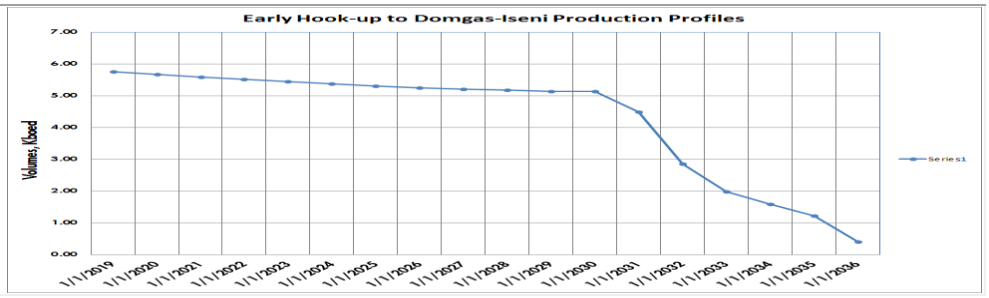
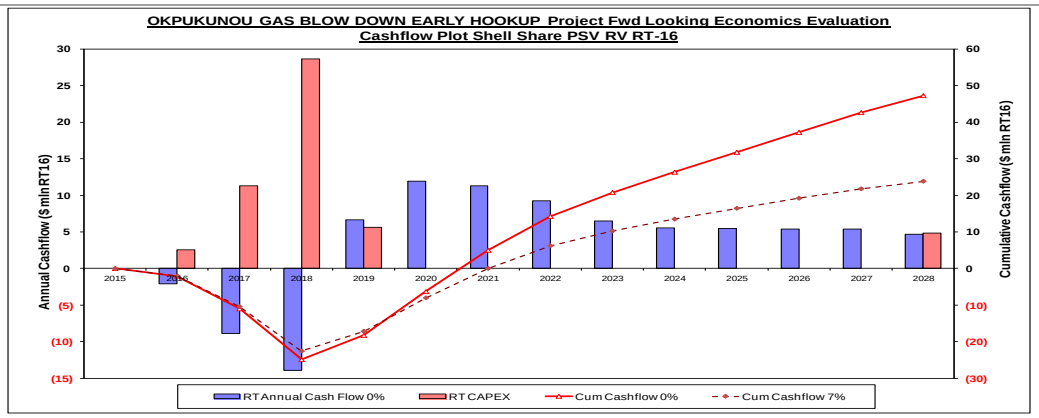
Investment Proposal

Summary information

Business unit and company	The Shell Petroleum Development Company of Nigeria (SPDC)
Group equity interest	100% in SPDC, whereas SPDC is the Operator of an unincorporated JV with a 30% participating interest share in the SPDC JV.
Other shareholders /Partners	Nigeria National Petroleum Company (NNPC: 55%), Total E&P Nigeria Limited(TEPNG): 10%, Nigeria Agip Oil Company (NAOC: 5%) in SPDC-JV
Business or Function	Upstream
Amount	Pre-FID commitments of US$8.58 mln Shell share (MOD, 50/50).
Project	Early Hook-up to Domgas-Iseni
Main commitments	

Description	Expenditure		Other Commitments		This Pre-FID IP Proposal	
USD'm 50/50 MOD	100%	Shell Share	100%	Shell Share	100%	Shell Share
Expenditure						
EIA, field visits, land acquisition & SCD	0.96	0.29			0.96	0.29
Geomatics, geotechnical Inv & Analysis, Design of civil works	0.72	0.22			0.72	0.22
Roadworks	3.25	0.98			3.25	0.98
Jetties & Ramps	0.76	0.23			0.76	0.23
Location Prep -2 locations	2.05	0.62			2.05	0.62
Project Management	0.75	0.23			0.75	0.23
FEED	0.89	0.27			0.89	0.27
Commitment						
Wells LLIs			19.23	5.77	19.23	5.77
TOTAL US$,mln Pre-FID 50/50 MOD	**9.38**	**2.81**	**19.23**	**5.77**	**28.61**	**8.58**

Pre-FID IP Proposal is a combination of planned expenditure & Wells LLIs commitments

Reserves/Resources	Delivery of 2P reserves of 16 MMboe, SS, by July 2019 (OSD)
Production	
Source and form of financing	This investment will be financed with JV funding and Shell share of the expenditure will be met by SPDC's own cash flow. All JV Partners's support (including NAPIMS) has been secured.
Summary cash flow	
Summary economics	PRE-FID Economics (Shell Share RV RT-16)

	NPV (USD mln)	RTEP (%)	VIR
Base case	-1.8	NA	NA
Note: Cost Only evaluation thus SV and HV values are the same.			

Investment Proposal

Section 1: The proposal (management summary)

This Pre-FID Investment Proposal seeks organisational approval for funding of $8.58mln (MOD, SS 50/50) for early civil works, location preparation, FEED and commitment for procurement of Wells' long lead items towards the execution of Early Hook-up to DOMGAS Project to protect OML-35 licence. The main objective is to enable the project deliver gas in 2019 to the domestic market and demonstrate activity in the northern part of the OML-35 before 2019 expiry date. It will also make money for the JV via implementation of a GSPA with a 3rd party off-taker of the gas produced. This timeline will also be crucial in enabling SPDC and Nigeria government meet its domestic gas aspirations. Brief description of the cluster value is shown in Appendix I.

Part of the enablers supported by the DG1 DRB is the pre-FID funding to ensure early start of some long lead activities. One of these long lead activities is the construction of access road to the Iseni field location and preparations of the two locations. To enable first gas date in H1-2019, the activity needs to be started in Q2-2016 to ensure readiness of the location by Jan-2018 to allow rig mobilisation to site to commence the well execution activities. Extensive engagements were held with relevant teams within NAPIMS to secure the critical Partner support and this support was obtained in May-2016 at the DEVCOM meeting.

Early Hook-up to Domgas-Iseni Project

In 2014 it was decided that the OML-35 will be one of the SPDC leases to keep during the 2019 licensing renewal discussions. This is partly due to the size and value of the gas volumes in the northern part amounting up to 20% of SPDC discovered gas growth portfolio with pre-DG1 nodal development NPV of 1.5 bln (100%, SV) and VIR of 0.63. The node is therefore of strategic importance to SPDC's growth aspiration. Due to lack of activity in this part of the OML (oil production is going on in the Southern part-Opukushi & Benisede), a decision was made to initiate a low-cost project that will ensure delivery of quick gas to domestic market and generate early value to the company whilst also ensuring that we demonstrate activity in the northern part of OML. The risk of expropriation from the southern part was considered plausible due to PIB and push for the government to empower indigenous players. Furthermore, NAOC's aggressive activities on adjacent OML-62 (FID for NAOC Tuomo phase2 planned for H2-2016), and claims to adjacent straddled OKNU-TW field operatorship is seen as constituting a further risk to licence challenge come 2019.

The project scope include re-entry into existing exploration and appraisal wells in Iseni field, drilling-out the suspension plugs, complete & perforate the wells for production and provide early gas to domestic market. The project strategy is to source for 3rd party off-taker that will buy the gas from the SPDC manifold and evacuate via its own bulkline to Utorogu CPF for processing and eventual sale to domestic gas via government owned ELPS. A credible off-taker, West African Exploration and Production (WAEP) (a joint venture between an indigenous First Exploration and Production Company and Dangote Industries), has been selected after thorough offtaker assessment and endorsed by DRB. It is expected that gas would be sold by the offtaker to Dangote Fertiliser Company in Lekki, Lagos area whose operations is expected to be commissioned in 2017/2018. A working premise of 100 MMscf/d for 10 years has been agreed with the off-taker, and Expression of Interest & Confidentiality agreement has been signed. A duly executed binding HOA is is expected to be in place by Q4-2016 and a GSPA in Q3-2017.

2016 Pre-FID expenditure

The proposed 2016 expenditure are as follows:

a) Iseni field visits, EIA sampling acquisition and analysis, land acquisition and related SCD programs
b) Site geomatic surveys, Geotechnical investigation and sampling
c) Design of 2 Nos Jetties/Ramp and 13.5km road.
d) Mobilisation, Site clearances , sand filling and piling for Jetties/Ramp, 13.5km road, & 2 Nos location

Pre-FID Commitments

Other enablers required in 2016 are ordering for wells' long lead items and FEED contract. The expected duration for the well's LLI to be delivered is 18 months. The scope of commitments is as follows:

a) FEED to be paid for in 2017
b) Wells' LLI to be paid for in 2018
    - St pipes/CSGs/Accessories/Running Service, Sand Control/Chemicals/Accessory and Service
    - Tubing and Other completions (Smart ICVs)
    - Well Head/Xmas Trees & Services & Smart Well surface Installation Equipment

The P50 date for full FID is December 2017. Level-2 schedule for the project is shown below. Key milestone dates for FID and OSD are target driven to align with the objective of lease protection.

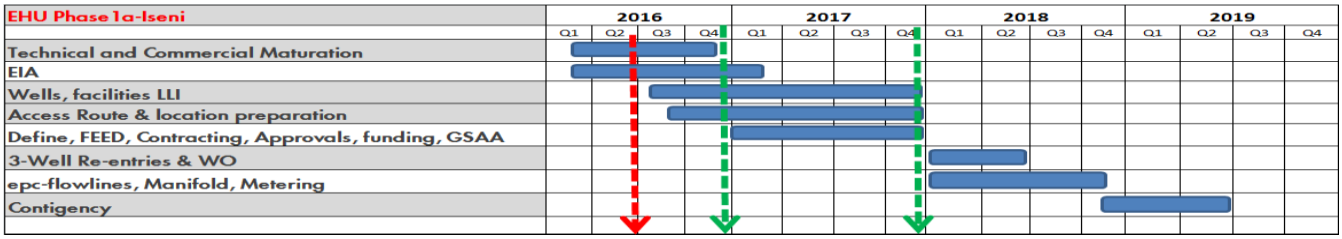


Figure 1: Type-2 Project Schedule

Expenditure Phasing

The full Life Cycle Cost for phase one of the project is $165.90 mln (50/50, MOD, 100%). The expectation is that this will be funded by Domgas JV budget and checks done with OP15 data indicate that around 2018 when the budget requirement peaks, some of the more firmer projects' funding in the basket will have declined, hence providing room for this project. However there is an increasing pressure on the government counterpart funding, hence alternative funding is also being worked for this project.

Cost Phasing (F$mln, MOD)					
Type 1 Costs	**2016**	**2017**	**2018**	**2019**	**Total**
EIA, SCD, Studies	0.30	0.51			0.81
Civil works, 2 location prep	8.19				8.19
FEED	0.00	0.89			0.89
Total Expenditure	**8.49**	**1.40**	**0.00**	**0.00**	**9.89**
Wells			32.77		32.77
Wells-LLIs			19.23		19.23
LLIs -Linepipes & power cables		14.01			14.01
Location preparation		23.00			23.00
Flowlines, manifold & power cables			47.00	20.00	67.00
Total Commitment	**0.00**	**37.01**	**99.00**	**20.00**	**156.01**
Grand Total	**8.49**	**38.4**	**99.0**	**20.0**	**165.9**
Planned Commitment is for pre-FID activities with the expectation that the LLIs will arrive post-FID					

Table 1: Type-1 Cost Estimate

Section 2: Value proposition and strategic and financial context

The primary objectives of Early Hook-up to Domgas, Iseni project among others include:

- Quick and low cost gas development for sale to Nigerian domestic market to enhance SPDC reputation and generate value.
- Strategic partnership with 3rd party offtaker that enables the offtaker to invest in bulk-line and processing facility and thereby limiting SPDC JV capex exposure (low UDC).
- Alignment with government plan of developing the upstream capacity of indigenous players
- Activity in the northern part of OML-35 (in addition to existing operations in the southern side) will enhance the OML-35 renewal discussions in 2019.

Summary Economics

The Pre-FID economics was evaluated on a cost only basis. This cost is treated as OPEX. The full value of the project can only be realized on full project execution post-FID, therefore the full project value is shown in Table 2 to support this pre-FID request.

The full project (including the pre-FID spend) was evaluated on a forward-looking basis using cost and production forecasts provided by the project team.

The base evaluation is done over the 10 year contractual window (provided forecast is beyond the 10 year contractual window) and also assuming the price construct from brass fertilizer project.

The full project evaluation result (for the contractual period) has a positive NPV7 though unable to meet the 0.6 VIR threshold, CAPEX reduction by 5% will improve the project VIR to 0.6. Key sensitivities are shown in the grid.

Table1: PRE-FID Economics (Shell Share RV RT-16)

PV Reference Date: 1/7/2016	**NPV (S/S $ mln)**		**VIR**	**RTEP**	**UTC (RT $/bbl or $/mln btu)**		**Payout-Time (RT)**	**Maximum Exposure (RT) $mln (yyyy)**
Cashflow from: 1/1/2012	**0%**	**7%**	**7%**	**%**	**0%**	**7%**	**yyyy**	**$mln (yyyy)**
Base Case								
RV ($80/bbl)	-1.8	**-1.8**	**NA**	NA	NA	NA	NA	1.77 (2016)

Note: Cost Only evaluation thus SV and HV values are the same.

Table-2 – Economic Assumptions.
Sensitivities were carried out to assess the project value at the following conditions:

1. The project Full Life Cycle (EoFL)
2. High (P10) and Low (P90) realizations
3. High (P90) and Low (P10) CAPEX
4. 1 year production delay.
5. 2019 License Expiry

The project cash flow over the contractual period was also plotted. Cashflow chart is for the Project's Full Life Cycle

Pre-FID KEY PROJECT PARAMETER DATA (SHELL SHARE)

Parameter (Shell Share)	Unit	Bus Plan (RV)	Low	Mid	High	Comments
Opex (MOD)	US$ mln	8.58	NA	8.58	NA	Pre-FID Cost
Capex MOD	US$ mln	NA	NA	NA	NA	Pre-FID Cost treated as Opex
Production Volume	mln boe	NA	NA	NA	NA	No Volumes for pre-FID activities
Start Up Date		Jul-16	NA	Jul-16	Aug-16	Pre-FID activities

Table 3: Pre-FID Key project Parameter Data

Table 4: Full Project Economics Result (Shell Share RV RT-16)

Group Investment Proposal (GIP)

PV Reference Date: 1/7/2016	NPV (S/S $ mln)		VIR	RTEP	UTC (RT $/bbl)		Payout-Time (RT)	Maximum Exposure (RT)
Cash flow forward from: 1/1/2016	0%	7%	7%	%	0%	7%	yyyy	$mln (yyyy)
Base Case *(10-year Contractual Period)*								
SV ($60/bbl)	37.5	17.5	0.41	22.0%	6.8	8.1		
RV ($80/bbl)	47.2	23.8	0.56	26.0%	6.8	8.1	2021	24.9 (2018)
HV ($100/bbl)	57.0	30.2	0.71	31.0%	6.8	8.1		
Sensitivities (using RV)								
Low Capex (-15%)		26.5	0.73					
High Capex (+25%)		19.3	0.36					
Low Reserves (P90)		11.7	0.27					
High Reserves (P10)		29.2	0.68					
1 yr Production Delay		18.9	0.44					
License Expiry 2019		-17.7	-0.41					
Full Life Cyle (EoFL)		27.7	0.65					

Economics Assumptions

- Short term Oil PSVs of $42.5/bbl in 2016, $60/bbl in 2017 $60/bbl in 2018, and $60/bbl in 2019 – all in MOD, with applicable price offsets applied. RV-RT16 price $80/bbl used from 2020 onwards, as well as the SV-RT16 and HV RT16 were used for the full project scope.
- 2016 Oil PSV of $60/bbl (SV), $80/bbl (RV) and $100/bbl
- No offsets applied as condensate is to be sold to WAEP
- Wet gas price based on Brass fertilizer Project contracted dry gas price of $1.3/mscf as advised by the project team
- Oil and condensate were assumed to be taxable under PPT
- Gas assumed to be taxable under CITA with AGFA (Associated Gas Framework Agreement) incentive
- Abandonment cost is estimated at 10% of total project RT CAPEX.
- SPDC Generic Opex assumption was applied.
    - Variable OPEX: $2.80/boe.
    - Fixed OPEX:- 3.5% of Gas CAPEX
- NDDC levy 3% of total expenditure.
- Education tax of 2% assessable profit.
- 2.5% of CAPEX assumed as SP cost
- Gas Heating Value (GHV) of 1000 for DOMGAS assumed

Section 3: Risks, opportunities and alternatives

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

Key Risks

Integrity issues in the existing wells (T)

Due to the age of the wells earmarked for re-entry and the plan to use existing casing configuration, there is a risk of well integrity issues in 1 or more of the wells.

Mitigation: Detailed wells' technical maturation and modelling work to assess the capacity of the existing casings and feasibility of well entry. The outcome of this assessment will be incorporated in the design whilst ensuring adequate provision of sufficient contingency both in time and cost to address any integrity issues that might arise during the wells' execution.

Inability of 3rd Party to deliver its own Scope (T)
As a result of lack of capacity and/or funding on the part of 3rd party off-taker, there is a risk of non-delivery or delay of the 3rd scope which includes bulkline and processing facility.

Mitigation: Focussed and regular working sessions will be held with the offtaker throughout the maturation phase amd during execution. This will help to ensure early identification of issues for necessary interventions and resolutions. Opportunity to providing SPDC expertise both in contracting strategy and other technical services will be explored to ensure timeline delivery.

Security & Social Performance Risks (P, E)
The project is located in the swamp of the Niger Delta; community interfaces, HSE and security issues are particularly significant in these areas.

Mitigation: All work will be done under an approved security plan through the Head of Security operations – West and SPDC social performance group. It has been established there are no legacy issues here. Project team will leverage expertise in SPDC SP and community relations functions to develop and execute a detail plan to provide the necessary social performance in the absence of GMOU in this area.

Lack of funding (E, C)
Due to lower oil prices and increasing difficulty in NNPC funding its share of project finance, there is a risk of lack of funding or inadequate funding which can lead to stoppage or delay of the project

Mitigation: Domgas JV budget is considered as reference case, alternative funding is however being evaluated as a suitable alternative. Other funding sources will also be evaluated. PT2020 tools are being deployed to ensure optimum costs scope and structure that will ease the funding demand of the project

PIB Passage (E, P)
Passage PIB with changing fiscal terms could have negative impact on project value

Mitigation: Ensure project robustness assuming PIB fiscal terms impacts.

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

Opportunity to enable Operatorship of OKNU-TW field. (C)
Locking down a 3rd party partner around OML-35 will provide good opportunity for early production from another field (e.g. OKNU-TW) in the cluster that will help demonstrate activity in the field which in turn can be leveraged to obtain operatorship of the unitised field.

Opportunity to Support Capacity Development of Offtaker. (P)

One of the key business drivers is the capacity development of indigenous companies. This will enhance company reputation with Nigerian government.

Licence Renewal. (C)

This activity will be leverage in the licence renewal process in 2019.

Alternatives Considered

1) Do nothing: Wait till 2019 and argue for licence protection due to oil activities in southern part of the OML
This was rejected and is not recommended due to the strategic fit of the cluster to SCiN aspiration, and the aggressive posturing of NAOC via activities in the nearby OML-62. However all activities (including those in the southern part) will be used to support the application for lease renewal and related discussions in 2019.

2) Mature Nodal development (5 fields) instead of Early Hook Up project: This was rejected as Nodal development will require significant resources and funding. It will be almost impossible to achieve significant progress by 2019 that will demonstrate sufficient activity for licence renewal objectives.

Section 4: Carbon management
The Co2 emission for this project is expected to be less than 50ktpa.

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 structure for SPDC and the SPDC JV.

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. The Finance, Supply Chain Management, Legal, and Tax functions have provided functional support for this Investment Proposal.

Section 7: Project management, monitoring and review
The project is managed by a properly constituted project under a clear governance structure The Project Controls and Assurance Plan (PCAP) is compliant with the ORS having project specific DRB, DE, BOM and FEDM in place. A Project Control and Assurance Plan (PCAP & OAP) have been approved to define the applicable controls for SELECT phase.

Section 8: Budget provision
The project was categorised as OUT-OF-Plan in OP15. However an offset was found in the OP15 firm in-plan budget that is supported by BCC and NAPIMS to be used for the 2016 pre-FID activities.

Section 9: Group financial reporting impact

This is not required as this pre-FID IP is below the threshold of $20m, MOD SS.

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 financed with JV partners funding (within Domgas budget), and Shell Share of expenditure will be met by SPDC's own cash flow.

Section 12: Taxation
There are no unusual taxation features at this stage

Section 13: Key Parameters
Expenditure:

The following is the main aspect of this proposal:

- Approval for $9.38mln, MOD, 50/50 100% JV (i.e. $2.81mln, SS) for the early field visits, geomatic surveys, geotechnical investigations and sampling, FEED, Design of 2 Nos Jetties/Ramp and 13.5km road.

Other Commitments:
Pre-FID commitments required in 2016

- Approval to commit to $19.23mln, 50/50, 100% JV ($5.77mln, SS) pre-FID commitments for Wells' long lead items.

Section 14: Signatures
This Proposal is submitted to UIO/G for approval.

Supported by:	For Shareholder approval:
.....	.....
Jan Van Bunnik (FUP/OG)	Robert Munster(UIO/G/S)
SPDC Finance Director	GM Safety & Environment
Date.... /.... /...	Date.... /.... /....

Initiator: *Ismail Usman UPO/G/DM*

Appendices:

Appendix-I – Brief Description of Cluster Value.

Field Introduction

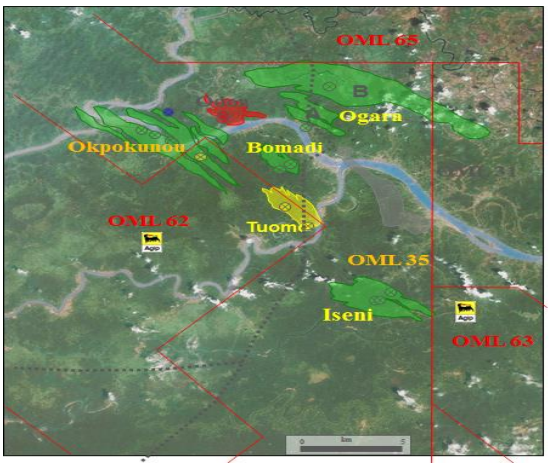


Figure 1: Northern OML-35 Cluster of Fields

The gas rich Okpokunou node (Nothern part of OML-35) is 40km SE of Warri in the heart of the Niger Delta in northern part of SPDC JV licence OML35 (Figure 1). The node contains six fields, all undeveloped, in the Central Swamp depobelt and along strike from Gbaran. The Forcados River crosses the centre of the node where, for some of its length, it acts the boundary between the states of Bayelsa & Delta. The river has a low tidal range (~1 m) and its course seems quite stable based on different vintages of satellite data, though there is evidence of expansion of sand bars, especially around Gbaregolo. The primary land cover is disturbed forest. The primary activities are fishing, trading and subsistence farming (notably along the river banks)

The cluster was matured to DG3 level in 2006/2007 but was subsequently put on hold primarily due to funding and gas destination issues. In 2014 the cluster maturation was recycled to pre-DG1. DG1 maturation work was conducted between 2014 and early 2015. The project was again put on hold due to funding and licence expiry date issues. A value assessment for the cluster was completed in Q1-2015 (DG1 basis) based on processing via expansion of Gbaran CPF with additional 800 MMscf/d train for both domestic (70%) and export (30%) markets. The total discovered GIIP is estimated as 9.3 Tscf (UR ~ 7.6 Tscf) whilst the total discussed STOIIP/CIIP is estimated at 581 MMbbls (UR ~ 282 MMbbls). Currently mapped exploration potential (Leads) is estimated at 1 Tscf.