



NIGERIAN CONTENT DEVELOPMENT AND MONITORING BOARD

GUIDELINES ON RESEARCH AND DEVELOPMENT

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RESEARCH AND DEVELOPMENT

Sections 36 -39 of the Act

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PART ONE

INTRODUCTION AND GENERAL FRAMEWORK

1.1 PROVISIONS OF SECTION 37 TO 39 OF NOGICD ACT 2010

Sections 37, 38 and 39 of the Nigerian Oil and Gas Industry Content Development Act, (the Act) contain provisions on the Research and Development obligations of Operators, contractors, sub-contractors and other stakeholders in the Industry.

1.2 Whilst Section 7 provides that in the bidding for any license, permit or interest and before carrying out any project in the Nigerian oil and gas industry, an operator shall submit a Nigerian Content Plan "the Plan" to the Board demonstrating compliance with the Nigerian Content requirements of the "Act". Section 37 stipulates that :

" for every project for which a plan is submitted, an operator shall carry out a program and make expenditure to the satisfaction of the Board for the promotion of education, attachments, training, research and development in Nigeria in relation to its work program and activities".

1.3 Section 38 (1) makes it mandatory for Operators to submit an update of their Research and Development "R and D" Plan every six months.

1.4 Also, the Act provides that the Research and Development "R and D" Plan so submitted shall outline a revolving three to five year plan for Oil and Gas related research and development initiatives to be undertaken in Nigeria, and a breakdown of the expenditures that will be made in implementing the said R and D Plans.

1.5 PURPOSE OF R&D GUIDELINES

These Guidelines provide guidance as well as the procedure for the implementation and administration of the Research and Development provisions referred above; and the provisions of the Schedule to the Act.

1.6 OBJECTIVES

1.6.1. The objectives of these Guidelines are as follows:

- a. To provide the procedure for the implementation of the R&D provisions in the Act and its Schedule ;
- b. To create a linkage between the Oil and Gas industry with research institutions and academic community under R&D cluster model;
- c. To stimulate utilization of Nigerian facilities and intellectual resources, in finding research solutions to industry problems;
- d. To encourage optimal utilization of resources available at NNPC R&D Division by Nigerian Oil and Gas industry.

1.7. APPLICABILITY

1.7.1 These Guidelines shall apply to all operators, service companies and alliance partners that carry out business in the Nigerian oil and gas industry.

1.8. DEFINITIONS

All the definitions here are specific to the activities of oil and gas industry in Nigeria.

1.8.1 RESEARCH AND DEVELOPMENT (R&D): Any activity (Study, investigation, Analysis) designed to solve a technology problem, add to a body of knowledge, lead to process improvement or result in a new technology development and geared towards enhancement of Nigerian content in the oil and gas industry in Nigeria.

1.8.2 RESEARCH CENTER: This shall mean Research and Development (R&D) Cluster/Center of Excellence(CoE), in such case, it is a collection of Organizations/Companies, Intellectuals and Subject Matter Experts (SMEs) who have been pre-qualified to carry out research and development within a location in Nigeria in their respective thematic areas as approved by the Board.

1.8.3 THE BOARD: Herein means Nigerian Content Development and Monitoring Board(NCDMB).

1.8.4 PROJECT: An investment in the oil and gas activity chain (exploration, development and production operations). Generally, they tend to be stand alone, identifiable, and can span multiyear, in many cases.

1.8.5 OPERATOR: Operator means the Nigerian National Petroleum Company (NNPC), its subsidiaries, and Joint Venture(JV) partners, and any Nigerian, Foreign or International Oil and Gas Company operating in the Nigerian Oil and Gas industry under any petroleum arrangement.

PART TWO

COMMON INDUSTRY RESEARCH AND DEVELOPMENT (R&D) PROGRAMMES/ACTIVITIES

The Board may pursuant to its statutory mandate engage qualified Research Centers to carry out research and development programmes aimed at solving common industry problems.

2.1 STEERING COMMITTEE (SC)

There shall be a Steering Committee established by the Board to carry out such functions as specified in article 2.1.2 of the Guidelines.

2.1.1 The composition of the **SC** shall consist of 8 members. The members shall not be below the rank of a Group General Manager or its equivalent in their respective organization. The Board shall call for nominations.

The membership is as follows:

- a. Chairman-NCDMB
- b. NNPC R&D- 1 nominee
- c. PTDF -1 nominee
- d. OPTS- 1 nominee
- d. PCTS -1 nominee
- e. PETAN- 1 nominee
- f. Renowned Research Fellow (nominee from NCDMB Database of Researchers).
- g. Secretary (nominated by NCDMB).

2.1.2 **The functions of SC shall be** as follows:

- a. Draws up policy guidelines and framework for managing R&D Centers,
- b. Serves as Administrative/Approval Authority on R&D Centers implementation,
- c. Makes decisions on approved R&D projects as presented by Technical Evaluation & Monitoring Committee (TEMC)
- d. Determines R&D programs and project placements /priority areas.
- e. Performs oversight on R&D Budget and Expenditure.
- f. Determines reward system for members of Research Centers.
- g. Determines procedures for assigning recognition for Research breakthroughs.
- h. Manages the outcomes of the Research Centers and domiciled same in NCDMB

2.2 TECHNICAL EVALUATION AND MONITORING COMMITTEE (TEMC)

There shall be a Technical Evaluation and Monitoring Committee to carry out such functions as enumerated in article 2.2.2

2.2.1 The composition of the TEMC shall consist of 18 members. The members shall not be below the rank of a Manager or its equivalent in their respective organization. The Board shall call for nominations.

The membership is as follows:

- a) NNPC R&D -2 nominees
- b) NCDMB 2 nominees
- c) OPTS --7 nominees
- d) PCTS -- 2 nominees
- e) PETAN – 1 nominee
- f) DPR - 1 nominee
- g) PTDF- 1 nominees
- h) Research Fellow nominated by NCDMB.
- i) Secretary – (nominated from NCDMB)

2.2.2 The functions of the TEMC shall be as follows:

- a. Evaluates R&D Proposals & Technical Presentations, and make recommendation to the Steering Committee.
- b. Manages the selection of Researchers into Research Centers.
- c. Monitors Research Centers
- d. Receives the R&D findings/outcomes for onward submission to the Steering Committee(SC) .

2.2.3 The TEMC shall have a reporting relationship with the Steering Committee.

2.3 SELECTION OF RESEARCH CENTERS

2.3.1 The Board shall select Research Centers in accordance with the provisions of these Guidelines.

2.4 COMPOSITION OF RESEARCH CENTERS

2.4.1 The Research Centers shall consist of the following stakeholders:

- a. Service Companies or alliance partner(s) initiating the research topic.
- b. R&D Unit of the service company or alliance partner(s);
- c. Multinational and Indigenous Service Companies (product or process Developer);

- e. Institutions, Postgraduate students, international research agencies and Petroleum Research Institute (PRI);
- f. Agencies related to technology development such as PTFD;
- g. Any other institution considered necessary to the research topic.

The Board shall provide secretarial support as may be required.

- 2.5. The Board shall appoint a Consultant or a Body to oversee the activities of the Research Centers.

2.6. RESPONSIBILITIES FOR IMPLEMENTATION OF R&D PROGRAMMES/ACTIVITIES.

2.6.1 RESEARCH CENTER

Research Center shall be a selected Center, which can provide a sustainable platform, mechanism and capacity to conduct a fundable common industry problem-solving research in its designated thematic area. The Center shall therefore provide requisite enabling environment for research intellectuals/subject matter experts pre-selected by the TEMC to collectively and actively conduct research at the Center.

2.6.2 RESEARCH PROPOSALS

In line with the provisions of the Act, NCDMB shall call for proposals on common industry R&D initiatives. Selected Research Centers shall implement approved research topics, not later than 3 months after the approval.

2.6.2 The following principles shall apply:

- a. Selection of proposal shall be based on R&D needs of the Nigerian oil and gas industry;
- b. Proposals shall be based on testable hypothesis;
- c. Each proposal shall be directed towards a clearly established goal;
- d. The NCDMB shall require the Operators to submit prior research commitments made on R&D of the NC Plan;
- e. The time frame shall be stated for further research on the approved research topic;
- f. The research shall be organized within a definite period of time with regular milestone deliverables.
- g. Advertisements calling for proposals shall be placed in at least three (3) local newspapers and the NOGIC JQS;
- h. Evaluation of proposals shall be based on capacity development, technology development and process improvement indicators;
- i. Research shall promote capacity development (academia, new product development, attachment and training opportunities, facility development etc.)

2.6.3 **Source of Research Topic:** Research topics should emanate from Public Notices from NCDMB, Operators, Service Companies, Researchers with Research Centers.

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2.6.4 **Streamlining Of Projects:** The Steering Committee shall set criteria for selection of projects that qualify for R&D. The projects that qualify for R&D should not have time limitation, but be based on the problems encountered during the execution of the projects in the oil and gas industry.

2.7 APPOINTED RESEARCH CENTERS OF EXCELLENCE

2.7.1 The Centers of Excellence (CoE) for R&D activities shall be a Research Center in the country, and selected by the Board with superior infrastructure domiciled in Nigeria.

2.7.2 The infrastructure to be put in place shall be state of the art equipment, and shall have defined processes and procedures that will be used for research and development activities.

2.7.3 Appointed Research Centers of Excellence shall develop the capacity and capability to undertake proof of concepts, verification of research claims, as well as confirmation of research outcomes for recommendation for deployments.

2.8 ACCREDITATION OF CENTERS

2.8.1 Each Research Center shall pass through an accreditation process which will involve the following:

- a. Criteria which will show capacity, capability, equipment and other infrastructure, research achievements, publications and patents, etc and strategic plans to sustain excellence and best practices
- b. Capability to review research results, proof concepts and advise on the best results,
- c. Staff/Researchers' profiles as related to the Research activities,

2.8.2 The Accreditation Panel shall be drawn from the TEMC and the panel shall be chaired by a member of the Steering Committee.

2.8.3 Accreditation will take place every 4 years, and the Panel will submit its report and recommendations for approval by the Steering Committee.

2.8.4 The Steering Committee shall issue Certificate of Accreditation to the Research Centers that meet the requirements of the Accreditation Panel.

2.8.5 During the 4-years cycle, the Steering Committee may in its discretion, withdraw the accreditation given to any Research Center; with written notification of the reasons for the withdrawal. Such a Center may be subsequently be re-accredited with the approval of the Steering Committee upon fulfilling the requirements which led to the withdrawal of the accreditation.

2.9. OTHER CONDITIONS APPLICABLE TO RESEARCH CENTERS

2.9.1 FUNDING of Research Projects

(i) Common Industry R&D initiatives should be funded through NCDF, and or 3rd Party Sponsors/donors such as PTDF, Industry Technology Facilitators –ITF(e.g National Board for Technology Incubators-NBTI, Small and Medium Enterprises Development Agency of Nigeria-SMEDAN and support from the industry players(ie Operators and Service Companies that may wish to participate as the need arises).

2.9.1.1 Technical Evaluation and Monitoring Committee (TEMC) to cross check selected R&D topics with others stakeholders to avoid duplication.

2.9.2 OWNERSHIP

Stakeholders in the R&D Centers under signed agreement (MoA), shall be accorded ownership of Assets, Liabilities, Rights, Duties and Obligations proportionate to the ratio as specified in the MoA for the followings:

a. Research Centers(equipment, infrastructure, materials, etc); b. Research Outcomes (findings, products etc), c. Brand Name and Product license.

2.9.3 **INTELLECTUAL PROPERTY (I.P) RIGHTS:** Parties (sponsors of research topics e.g PTDF, NCDMB, NNPC R&D, OPTS, PCTS, Research Centers) that are involved in research of the projects, shall be accorded the Intellectual property rights

2.9.4 **NON-DISCLOSURE:** There should be in the MoA a non-disclosure clause to be used in managing the project. This should be agreed in such a way that it does not conflict with Nigerian Intellectual property law.

2.9.5 **THE SPONSORS** (the sponsors of research topics) and the Research Centers will jointly own the Patent Right, and if the product is commercially viable, the Researcher will share a certain percentage (%) as agreed in the terms of the MoA

2.9.6 **ACCESS TO DATA:** Once MoA with Research Center is signed, Access to Data should be granted by the Research Centers.

2.9.7 **CONFIDENTIALITY:** The clause on confidentiality should be properly captured in the MoA to protect the intellectual property right and other information of the parties to the MoA.

2.9.8 **BRAND NAME:** The Sponsor will have the brand name.

2.9.9 **MANAGEMENT OF CONFLICT:** Conflict arising from proprietary rights should be managed in accordance with each individual contracts emanating from individual transactions.

PART THREE

OPERATORS SPECIFIC RESEARCH AND DEVELOPMENT PROGRAMES/ACTIVITIES

The Operator shall carry out R&D programs in accordance with the provisions of NOGICD Act and consistent with the requirements of these guidelines.

3.1. R&D SCOPE

3.1.1 The scope of R&D envisaged for different services in the Schedule to the Act is as follows:

- a. Engineering studies - reservoir management production facilities, drilling etc..
- b. Geological and geophysical studies
- c. Safety and Environmental studies
- d. Local materials substitution studies

3.1.2 The Schedule to the Act sets the following Nigerian Content (NC) minimum targets for R&D related activities:

3.2 RESEARCH AREA AND MINIMUM TARGET

RESEARCH AREA	MINIMUM TARGET
a. Engineering Studies , Reservoir Studies, Facilities, Drilling	60%
b. Geological and geophysical Services	80%
c. Safety & Environment Studies	75%
d. Local material substitution studies	75%

3.3. INFORMATION REQUIRED

3.3.1 The R&D plan shall consist of the following information as specified in the R&D Initiative Template attached to this Guideline:

- a. Purpose & expected outcome from research initiative
- b. Research scope (basic or advanced)
- c. Planned expenditure
- d. The Research Centers to be engaged. However, in the case of Operator Specific research , such Operator shall be at liberty to engage a Researcher outside the research center, subject to effective reporting and monitoring by the Board.
- e. Location(s) of R&D activities
- f. Estimated duration

3.4 . IMPLEMENTATION PROCEDURE

3.4.1 DESIGNATED OFFICE/OFFICER FOR R&D

- a. The Operator, Service Company shall have a designated Officer/office for coordinating the R&D activities.
- b. The designated office/officer for R & D shall manage the selection of nominees to the R&D Center and ensure interface with the nominated Coordinating entity.
- c. The designated office/officer for R&D shall be responsible for reporting R&D activities and Operator's plan to the Board in compliance with sections 37, 38 and 39 of the Act.

3.4.2 Funding

Operator Specific R&D Initiatives should be project based, the R&D Plan shall be established at the work program level, while each project in its NC plan shall indicate relevant funding terms for such R&D plan where applicable in accordance with section 37 of NOGICD Act.

3.4.3 Percentage Spend

The amount to be expended by Operators on R& D shall be agreed during the commercial phase of each applicable project in conjunction with NCDMB.

3.4.4 Establishment of Need

This shall be based on Operators Specific issues that emanates from its work program.

PART FOUR
GENERAL PROVISIONS

4.1 COMPLIANCE MONITORING

4.1.1 NCDMB shall establish a mechanism for monitoring compliance with this Guideline.

4.1.2 This may include but not limited to: unscheduled visits to R&D locations; validation of reported milestones and outcomes as NCDMB may deem necessary; submission of documentary evidence of all publications relating to call for research proposal; and quarterly progress report on implementation of R&D plans indicating milestones.

4.2 COMPLIANCE TRACK-RECORDS

All project based R&D plans, general R&D plans, R&D progress reports, R&D monitoring and evaluation reports shall be uploaded in the NOGIC JQS for effective tracking and retrieval.

4.3 R&D PERFORMANCE MANAGEMENT

The performance management for R&D shall follow standard project management practices consisting of scope, cost, time and quality.

4.4 CONSIDERATION OF R&D PLANS AND RELEVANT DOCUMENTS BY NCDMB

4.4.1 Within thirty (30) days of its receipt, the Board and its selected researchers shall, in conjunction with the relevant Operator, Service Company or alliance partners, as well as the relevant Research Center, hold a joint evaluation to ascertain completeness and relevance of planned R&D activities submitted by the Operator to industry needs.

4.4.2 Upon assessment of the submitted plan, the NCDMB shall advise the relevant operator, service company or alliance partner on the adequacy or otherwise of the R&D plan.

4.4.3 The NCDMB shall decide on the adequacy of the R&D plan and other reports within 30 days. However, if it is unable to make determination within the stipulated time, it shall inform the relevant operator, service company or alliance partner as to reasons for the delay and shall give a definite time within which a determination shall be made. The extended period shall not be more than fifteen (15) days after the expiration of the initial thirty (30) day period. After the expiration of the extended period of fifteen (15) days, if no determination is made by NCDMB, the relevant operator, service company or alliance partner should consider the document submitted as approved by NCDMB, unless otherwise notified in writing by NCDMB.

4.4.4 All approved R&D plan or research proposal from the public shall be assigned to one of the Research Centers approved by the Board for selected Researchers, with linkage to industry.

4.4.5 In event that the approved Research or proposal cannot be handled by the Research Center, the Operator, Service Company and its Alliance partners is required to notify the Board and obtain approval for conducting such research in other centers (overseas). Such centers must have collaboration with one of the approved Research Centers in Nigeria for

the purpose of capacity development. However, such collaborations shall be subject to Intellectual Property (I.P) rights of the foreign research entity. In this respect the general rule applicable to R&D centers shall not be applicable to this collaboration.

4.5 ENFORCEMENT AND CONSEQUENCES OF NON-COMPLIANCE

4.5.1. Any stakeholder in the Industry, including service companies who carry out any activity relating to R& D without complying with this Guideline , including the provisions of the Schedule dealing with R&D shall be in default thereof.

4.5.2. The Board shall first duly notify the operator or other stakeholder concerned of any identified default(s); and shall specify the step, action and/or remediation required to correct the non-compliance indicating the necessary timeframes within which compliance must be achieved to the satisfaction of the Board.

4.5.3. Any violation on the provisions of the R&D guideline as contained in 4.5.1 and 4.5.2 shall be sanctioned in accordance with provisions of section 68 of NOGICD Act 2010.

4.6 REVIEW OF R&D GUIDELINES

There shall be a review of the R&D guidelines as the need arises, based on the application by the Oil and Gas industry to the Board for consideration.

4.7 PUBLIC CALLS

There shall be public calls for proposals for R&D initiatives associated with Operators Specific activities or Common industry R&D concerns respectively.

4.8 ABBREVIATIONS

- The Act
 - NCDMB
 - ES
 - DPR
 - DPRS
 - NNPC
 - NBTI
 - PETAN
 - PTDF
 - PTI
 - PRI
 - JQS
 - ITT
 - ITF
 - I.P
 - R&D
 - SME
 - SMEDAN

 - NOGIC
 - NOGICD
 - NC
 - NCD
 - NCDF
 - SC
 - TEMC
 - CEO
 - OPTS

 - PCTS

 - IOCs
 - MoA
- Nigerian Oil and Gas Industry Content Development Act
 - Nigerian Content Development & Monitoring Board (The Board)
 - Executive Secretary
 - Directorate of Petroleum Resources
 - Director of Planning, Research and Statistics
 - Nigerian National Petroleum Corporation
 - National Board for Technology Incubators
 - Petroleum Technology Association of Nigeria
 - Petroleum Technology Development Fund
 - Petroleum Training Institute
 - Petroleum Research Institute
 - Joint Qualifications system
 - Invitation To Tender
 - Industry Technology Facilitators
 - Intellectual Property
 - Research and Development
 - Subject Matter Expert
 - Small and Medium Enterprises Development Agency of Nigeria

 - Nigerian Oil and Gas Industry Content
 - Nigerian Oil and Gas Industry Content Development
 - Nigerian Content
 - Nigerian Content Department
 - Nigerian Content Development Fund
 - Steering Committee
 - Technical Evaluation and Monitoring Committee
 - Chief Executive Officer
 - Oil Producers Trade Section(Registered by Lagos Chamber of Commerce and Industry)
 - Petroleum Contractors Trade Section (Registered by Lagos Chamber of Commerce and Industry)

 - International Oil Companies
 - Memorandum of Agreement

**PART FIVE
APPENDICES**

5.1 ATTACHMENTS

5.1.1. Appendix A- Template for project based R&D Activities [..\Desktop\R&D Template Appendix A For Operators-RV 2 Updated December, 2015.pdf](#)

5.1.2. Appendix B- Template for R&D Initiative/Plan [..\Desktop\R&D Template Appendix B For operators RV 1 Updated December 2015.pdf](#)

5.1.3. Appendix C- Template for studies [..\Desktop\APPENDIX C R&D STUDIES TEMPLATE FOR OPERATORS RV 1 Updated December 2015.pdf](#)

 









ADOPTION OF THE RESEARCH & DEVELOPMENT GUIDELINES

THE REVISED R & D GUIDELINE IS UNANIMOUSLY ADOPTED BY THE NCDMB, OPTS, PCTS, PETAN & NNPC
R & D REPRESENTED BY THEIR UNDERSIGNED REPRESENTATIVES AT NCDMB HEAD QUARTERS, YENAGOA,
BAYELSA STATE ON THE 4TH DAY OF APRIL, 2017.

S/N	NAME	COMPANY	DESIGNATION	SIGNATURE
01	Austin Uzala	Shell	Ag. NC GM	<i>[Signature]</i>
02	Atkinson Dede	Schlumberger	Director	<i>[Signature]</i>
03	Benny Nwibani	Npac - ENI	GM, NCD	<i>[Signature]</i>
04	Simson Dgeri	Seplat	NCs, Adviser	<i>[Signature]</i>
05	Ataria S.O	NPPC R&D	Mgr R&DS.	<i>[Signature]</i>
06	Cyrian Amunoy	PETAN	BDM	<i>[Signature]</i>
07	Sega Oluwalu	Chevron	GM, NCD	<i>[Signature]</i>
08	Job Aguru	Adax	GM SCMT NCD	<i>[Signature]</i>
09	Anthony John	Halliburton	Scientist-Chemist	<i>[Signature]</i>
10	Roos Mike Onyekonwu	LASER - UNIPORT	MC	<i>[Signature]</i>
11	Bank Andy Omy	PETAN	Chairman	<i>[Signature]</i>