

THE SHELL PETROLEUM DEVELOPMENT COMPANY LIMITED
COST TIME RESOURCE



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COST TIME RESOURCE (CTR)

Confidential

Date:

CTR No.		CTR Title:	WEND CPF Pre-FEED
Project	Western Niger Delta (WEND) Gas Central Processing Facilities (CPF)	WBS No:	
Total Cost	267,800 USD	Cost Centre	108838
SEPCo Department Requesting Services	Concept Engineering for SPDC Upstream Gas Commercial	Name/vendor no of Group Affiliate	Shell GLOBAL SOLUTIONS INTERNATIONAL (NL27)
Start date and End date (One year budget cycle)	February 1 st 2014 to October 31 st 2014	Budget Allocation	

Business & Technical Objectives:

The scope for the KBR Pre-FEED PMT includes planning and managing the concept selection process, coordinating and performing the technical and economic analyses required to evaluate alternative concepts leading to the selection of a preferred concept. The feasibility of the gas and product transportation pipeline system is established.

The Western Niger Delta (WEND) Central Processing Facilities (CPF) project will primarily be executed out of the KBR Houston Operations Center (HOC), with the Project Management Team and the majority of the Engineering Discipline work performed at this location. The engineering Scope of Work for the WEND GAS CPF will be executed by Granherne from the HOC. The Pipeline engineering Scope of work will be executed by ILF from Munich, Germany.

KBR will form an integrated team, including staff from WEND consortium, which will work closely with Sponsor's Consortium project team to develop a well-managed Pre-FEED project. The Sponsor's Consortium comprised of Nigerian National Petroleum Corporation (NNPC), Chevron, Shell Petroleum Development Company of Nigeria Ltd (SPDC) and Sahara Energy Resources Limited.

PRE-FEED OBJECTIVES:

- Develop the technical aspect of the project to the point that an Invitation to Bid (ITB) can be prepared and may be issued to prospective bidders for FEED.
- Develop a $\pm 25\%$ project Total Installed Cost (TIC) estimate that can be used by WEND to secure investors and funding for the project.
- Develop a Level 2 schedule for the CPF project from the beginning of FEED through EPC, commissioning and start-up. (Based on Historical Data)
- Develop a preliminary Project Execution Strategy that includes contracting, engineering,

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procurement, construction and commissioning/start-up strategies <ul style="list-style-type: none"> • Perform studies as directed by WEND to further define the project. • Define future interfaces with all other, facilities and stakeholders 			
Detailed Scope of Work:			
SPDC scope of work for the WEND CPF project includes:			
A. Provision of Engineering resources seconded in the integrated PMT team. They support the delivery of their scope of work, which consists of the following activities: <ul style="list-style-type: none"> • Pre-FEED Deliverables: The PMT shall be responsible for managing the Pre-FEED Project. • Pre-FEED Assurance Reviews: Assurance Reviews will be completed on: Design, Estimate, Schedule, Cost & Schedule Risk, Peer and Preliminary Operational Deliverables. • Pre-FEED Deliverables Review: PMT will review and analyze all deliverables • PMT Participation in Pre-FEED Contractors Conferences: PMT will participate in and with the Pre-FEED contractor's Process Hazards Analysis, VIP's and Study Reviews. 			
B. Provision of Engineering Resources, including Technical Authorities/SMPs for the Sponsors Review Team, who assists the Advisory Committee in the performance of its role.			
C. Provision of Resources for the Advisory Committee, who has the responsibility to support the Steering Committee in the Project Governance.			
D. Provision of Resources for the Steering Committee			
The scope in this CTR includes:			
1) Technical Review Services provided by SIEP Gas Processing Department; Downstream and Upstream Americas; based in Houston for scope element B. 2) Accommodation costs for SPDC secondee on Short Term International Assignments (STIAs) for scope element A.			
Input Requirements from SPDC(Where projects runs over 2 years, Budget is for one year at a time)			Due Date
SPDC delivers resources for scope elements A,B and C as described above. Further support will be delivered by Upstream Gas Commercial (UIG/G/GUU), who owns the budget for this project.			ongoing
Milestone/Deliverables with planned resource allocation			Delivery Date
WEND Project Milestones are:			
• Project Mobilization Start : (contract effective date 16th September, 2013), (M01)			23.09.2013
• Start Pre-FEED works : (M02)			23.10.2013
• Complete Pre-FEED contract completion : (M11)			22.08.2014
Resource Summary			
Manpower (Names). Time writers only.	Man-	Unit Cost	Cost (\$)


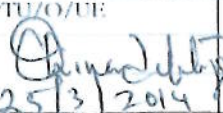

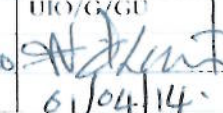
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		Hours	(\$)	
1	Technical review and SME support for Shell Houston Staff - JG 1 / 2	200	389	77,800
2	Technical review and SME support for Shell Houston Staff - JG 3 / 4	400	300	120,000
3				
4				
5				
6				
7				
TOTAL MANPOWER COST (\$)				197,800
Material and Consultancy Services Costs – including air fares/hotel costs		Man-Hours	Unit Cost (\$)	Cost (\$)
1	Transport allowances for VIP and Assurance events/ Shell Staff STIA Administrative support			20,000
2	Accommodation, misc. costs for STIA secondee			50,000
3				
TOTAL MATERIAL AND SERVICES COST				70,000
TOTAL COST NOT TO BE EXCEEDED				

Plan for Scope/Staff transfer to Nigeria/SEPCiN payroll or contract	Date/Time line
N/A	

Cost Phasing	2008	2009	2010	2011	2012	2013	2014
Manpower							197,800
Material and Service Costs							70,000
Total							267,800

SEPCiN Accountable Parties: Whole submission & process

	Budget Accountant	Contract Holder	Contract Owner	Asset Manager /Budget Holder
Name:	Ajayi Modupe	Akhoghe ohi	Okoronkwo Victor	Okoronkwo, Victor V
Ref Ind.	FUL/OG	PTU/O/UE	UO/G/GU	UO/G/GU
Signature				
Date	25/3/2014	25/3/2014	21/04/14	01/04/14

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Affiliates Accountable Parties:		
	Contract Holder	Line Manager
Name:	Mohamed Askar	Pervaiz Nasir
Ref Ind.	PTU/T/A	PTU/T/A
Signature	<i>Mohamed Askar</i>	<i>Pervaiz Nasir</i>
Date	March 19, 2014	March 17, 2014