

The Shell Petroleum Development Company of Nigeria Limited

Internal Investment Proposal

Summary Information

Directorate	Technical Directorate		
Group equity interest	100% in SPDC, whereas SPDC is the Joint Venture (JV) operator of an unincorporated JV with a 30% interest.		
Other shareholders / partners	Nigeria National Petroleum Company (NNPC: 55%), Total: 10%, Nigeria Agip Oil Company (NAOC: 5%) in SPDC-JV		
Amount	US\$2.82 mln Shell share, MOD, 50/50 (US\$ 9.40 mln 100% JV)		
Project	SPDC Fire Detection, Alarm and Extinguishing Systems Upgrade Project (from 2010 to 2014).		
Main commitments			US\$ mln
			Shell Share
			100% JV
	Fire Detection and Alarm Systems Upgrade (East & West)	1.107	3.695
	Fire Extinguishing Systems (East & West)	1.656	5.517
	SCD	0.056	0.188
	Total (Shell Share)	2.82	9.40
Source and form of financing	This investment will be financed with JV funding and Shell share capital expenditure will be met by SPDC's own cash flow. Formal JV partners' approval will therefore be obtained.		
Summary cash flow	Not Applicable..		
Summary economics	Summary economics*	NPV7% (US\$ mln)	RTEP (%)
	Base case	-0.5	NA
			VIR7%
			-0.25

Section 1: The proposal **Management Summary**

This investment proposal seeks approval for US\$2.82 mln Shell share (US\$9.40 mln 100% JV) for the upgrading of Fire detection, Alarm and Extinguishing Systems in SPDC.

This proposal covers the upgrading of fire detection, alarm and extinguishing systems in various SPDC facilities to provide modern centralised systems of automated fire detection, alarm and extinguishing systems in offices, IT equipment rooms and other company assets for greater reliability and operability, improved early alerts/ warning & shorter response time to fight fire, whilst providing enhanced safety to personnel and critical assets. The works are to be carried out between 2010 and 2014 to ensure the following:

Improved protection of personnel and vital assets against fire hazards hence ensure safety of occupants and maintaining asset integrity.

Comply with HSE & Legal requirements.

The Work scope covers the following:

Upgrade of fire detection and alarm systems in office, industrial and residential buildings including IT facilities in SPDC East & West locations.

Design and installation of clean agent automatic fire extinguishing systems, and decommission obsolete Halon extinguishing systems in critical IT equipment rooms, data centres, libraries, archives in SPDC East & West Locations.

Table 1:

Capex Phasing (MOD \$mln, 100% JV)

Project	2010	2011	2012	2013	2014	Total
Upgrade of fire detection and alarm systems (East & West)	0.147	0.127	0.098	0.216	0.519	1.107
Fire extinguishing systems East & West	0.029	0.137	0.108	0.284	1.098	1.656
SCD costs	0.004	0.005	0.004	0.010	0.033	0.056
Total Shell Share	0.18	0.27	0.21	0.51	1.65	2.82
Total 100% JV	0.60	0.90	0.70	1.70	5.50	9.40

Section 2: Value proposition and strategic and financial context

This project will enhance safety of lives and property and facilitate the continued production from SPDC facilities by minimizing damages and business downtimes occasioned by frequent fire incidents. Thus will assure asset integrity and enable SPDC to meet current and planned oil and gas sales commitments.

The direct benefits associated with these projects can be summarised as:

Compliance with NFPA, ISO14001 standards and other Statutory Regulations

Improve Asset Integrity.

Achieve shorter response time to fight fire and hence improved safety.

Cost savings – recent fire incidents from in last 6 years resulted in damages at a replacement cost of millions of Dollars e.g. 2005 – PH IA telecoms store -US\$7.0 mln; 2007 – Ogunu telecoms building Main Distribution Frame (MDF) room US\$0.2 mln.

Sustain company reputation

Summary of Economics

The SPDC fire detection facilities upgrade project was evaluated as a cost only Non-Oil infrastructure project using 50/50 cost estimate. The project returns an NPV7% of US\$-0.5 mln RT10 and VIR 7% of – 0.25. Sensitivity analysis was carried out to determine the value of the project under high Capex scenario. See table 2 below for further details.

Table 2:
Summary Economics Grid

PV Reference Date: 1/7/2010	NPV (S/S \$ mln)		VIR	RTEP	UTC (RT \$/bbl or \$/mln btu)		Payout-Time (RT)	Maximum Exposure\$mln (RT)
Cash flow forward from: 1/1/2010	0%	7%	7%	%	0%	7%		
SV (\$50/bbl RT10)	-0.4	-0.5	-0.25	NA	NA	NA	NA	\$1.7 mln (2014)
RV (\$60/bbl RT10)	-0.4	-0.5	-0.25	NA	NA	NA	NA	\$1.7 mln (2014)
HV(\$80/bbl RT10)	-0.4	-0.5	-0.25	NA	NA	NA	NA	\$1.7 mln (2014)
Sensitivity								
High Capex (+20%)		-0.7	-0.25					\$2.0 mln (2014)

Key Project Parameter Data Ranges (Shell Share)

	Unit	Bus Plan (BP09)	Low	Mid	High	Comments
Capex (MOD)	US\$ mln	0.6		2.8	3.4	Provision made for 2010 only. While 2011-2014 expenditure to be provided for in Bus plan.
Opex (MOD)	US\$ mln	NA	NA	0.1	0.1	
Production volume	Mmbbl	NA	NA	NA	NA	
Commission Date	mm/yyyy	NA	NA	NA	NA	
Production in first 12 months	Mmboe	NA	NA	NA	NA	

Economic Assumptions:

- SCD cost of 2% of Total Capex Expenditure.
- NDDC Levy of 3% of Total Expenditure.

Section 3: Risks, opportunities and alternatives

Risks

S/N	Risk Description	Mitigation / Remedial effort
1.	Lack of Budget	There is budget provision for 2010. The 2011 budget requirement will be submitted during the 2011 – 2014 programme build.
2.	Managing Community Issues	SPDC and contractors shall mitigate this with proactive engagement of communities through identification of viable workforce for some aspects of the project work as part of pre-mobilisation activities. All community engagements to be carried out by the respective Community Relations officers or Asset Team Community Interface Coordinators (CIC). The community work force shall be engaged to execute activities they can perform and in the process acquire some training. However, the cost of homage payment shall be borne by the Asset Team/Budget Holder, as this cost is not included in the project cost supplied above.
3.	Lack of Security	The Nigerian crisis team headed by the Managing Director is in place to manage the security issues in our operating facilities and environs. Freedom to operate (FTO) will be guaranteed before moving to work site(s). Measures will be put in place to safely evacuate personnel in case of heightened security breaches. The contractors will be put on “force Majeure” at minimal cost to SPDC if security in area of operation deteriorates.
4.	HSE Plan	The HSE plan will be prepared and approved by HSE support in the line and will cover all construction / logistics activities hazard analysis and mitigation methods. SPDC HSE policies will be strictly adhered to during construction.

5	HSE Risk of striking live electrical/telecom /aircon cable during construction:	RAM rating of this project is medium. Decommissioned Halon extinguishing systems will be properly handled to minimize release of ozone depleting gas to the environment. Detailed Job Hazard Analysis and work method procedure will be prepared, visual checks, use of cable probe/testers and isolation permits shall be obtained to ensure no contact with live electrical wires.
6	HSE Risk of Working at height and inside ceiling:	Detailed job hazard analysis, medical certification, prior to commencement of construction - This shall ensure that the chosen work method, lifting techniques, suitable ladders/scaffold and harness belts are used. Intermittent rest periods between workers shall be maintained and use of applicable warning bells and work permit process shall be strictly followed.
7	HSE Risks of wastes such as decommissioned extinguishing agents (e.g.Halon), fire cable-offs, pipes, etc.	A dedicated SPDC HSE Inspector shall be maintained on site during the construction period. SPDC waste management plan shall be implemented
8	HSE Risks of Road & marine transportation hazards	Application of SPDC journey management policies and guidelines.

Alternative Considered

Do Nothing. Not acceptable in view of securing lives and property during fire incidents. Vital company records and exploration /seismic data hosted in archives and IT facilities may be lost during fire. Compliance with National Fire Prevention Authority (NFPA), Building codes and other local and international legislations is necessary for strategic business continuity. The risk of operating company facilities without adequate fire protection systems would be extreme leading to increase in business downtimes, costly replacement costs, safety issues, loss of communication to production facilities, legal issues and possible loss of LTO and revenue to the company.

Section 4: Corporate Structure and Governance

The existing corporate structure and arrangements of SPDC-JV with SPDC as operator of an Unincorporated JV with 30% interest, with Under Operational Control (UOC) and Joint Controlled Assets (JCA) will be used as the vehicle for the investment and operations. This proposal is within the SPDC corporate structure and governance framework.

Section 5: Functional Support and consistency with Group and Business Standards

This project operates in line with SPDC processes and is supported by the relevant functions: Infrastructure, IT and Asset teams. Functional support for this IP has been provided by the Finance, HSE/SCD, Legal and Tax Functions.

Section 6: Project management, monitoring and review

The Corporate Utilities Asset Integrity & Fire Detection team (TPEUA) will execute this project. Project Engineers will be dedicated to these projects to monitor progress on daily and weekly basis. In carrying out the project, relevant functional inputs will be applied to ensure seamless execution. SPDC HSE and SCD policies will be strictly adhered to with a view to minimize the risk of accident/incident and disruptions. In addition, a project-specific HSE plan incorporating all the potential hazards relating to these projects will be put in place. Communities will be proactively

engaged before commencement of work activities. TPEUA will ensure that reliable fire detection and alarm systems recommended in SPDC vendor list are provided. All engineering standards that mitigate threat and risk to personnel and assets will be adhered to. Company site representatives (CSR) will be employed for these projects to ensure that contractors execute the scope of work as stated in the contract document to the specified quality requirement. Regular project reviews shall be carried out with contractor to ensure timely project delivery that meets overall project objectives.

Section 7: Budget provision

There is a provision for US\$ 0.18 mln Shell Share for 2010 and the balance of US\$2.62 mln will be provided for the 2011 to 2014.

Section 8: Group Financial Reporting Impact

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

US\$ mln	2010	2011	2012	2013	2014	Post 2014
Total Commitment	0.18	0.27	0.21	0.51	1.65	0.00
Cash Flow						
SCD Expenditure	0.00	0.01	0.01	0.01	0.03	0.00
Capital Expenditure	0.18	0.26	0.21	0.50	1.62	0.00
Operating Expenditure	0.01	0.01	0.01	0.02	0.05	0.00
Cash Flow from Operations	0.03	0.08	0.11	0.20	0.47	1.58
Cash Surplus/(Deficit)	(0.15)	(0.19)	(0.10)	(0.31)	(1.18)	1.58
Profit and Loss						
NIBIAT +/-	0.01	0.01	0.01	0.02	0.07	(0.46)
Balance Sheet						
Average Capital Employed	0.11	0.38	0.67	1.10	2.39	13.74

Section 9: Disclosure

Disclosures, if required, will be done in line with existing Group and SPDC policies and guidelines

Section 10: Financing

The investment will be financed by JV funding while Shell share capital expenditure will be met by SPDC's own cash flow.

Section 11: Taxation

There are no unusual Taxation features.

Section 12: Key Parameters

Approval is required for the proposed commitment and expenditure for SPDC Fire Detection, Alarm and Extinguishing Systems upgrade Project from 2010 to 2014 for US\$2.82 mln MOD Shell share, 50/50 (US\$9.40 mln 100% JV).

Section 13: Signatures

This Proposal is submitted to GM DeepWater Projects for approval.

Supported by:

Approved by:

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Ogunjimi Kayode

EPF-G-PI

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

.....

Jerry Jackson

SNEPCO-UIG/T/E

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

Initiator: Abinusawa, Babs (Mr)

Head Corporate Utilities (EPG-TPEU)

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

APPENDIX –1

Below is the summary of the work scope under this proposal.

Project	2010	2011	2012	2013	2014
Upgrade of fire detection and alarm systems (East & West)	Medical store, Edjeba Blk X, W, SITP/EL V classrooms, PHC M2,M1, Install additional FDS in B4, B3 office rooms,	2 Akukwa IT equip building, MOA Block B. Addition al FDS in B1, B2 office, Ogunu Tel Equipme nt rooms. Complete FDS in ELV/SI TP. P5/WCC VESDA	SPDC Guest houses PHC/Warri fds, complete fire detection systems in RA PHC offices. Warehse E& W. Edjeba Substations 1,2,3,4, 5, 6, 9. Substations 7A, 8A IA PHC.	FDS in Telecom equipment rooms (radio huts) & offices in field locations East & West, KI offices. Complete FDS in warehouse & guest houses East & West.	Complete upgrade of fire detection systems in Telecoms equipment rooms in field locations East & West. FDS Supervisory systems in Fire Stations East & West
Design and installation of clean agent automatic fire extinguishing systems in SPDC East & West Locations.	Complete design and install clean agent fire extinguish ing systems in A8/A9. Library Fire extinguis hing.	Complete Corporat e library fire extinguis hing system. Extinguis hing systems for P5, SINC, and Telecoms store.	Complete Corporate archives fire extinguishin g system and P5 IT equipment rooms.	Design and installation of fire extinguishing systems in archives and Telecoms equipment rooms (radio huts) in field locations East & West.	Complete Design and installation of fire extinguishing systems in Telecoms radio huts.