a safe, pace-setting target for pipeline installation projects in the Niger Delta with average daily production above benchmark project. An incentivization strategy is in place to leverage the achievement of milestones to stay within promised P50 schedule. Given that new and emerging contractors to SPDC operations will be involved, managing interfaces and non-technical risks closely has been identified with adequate mitigation plans in place to set up this project for success. Integrity Due Diligence (IDD) has been completed, all the bidders have met the company requirements and no red flag was identified by the IDD team.

### ***Section 8: Budget provision***

Private partners' equity share of capital expenditure and NNPC carry portion will be budgeted for under the modified carry arrangement (MCA) while Project Management costs and other FID Opex will be funded via the normal JV budgetary process. Formal JV partners' approval of project for funding under the proposed MCA has been received.

### ***Section 9: Group financial reporting impact***

MCAs are accounted for in the same way as ordinary course investments in JV projects i.e. recording resulting Capex, depreciation, gross revenues, royalties and taxes and associated production and reserves in line with Group Policy. The financial impacts of the MCAs are calculated in line with the base case MCA specific assumptions and are indicated in the table below.

US\$ mln	Pre 2013	2013	2014	2015	2016	Post 2016
<b>Total Commitment</b>	51	105	175	146	96	30
SCD OPEX	0	1	2	1	1	0
Pre-FID	24	0	0	0	0	0
<b>Cash Flow</b>						
Capital expenditure	27	104	173	145	95	29
Cash Flow from Operations	-2	26	54	79	94	253
Cash Surplus/(Deficit)*	-29	-77	-119	-67	-1	224
<b>Profit and Loss</b>						
NIBIAT +/-	-2	5	9	9	7	-94
<b>Balance Sheet</b>						
Average Capital Employed	13	68	174	276	318	69

### ***Section 10: Disclosure***

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

### ***Section 11: Financing***

Capex financing for the main project scope shall be through the MCA funding mechanism. A Group Investment Proposal has been raised for the NNPC Carry portion of MCA funding requirement. Shell share of capital expenditure will be met with own cash flow.

### ***Section 12: Taxation***

There are no unusual Taxation features.

**Section 13: Key Parameters**

Approval for the total headline size of \$607mln Shell Share (\$947mln 100%JV) 50/50 MOD for the execution of Trans Niger Pipeline Loopline Project. This value is made up of \$284mln Shell equity and \$323mln MCA carry commitment.

**Section 14: Signatures**

This Proposal is for approval.

**Supported by:**

**For Business Support:**

.....

*Bichsel, Matthias F RDS-ECMBI*

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

.....

*Brown, Andrew RDS-ECAB*

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

**Supported by:**

**For Business Approval:**

. ....

*(Henry, Simon P RDS-ECSH)*

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

. ....

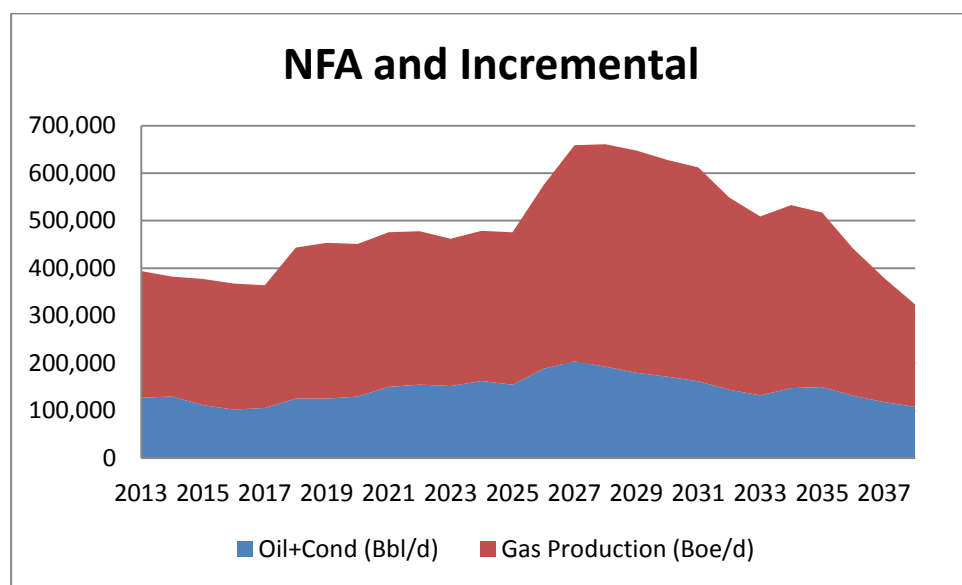
*(Voser, Peter RDS-CEPV)*

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



**APPENDIX 1****List of Flowstations in BP12 that feed into the TNPL (Potentially at Risk if TNP fails completely)**

Flowstation	
1	ADIBAWA1_FS
2	AGBADA 1&2_FS
3	AHIA1_FS
4	ALAKIRI_FS, GP
5	DIEBU_CREEK1_FS
6	EGBEMA_FS, WEST1_FS, GP
7	IMO_RIVER_FS (1,2&3)
8	ISIMIRI1_FS
9	KOLO_CREEK1_FS
10	NKALI1_FS
11	NUN_RIVER_CPF, FS
12	OBELE1_FS
13	OBIGBO _NORTH_FS, GP
14	OGUTA1_FS
15	OKOLOMA_FS, GP
16	ASSA _NORTH_DG, FS, GP
17	GBARAN _DG, FS, GP
18	RUMUEKPE1_FS
19	UBIE1_FS
20	UMUECHEM1_FS
21	PLANNED_OHUR1_FS

**APPENDIX 2****Production Profile**

## **APPENDIX 3**

### **Economics Assumptions**

- Oil and Condensate prices SV-RT12 \$50/bbl, RV-RT12 at \$70/bbl and HV-RT12 \$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.
- Condensate treated as oil and taxed under PPT (PPT tax rate of 85%).
- ARPR 31/12/2011 variable OPEX for Awoba FOD and Nembe Phase 2 was used.
- 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 RT12 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.

### **PIB Assumptions**

- PIB as per Technical Committee proposals end June 2012
- Oil tax rate reduced from 85% to 80% (NHT 50% and CIT 30%)
- No ITA
- 6% of all costs disallowed for Tax purposes

## **APPENDIX 4**

### **Glossary of Abbreviations**

- JV: Joint Venture
- MCA: Modified Carried Agreement
- TNP: Trans Niger Pipeline
- TNPL: Trans Niger Pipeline Loopline
- NLNG: Nigerian Liquefied Natural Gas
- NAPIMS: National Petroleum Investment Management Services
- SCD: Sustainable Community Development
- FID: Final Investment Decision
- MOD: Money of the Day
- GMOU: Global Memorandum of Understanding
- NCDMB: Nigerian Content Development Monitoring Board
- EPC: Engineering Procurement and Construction
- IOC: International Oil Companies
- FOD: Further Oil Development
- BVA: Benchmarked Verified and Approved