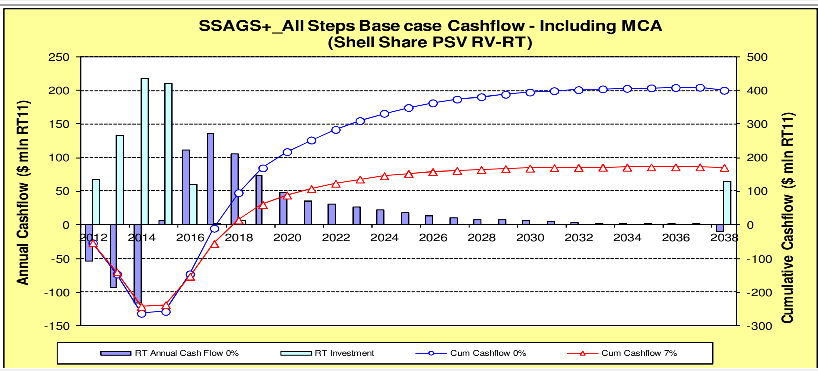
The Shell Petroleum Company Limited

Group Investment Proposal

Summary Information

<table>
<tr><td>Business unit and company</td><td>Shell Petroleum Development Company of Nigeria</td></tr>
<tr><td>Group equity interest</td><td>100% in SPDC, whereas SPDC is the Joint Venture (JV) operator of an unincorporated JV with a 30% interest.</td></tr>
<tr><td>Other shareholders / partners</td><td>Nigeria National Petroleum Company (NNPC: 55%), Total: 10%, Nigeria Agip Oil Company (NAOC: 5%) in SPDC-JV</td></tr>
<tr><td>Business or Function</td><td>Upstream International</td></tr>
<tr><td>Amount</td><td>US$618mln Shell share (MOD, 50/50), including US$52.3mln previously approved Pre-FID; bringing the FID total to US$670mln Shell share (MOD, 50/50).</td></tr>
<tr><td>Project</td><td>Southern Swamp AG Solutions (SSAGS+) Project Plus, incorporating:
Opukushi, Benisede, Ogbotobo, Tunu, Agbaya, Ajatiton, Akono and Dodo North Fields</td></tr>
<tr><td>Main commitments</td><td>
<table>
<tr><th>Description</th><th>pre-FID proposal (100%)</th><th>pre-FID expenditure (100%) @ Dec '11</th><th>This proposal (100%)</th><th>This proposal (SS)</th><th>Total IP (100%)</th><th>Total IP (Shell Share)</th></tr>
<tr><td>Production Facilties[1]</td><td>122</td><td>-</td><td>713</td><td>214</td><td>835</td><td>251</td></tr>
<tr><td>Flowlines/Bulklines/Pipelines[2]</td><td>37</td><td>-</td><td>374</td><td>112</td><td>411</td><td>123</td></tr>
<tr><td>Location Preparation (Wells)</td><td>-</td><td></td><td>24</td><td>7</td><td>24</td><td>7</td></tr>
<tr><td>Owners Cost (excl. SCD)</td><td>15</td><td>20</td><td>129</td><td>39</td><td>144</td><td>43</td></tr>
<tr><td>Contingency</td><td>-</td><td>-</td><td>225</td><td>67</td><td>225</td><td>67</td></tr>
<tr><td>SCD (opex)</td><td>-</td><td>-</td><td>35</td><td>11</td><td>35</td><td>11</td></tr>
<tr><td>23 Wells, (Drilling, Completion & Testing) & 1 Recompletion</td><td>-</td><td>-</td><td>561</td><td>168</td><td>561</td><td>168</td></tr>
<tr><td>Total</td><td>174</td><td>20</td><td>2,060</td><td>618</td><td>2,235</td><td>670</td></tr>
</table>
[1] US$xx expenditure represent 1st Milestone paid. Remaining expenditure to be incurred over xx month period
[2] US$20mln fully committied on PO. Actual expenditure to be incurred in May'12 when Line pipes are fully delivered to SPDC
</td></tr>
<tr><td>Source and form of financing</td><td>This investment will be substantially financed with JV funding and Shell share capital expenditure will be met by SPDC’s own cash flow, while a portion of the scope (step_3) will be financed through third party financing mechanisms, which terms are under negotiations with JV partners. Formal JV partners’ approval will therefore be obtained.</td></tr>
<tr><td>Summary cash flow</td><td>


</td></tr>
<tr><td>Summary economics</td><td>
<table>
<tr><th>At Ranking PSV ($70/bbl RT11)</th><th>NPV7% (US$ mln)</th><th>VIR7%</th><th>RTEP (%)</th></tr>
<tr><td>Base Case (50/50)</td><td>171.2</td><td>0.27</td><td>19%</td></tr>
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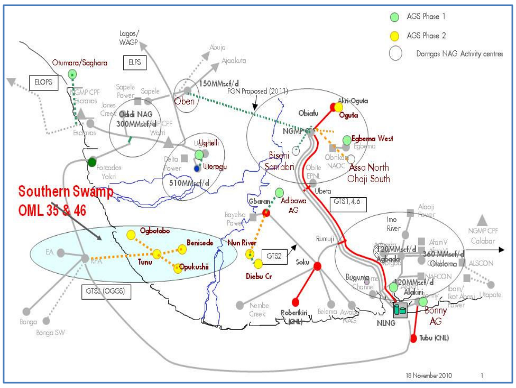
Section 1: The Proposal

Management Summary

This Group Investment Proposal seeks organizational approval for funding of **$618mln** Shell Share ($2,060 mln, MOD, 50/50 100% JV) bringing total IP value to $670mln Shell Share (2,235 mln 100%JV) for the execution of AG Solutions, and oil development drilling in the Opukushi, Benisede, Ogbotobo, Agbaya, Ajatiton, Akono and Tunu fields as well as NAG development drilling in Dodo North field.



The Southern Swamp area comprises 16 fields (12 producing and 4 Partially Appraised) in OML 35, 36 & 46 with significant oil and gas resources; EUR of 1,636 MMstb and 2,138 Bscf of associated gas (GIIP UR of 7.6 Tcf, 53% RF). Of this, 790 MMbbl with 418 Bscf associated gas has been produced from the fields in the period January 1976 to December 2011.The fields lie in the coastal swamp area, 65km South of Warri, currently with 100 oil wells and flow lines producing through 4 flow stations (Benisede, Opukushi, Ogbotobo and Tunu) and a new FLB at Tunu at advanced stage of completion. Oil evacuation is via the Trans Ramos pipeline to Forcados Terminal whilst associated gas is flared. NAG resources in the node have not been developed and the SSAGS^{+} project represents the first of such developments.

The effort to provide AG solution in the Southern swamp began in October 1999 with the SSAGG project which later expanded to include a nodal wide development called Southern Swamp Integrated Oil & Gas Project (SSIOGP) aimed at developing 407 MMstb oil expectation reserves and 505 Bscf associated gas (87 MMboe) through drilling and completion of 51 oil and 2 CRI wells. The project passed VAR4, but became stalled at DG4 due to higher than expected bid prices for the main EPC contracts and constrained funding. Renewed effort was launched in 2008 to provide AGS for NFA production only but given the huge resource potential in the node and the opportunity of funding that came with domestic gas supply, the project was re-conceptualised as a Domgas supplier (previous concept was to supply AG to NLNG). However, this revised concept meant that a reasonable volume and long term gas supply has to be guaranteed to meet the Government aspiration for Domgas Supply. This could not be met with AG alone and therefore the need for a portfolio review to identify a more secure sources of gas supply. In 2010, a due diligence study of the previous SSIOGP Nodal Development work confirmed the selection of 21 oil wells out of the original 51 wells to be developed in a phased manner once the AG infrastructure has been provided. Detailed and up-to-date performance review, including 3D reservoir simulation modeling of key reservoirs, of the seven fields from which the 21 wells were selected has been done culminating in an updated Nodal Development plan (NDP). As part of the NDP, a feasibility study of Dodo North field was also carried out to develop NAG to supplement the AG in order to sustain supply of 100MMscf/d minimum to the domestic market for at least 10 years. The study also identified backfilling opportunities for the gas supply that could be matured in a second phase development to extend the plateau beyond the initial 10 years. These include Opukushi F3000A and F5000, which together hold 1 Tcf (UR of 650Bcf) and discovered potential in Opukushi deep (penetrated by Opuk-6 & 6ST), subject to further appraisal. There is also 'game changer' opportunity in Tolugbene exploration. The expectation resource volumes in the new NDP are currently being reclassified under the new PRSC naming convention and will be undergoing the Resource Endorsement Session (RES) Assurance in March 2012 as a pre-requisite for the FID.

The new project called **Southern Swamp Associated Gas Solutions plus (SSAGS^{+})** is primarily aimed at providing AG solutions to secure NFA production (100 MMbbl + 98 Bcf associated gas) while also drilling 21 oil wells to utilise capacity in the flow stations, thereby developing 105 MMbbl new oil (with 72 Bcf AG). It also includes the drilling of 2 gas wells from Dodo North to guarantee the sustenance of the 100 MMscf/d supply (321Bcf of NAG). The project successfully passed DG4 in March 2012, following a VAR4 and an ESAR4. A pre-FID IP of F$174.3m 100% JV (US$52.3mln SS) was approved in April 2011 to facilitate completion of FEED and placement of orders for Long Lead Materials.

Comment [B1]: Confirm after DG4

The Gas Flaring (Prohibition and Punishment) Bill 2009, currently before the national assembly, specifies payment of fines by non-compliant companies, of not less than the cost of gas at the international market plus another 50% of the penalty sum to the Local Government Area for community development activities. The impact of the law could be adverse if current efforts at providing Associated Gas solutions to the Southern Swamp fields are not accelerated. Apart from shut-in of the assets post-flares out date (2012 proposed at the National assembly), the likelihood of non-renewal of expiring Acreage Licenses due in 2019 by government, loss of surface assets to vandalisation and loss of opportunity to develop and book significant reserves (both NFA and FOD) is very high.

This FID Investment Proposal:
The scope of the FID expenditure will cover for the following:

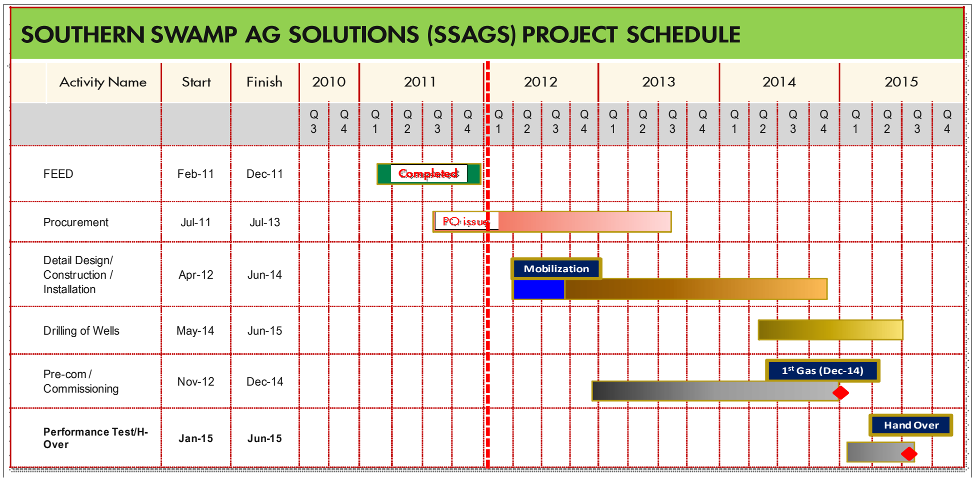
1. Facilities:
   a. Brown-field facilities upgrade for the Tunu, Benisede, Opukushi and Ogbotobo flowstations plus gas compression.
   b. Laying of pipelines for associated gas from Benisede (12" x 16 km), Opukushi (12" x 24 km) and Ogbotobo (8" x 16 km) to Tunu, where the CPF is located.
   c. A new 70 MMscf/d AG compression facility (with slug catcher) at Tunu.
   d. A new 120 MMscf/d slug catcher at Tunu for non-associated gas.
   e. A 160 MMscf/d hydrocarbon dew-pointing facility at Tunu for AG & NAG.
   f. A 160 MMScf/d Export Gas Compression and Metering system
   g. Laying of 16"x 32km high-pressure gas pipeline for export from Tunu to EA-RPA.
   h. Condensate handling system, associated metering, instrumentation and electrical systems.
   i. Island power generation at all the Facility Locations to include community power supply in support inter-dependencies with host communities.
2. Wells scope:
   a. Drilling, completion and hook-up of 2 NAG wells from Dodo North field to supplement and back-up AG production into the Nigerian Domestic Gas network..
   b. Drilling, completion and hook-up of 21 oil wells – to utilize the existing ullage in the facilities

An earlier pre-FID cost of US$174.3 mln (100% JV) was approved to cover the following scope

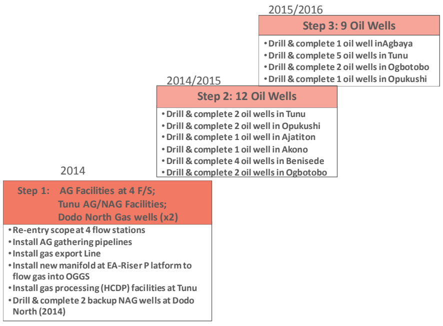
a. Studies including FEED (Complete NDP, FDPs and carry out FEED)
b. Project Management (Staff salaries, travels and incidental costs for project team and support team members)
c. Surveys and Permits acquisition (revalidate/acquire new PTS, OPL, ESHIA, NCD waivers, NDP, FDPs)
d. Procurement of Long Lead items (LLI) (commit to procure materials/equipment that could take up to 20 months to be fully prepared for site installation)

The value of the LLI in the pre-FID cost represents the full commitment value of the materials. However, as the nature of the procurement contract is to either pay upon delivery or milestone payment over delivery period, the actual expenditure at FID is far lower than the provision in the pre-FID IP. The un-spent amount will be rolled-over into the overall GIP and expended over the procurement period.

Level 1 schedule for the project is shown below.



Funding



The estimated total Capex for the SS AGS+ project is approximately $2.2 bln (MOD) plus SCD (Opex) cost of $35 mln. The project is phased into 3 discrete steps for funding in installments under the Domgas (Step_1) and JV Base tranche (Step_2) and Third Party financing (Step 3). It is noteworthy that the Domgas funding has been fully supported by the Government, and the circa F$284 mln required for step 2 is in BP11 JV base funding plan, whilst Step3 cost of $207mln is planned for third party financing. Regardless of the stepwise funding the DRB's decision since DG3 was to go for a single FID proposal in order to present (and preserve) the total investment value.

Table 1: Full Project COST phasing

Scope	Funding Tranche	Cost $million										
		Pre-FID Opex			Post FID Capex							
		2010	2011	2012	2012	2013	2014	2015	2016	2017	2018	Total
Step_1 Gas Facility / Infrastructure Incl. NAG	Domgas/IPP	2	19	2	222	546	625	204	65	-	**25**	1,708
Step_2 Oil Development (12wells)	Base JV						152	132				284
Step_3 Oil Development (9wells)	Third Party Financing							144	63			207
SCD (Opex)	Domgas/IPP	-	-	3		7	12	9	2	-	1	35
Total		**2**	**19**	**5**	**222**	**554**	**790**	**488**	**131**	**-**	**25**	**2,235**

Section 2: Value Proposition and financial context

The primary objective of the AG Solutions project is to ensure continued economic production from the affected fields, in compliance with statutory requirements for non-routine flaring of associated gas. Protection of Shell's reputation and possible Freedom To Operate (FTO) loss may make flaring of associated gas an unattractive proposition with attendant negative repercussions. Besides, incurring long-term penalties (even if viable) by producing without an AG Solution in place contravenes the Flares Down Policy from the Group. In addition the execution of the project opened up opportunity for further oil and gas development in the fields as well as enable SPDC JV to meet Nigerian government aspiration for Domestic Gas supply for power generation.

The implementation of this project will enable continued production of 100 MMstb of NFA oil by securing the surface assets and also enabling further growth in the affected fields once AG gathering is in place. Immediate development scope to be executed as part of the project will produce 105 MMstb of Oil and 321Bcf of NAG whilst future activities could cream off approximately 550 MMstb of additional expectation reserves.

Summary Economics[1]

Comment [B2]: Update after EPC prices are updated in project Costs.

The full project was evaluated on a forward-look basis using the post flares down NFA + FOD production forecast (Oil and AG) for the affected fields and 50/50 level 3 CAPEX estimates. Step 1 & 2 were evaluated under the assumption of JV funding and step 3 under the 2008 MCA funding agreement. The gathered gas is expected to be sold to the domestic market. Key sensitivities[2] are shown in the grid.

Table 2: Economics Grid

PV Reference Date: 1/7/2012	NPV (S/S $ mln)		VIR	RTEP	UTC (RT $/boe)		Payout-Time (RT)	Maximum Exposure (RT)
Cash flow forward from: 1/1/2012	0%	7%	7%	%	0%	7%		AT
Base Case (SSAGS+ Step 1 - 3)								
SV ($50/bbl RT12)	228.5	68.4	0.11	NA	26.0	29.7		
RV ($70/bbl RT12)	400.5	171.2	0.27	19%	26.0	29.7	2018	262.6(2014)
HV ($90/bbl RT11)	607.0	293.8	0.47	NA	26.0	29.7		
BEP ($/bbl)								
Sensitivities (using RV RT)								
High CAPEX (Prob <0.1)		157.6	0.23					
Low Reserves (Prob <0.9)		118.7	0.19					
High Reserves (Prob <0.1)		171.2	0.27					
6mnths Delay		167.3	0.27					

Key Project Parameter Data (Shell Share)

Parameter	Unit	BP11	Low	Mid	High	Comments
Capex (MOD)	US$ mln	667	632.7	674.1	744.9	
Investment Opex (MOD)	US$ mln	NA	336.3	373.2	435.0	
Production Volume	mln boe	96.6	66.6	84.9	-	
Start Up Date	mmm-yy	Mar-14	Jun-15	Dec-14		
Production in first 12 months	mln boe					

Economics Assumptions

- 2011 Oil PSV was used for Oil and Condensate
  - SV-RT - $50/bbl, RV-RT - $70/bbl & HV-RT - $90/bbl
- 2011 Domestic Gas PSV - BP11 Low Aggregate Domgas PSV based on NGMP
- Oil taxed under PPT (PPT tax rate of 85%)
- Steps 1 and 2 will be JV funded while Step 3 will be funded from Alternative Funds (AF)
- Gas taxed under CITA with Associated Gas Framework Agreement (AGFA) incentive.
- Education Tax of 2% assessable profit
- NDDC levy of 3% total expenditure
- GHV of 1000btu/scf for Domgas
- Flare Penalty of $3.5/Mscf was applied and is not tax deductible
- Abandonment estimated as 10% of total RT CAPEX
- Facility design life of 25years used to truncate project in 2038

[1] Economics based on VAR4 dataset.

[2] Full R&U and other sensitivities will be provided after costs are finalized.

- SCD Cost was provided by project team
- ABC OPEX provided by project team.

Section 3: Risks, Opportunities and Alternatives

The key risks and opportunities identified in the project are as follows:

Under-delivery of gas in the medium to long term (T)

The under-performance of identified gas wells or demand for higher-than-planned gas supply plan of 100MMscfd will reduce the plateau of Dodo North NAG source and result in low capacity utilization in the longer term – this will impact on SPDC's corporate reputation.

Mitigation: Work has been initiated to identify additional gas resources to be matured for possible acceleration to back-up Dodo North (for example the Opukushi gas cap blow down (F3 & F5) and Opukushi Deep development requiring appraisal), and NAG development drilling in Orobou and Egunabo fields

Continued production without AG solutions in place post 2010 (T, P)

As a result of the uncertainties around the flares down date, continued production of Southern Swamp fields without AG utilization post March 2012 (GIP date) will result in the reduction of AG volumes to be produced & monetized by the SSAGS+ project,potentially impacting the gas supply promise..

Mitigation: There are other in-field oil development opportunities within the node (e.g. remaining 30 wells in the original SSIOGP) that will be investigated as acceleration candidates in order to increase AG production and add value. Additional NAG resources have also been identified and assessed as backfill to dwindling NAG/AG production, including the huge potential in Tolugbene exploration.

Security & Social Risks (P, E)

The project is located in the swamp of the Nigeria Delta; community interfaces, HSE and security issues are particularly significant in these areas, highlighted by cases of hostage taking, armed attacks and sabotage of,especially, pipeline systems. There is also a risk of community agitations outside agreed GMOU terms that could lead to SCD related cost growth.

Mitigation: The amnesty programme of the federal government has helped to calm the security situation although uncertainty still pervades. The Security Information Network Centre (SINC) will monitor Delta threat traffic and provide timely early warning to the project team on a `need to know and act` basis. All work will be done according to the approved security plan under the oversight of the Head of Security Operations – West. Community interfaces will be managed through the Global Memorandum of Understanding (GMoU) mechanism to be deployed in alignment with the project schedule. An allowance has been made in the project budget for funding of social investment programmes (including a community interdependency power supply project). Offsite fabrication work will be maximized and done at a safe and secure location thereby limiting site activities to a minimum.

NCD Act Implementation (E, C, P)

The requirement to comply with the Nigerian Content Directive (NCD) Act 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 worked out together with the EPC contractors and approved by the Nigerian Content Development and Monitoring Board (herein after referred to as Board). This plan highlights areas of gaps in compliance with the NCD Act, with the intent to seek waivers from the Board for out-of-country procurement. An early engagement with the Board in 2011 indicates that it is amenable to granting waivers for the project where there is a compelling business case. In this respect the board has already granted waivers to carry out elements of the FEED work outside Nigeria and for procurement of Line pipes outside Nigeria. . The NCD plan already approved by the Board has recognised the need for waivers for out-of-country procurement of certain items e.g. Valves, HC Cables, Major Rotating equipment, Twister Components etc.

NNPC Award Approvals for EPC contracts (C, E)

To safeguard the project schedule it is necessary to award the two major EPC contracts within Q2 2012. With the conclusion of commercial negotiation with bidders, award approval by SPDC MTB is possible within the required time period but approval protocols within NAPIMS/NNPC easily take 6 to 12 months period to process. Contract award ahead of the formal NNPC approval could expose Shell to cost recovery issues, if NAPIMS decline to honour cash calls or approve end of year performances at OPCOM.

Mitigation: SPDC has maintained close and rigorous engagement with NAPIMS to ensure common understanding of project priorities and urgencies. Thus far NAPIMS has demonstrated good faith in approving Budget requests, cash calls and financial performances even where formal contractual approvals have not been given by NNPC (e.g. POs for FEED to UMP and LLI). NNPC has also recognised SSAGS+ project amongst the priority Domgas projects to be given accelerated approvals in order to meet with the medium term Domgas supply of government. Based on this antecedent, the proposal is for Shell to make full commitment and award the EPC contracts whilst giving time for NAPIMS to process approval through the NNPC system.

Comment [c3]: We need a separate engagement on this issue

Funding for Oil Wells (C, E, P)

Although the 12 oil wells in step 2 are included in the JV Business Plan, there is a concern that NNPC may be unwilling to fund them.

Mitigation

SPDC will continue to engage NAPIMS and highlight the need to preserve project value by executing the complete scope of work especially as the AG attached to the oil wells is included in the Domgas supply volumes premised in the project. However, an economic sensitivity has been included in the economic section, which shows that project value remains robust even where only 3 out of these 12 oils wells are funded with JV funding whilst others are funded with third party financing.

Comment [c4]: We need to include the numbers in the final GIP submission

Key Opportunities

The following key opportunities have been classified using the TECOP criteria.

Exploration scope and Future development (T/C)

Opportunities exist in Orobou, Egunabo and Opukushi (deep) fields to develop 620 Bcf of NAG in the short to medium term.

In the long term, additional gas could be matured from currently un-appraised prospects within the node. There is also an exploration potential of some 3 Tcf in Lotugbene.

Other exploration synergies with SSAGS development project that are being evaluated include the reduction in unit finding cost through deepening of development wells to exploration targets (Opuk-6 & 6ST).

Alternatives Considered

1. Continue to produce the fields and pay flaring penalty till end of field life: *Rejected:* This is not recommended viewed against the environmental concerns, imminent stiffer flaring penalties, the impact on company reputation and the Group commitment towards Flares Out.
2. Shut-in and abandon the fields: *Rejected:* Significant proven recoverable volumes and production will be lost, and high cost will be used on abandonment.
3. 3rd Party Alternative Solutions: Given the strategic nature of the southern swamp fields, the search for the third party AG solution has been discountenanced. The fields have therefore been withdrawn from the market accordingly.

Section 4: Carbon Management

The purpose of this project is to limit green house gas emissions to the environment. It is estimated that the project will generate circa 0.5MT of CO_2 over its lifetime. Registering the project under CDM initiatives will enable it to have access to additional income stream through carbon credits. This prospect is still being reviewed with the appropriate consultant and a final decision will be reached when the scoping work is completed. It is noteworthy that the additionality income stream from the Carbon credits has not been considered in the present economics of the project.

Comment [c5]: I think we should drop the reference to CDM, because taking FID on the project now will effectively disqualify it from claiming carbon credits.

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. Full functional support covering SCD is provided for in the full project scope. Additionally, there will be a focus on Nigerian Content Development (NCD) as already indicated above. Relevant Functions have provided functional support for this Investment Proposal.

Section 7: Project Management, Monitoring and Review

The Major Projects Team under UIG/T/PD is managing the project. 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 EXECUTE phase.

Section 8: Budget Provision

The project is fully funded in BP11 base plan although under-funded in the 2012 JV programme, which needs to be addressed in the course of the year during budget re-alignment.

Section 9: Group Financial Reporting Impact

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

US$ Million	Prior Years	2011	2012	2013	2014	2015	Post 2015
Total Commitment	**2.14**	**13.43**	**36.72**	**0.00**	**0.00**	**0.00**	**0.00**
Cash Flow							
SCD Expenditure	0.34	0.05					
Pre-FID Expenditure	1.80	2.43					
Capital Expenditure		10.95	36.72				
Operating Expenditure		2.08	1.10				
Cash flow From Operations		(3.46)	4.86	6.77			
Cash Surplus/(Deficit)		(14.41)	(31.86)	6.77			
Profit and Loss							
NIBIAT +/-		(2.52)	1.08				
Balance Sheet							
Avg Capital Employed		5.94	28.36	41.44	38.06	38.06	38.06

Comment [B6]: Replace with end result after final economics.

Section 10: Disclosure

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

Section 11: Financing

This investment is expected to be substantially financed with JV partners funding (within the IPP/Domgas and JV base budget), and Shell Share of capital expenditure will be met by SPDC's own cash flow. A fraction of the project (i.e. drilling and completion of 9 oil wells in step3) will be financed through third party financing mechanism.

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:

- Organizational approval for funding of **$50.2mln** Shell Share ($167.2 mln, MOD, 50/50 100% JV) bringing total IP value to 52.3 Shell Share (174.3 mln 100%JV) for the early works towards execution of AG Solutions for the Opukushi, Benisede, Ogbotobo and Tunu nodes including procurement of long lead items.

Section 14: Signatures

This Proposal is submitted to UIG for approval.

Supported by:	For Business Approval:
....	....
Henry, Simon P RDS-ECSH	Brinded, Malcolm A RDS-ECMB,
Date.... /.... /...	Date.... /.... /....

Initiator: *Caroline Rockall, SPDC-UIG/T/PDF*

Comment [c7]: Is it maybe better to have Toyin as the signatory?