
Chapter-1

Hydrocarbon Production Sharing Contracts-An Introduction

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1.1 Introduction

As a growing economy, India has not only a substantial demand for energy but also, the demand is increasing making self-reliance in this sector a vital policy objective. Exploration and development of hydrocarbon reserves is a key element in achieving this goal. Consequently, in 1991, the Government of India (GoI) decided to invite foreign and domestic Private Sector Companies to participate in the development of discovered oil and gas fields, and in some cases, fields partially developed by the National Oil Companies (NOCs) – Oil and Natural Gas Corporation Limited (ONGC) and Oil India Limited. In 1993, the GoI introduced a policy of round-the-year bidding for exploratory blocks and four years later (1997), the GoI announced the New Exploration Licensing Policy (NELP), under which NOCs compete with Private Sector Companies for obtaining Exploration & Production (E&P) licenses through a bidding process, instead of getting them on nomination basis. The position of Production Sharing Contracts (PSCs) awarded under different fiscal regimes is as follows (February 2014):

Discovered/ Producing fields rounds	–	29
Pre-NELP Exploration Rounds	–	28
NELP Rounds (I to IX)	–	249

1.1.1 Contracting and operating regime

The Ministry of Petroleum and Natural Gas (MoPNG), the Directorate General of Hydrocarbons (DGH) and the Contractor /Operator are the main stakeholders in PSC. Their role and responsibilities are depicted in Figure 1.

MoPNG is, *inter alia*, responsible for the exploration and production of petroleum and natural gas, including the administration of the Oilfields (Regulation and Development) Act, 1948. MoPNG is assisted by the DGH, which was established in April 1993 with the objective of promoting sound management of Indian petroleum and natural gas resources having a balanced regard for the environment, safety, technological and economic aspects of petroleum activities. The Contractor is required to carry out petroleum operations and has the right to recover cost and expenses in case of a successful commercial discovery leading to production, as per terms of the PSC.

The PSCs between the GoI and the Contractor(s) for specific fields / blocks provide the contractual basis for petroleum operations, cost recovery, profit sharing and other aspects. In

most PSCs, there are many contracting parties with varying shares of Participating Interest¹ (PI); one party (usually the party with the majority PI) is designated as the “Operator”. The constituents of the Contractor have to enter into an “Operating Agreement”² among themselves for conduct of petroleum operations which would delineate the responsibilities of the Operator; establish an “Operating Committee” (OC)³ comprising an agreed number of representatives of the Companies, specify the functions of the OC, procedures for decision making, contribution to costs, etc.

The content of these PSCs varies substantially among those for discovered fields, pre-NELP exploratory blocks and NELP blocks, and even within different NELP rounds (with Model PSCs being drawn up for each NELP round).

¹ *“Participating Interest” means, in respect of each Party constituting the Contractor, the undivided share expressed as a percentage of such Party’s participation in the rights and obligations under this Contract.*

² *Termed as “Joint Operating Agreement” (JOA) in the Panna-Mukta and Tapti PSCs*

³ *Termed as “Operator Board” (OB) in the Panna-Mukta and Tapti PSCs.*

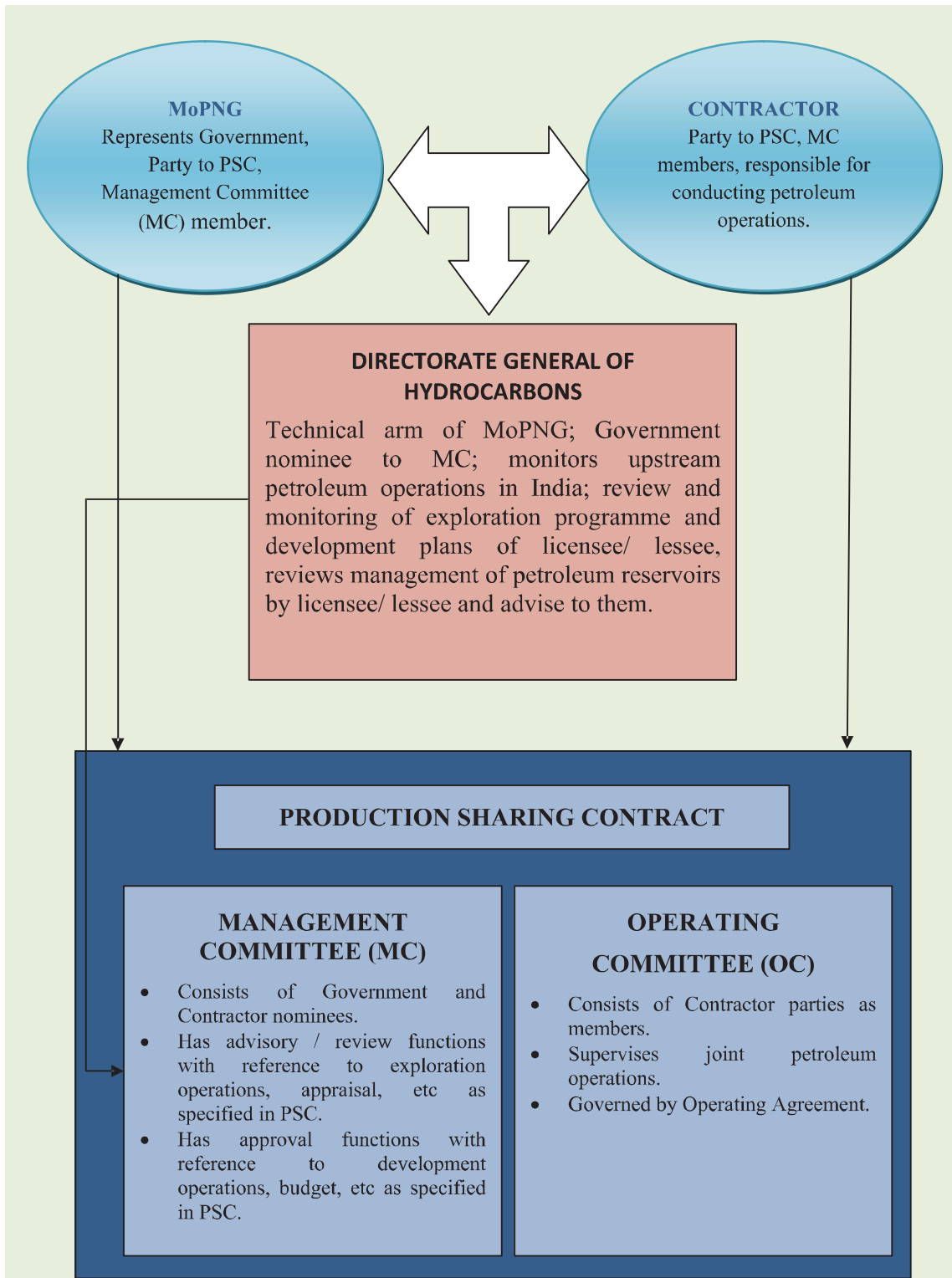


Figure 1

1.1.2 Fiscal parameters

The key feature of the PSC is that the Contractors bid on the percentage of the reward that the GoI receives from the hydrocarbon block. The Contractor undertakes the initial exploration risks. If no hydrocarbons are discovered, or the quantities are small, the revenues generated may not be sufficient to recover the costs incurred; this risk is borne by the Contractor.

The three key issues under the NELP fiscal regime are Cost Recovery, Profit Petroleum (PP), and Investment Multiple (IM); these are described below:

Table 1 : Key issues under the NELP fiscal regime

Cost Recovery	<p>The Contractor bids the Cost Recovery Factor – i.e. the percentage of revenues which he is entitled to take in a year to recover his exploration, development and production costs. This percentage can be up to 100 <i>per cent</i>. The higher the cost recovery factor that the Contractor bids, the earlier the costs can be recovered; however, in such a situation, his fiscal package will be relatively unattractive as part of the bid evaluation.</p> <p>The amount of costs recoverable from annual revenues is termed as Cost Petroleum (CP).</p>
Profit Petroleum	<p>After deducting the recoverable costs (CP) from the revenues, the resulting PP is then divided between the GoI and the Contractor. The sharing of PP, which is linked to the pre-tax Investment Multiple (IM) of the previous year, is a biddable parameter, and is evaluated as part of the fiscal package.</p>
Investment Multiple	<p>The pre-tax IM is the ratio of cumulative Net Cash Income⁴ to the cumulative exploration and development costs. The lower the IM, the more capital-intensive the project. As part of their bid, the Contractors are required to specify the GoI share at different IM slabs, e.g. less than 1.5, 1.5 to less than 2.0 etc. Generally, the Contractors bid for a lower GoI share for the lower IM slabs, and the highest GoI share for IM of 3.5 and above {(i.e. where net cash income is highest compared to the capital expenditure (capex))}. Also, since capex in the initial years will generally be high and will decrease over time, the IM is expected to increase over time from year to year.</p>

⁴ *Net Cash Income = Cost Petroleum + Contractor’s Share of Profit Petroleum (based on last year’s IM) + Incidental Income – Production Cost and Royalty.*

1.2 Background to audit

In response to a request (November 2007) from the MoPNG, the Comptroller & Auditor General of India (C&AG) had conducted a special audit of PSCs for four blocks (*viz.* KG-DWN-98/3, Panna-Mukta and Tapti, and RJ-ON-90/1) in 2008-11⁵. The audit pertained to the Financial Years (FYs) 2006-07 to 2007-08. The results of the audit were published in Report No 19 of 2011-12: Performance Audit of Hydrocarbon Production Sharing Contracts, which was laid before the Parliament in September 2011. The report was under examination (February 2014) by the Public Accounts Committee.

The MoPNG, in April 2010, had requested C&AG to undertake audit of 20 fields/blocks for the FYs 2007-08 and 2008-09. The request was accepted by C&AG in February 2012 agreeing to audit 8 blocks and the balance 12 blocks to be audited by Chartered Accountants.

Audit of four blocks, *viz.* PY-1, PY-3, Kharsang and CB-ON-7, was conducted during February to September 2011 for the years 2007-09 at the premises of DGH and the Operator. The financial details in respect of these blocks are given in *Annexure 1*. The audit was conducted at DGH and Operator premises and the audit findings of minor / procedural nature would be communicated through a Management Letter.

Audit initiated (May 2012) a Performance Audit of the implementation of Hydrocarbon PSCs at the MoPNG and DGH with respect to Blocks KG-DWN-98/3, Panna-Mukta, Tapti and RJ-ON-90/1. At the Operators' premises for these blocks, C&AG undertook the financial and propriety audit. While audit at the Operator's premises for RJ-ON-90/1 block commenced in July 2012, audit for KG-DWN-98/3 block and for Panna-Mukta, Tapti blocks commenced in January 2013 only.

The observations emanating from the performance audit at the MoPNG and the DGH as well as the results of the financial and propriety audit conducted at the Operators have been presented block-wise in this report.

1.3 Audit objectives

a) The Performance Audit at the MoPNG and DGH was conducted with a view to obtaining an assurance that

- 1) The systems / procedures of MoPNG / DGH were adequate and effective in monitoring and ensure compliance with PSC terms; and

⁵Audit effort was interrupted, due to difficulties in obtaining access to the records of the Operators. The problem arose initially in July 2008 during audit of PMT fields. The matter was finally taken up by the C&AG in August 2009 with the then Minister (PNG) for expediting access to the Operators' records. The issue was resolved and field audit of Operators commenced between January and May 2010. For details, please refer to para No. 3.5 of Audit Report No. 19 of 2011-12.

- 2) The revenue interests of the GoI (including royalty and GoI share of PP) were properly protected, and adequate and effective mechanisms were in position for this purpose.
- b) Audit of the Operators’ books and records was conducted;
- 1) to verify whether the GoI’s revenue in the form of PP (current and future) and royalty was correctly calculated and its revenue interests were properly protected; and
 - 2) to obtain an assurance that the expenditure incurred was in compliance with PSC provisions, accurately and reliably reflected, and these amounts were supported by adequate documentation. The audit included examination of the propriety of expenditure *vis a vis* the PSC provisions which involved verifying that the contracting process of Operator’s procurements is as per the letter and spirit of procurement process given in the PSC and standard best practices. Within the selected sample, Audit also sought to verify that the figures of individual items were reasonable, commensurate with original / revised budgets, plans, feasibility reports or other similar documents. Collateral evidence which would provide assurance regarding the authenticity of goods and services procured and provided was also requested.

1.4 Audit scope and methodology

The Performance Audit was conducted at the MoPNG and DGH with respect to their records for the period 2008-12. An Entry Conference with the MoPNG and DGH for conducting the audit of Hydrocarbon PSCs (KG-DWN-98/3, Panna-Mukta and Tapti, RJ-ON-90/1) was held on 11 May 2012. To verify the monitoring process and control exercised by the GoI and the regulator, records maintained at MoPNG /DGH, as well as those provided by the Contractors to DGH were scrutinized.

Details regarding the audit of Operators’ records are given below:

Table 2 : Details regarding the audit of Operator records

Block	Audit period⁶	Audit duration	Date of entry meeting
KG-DWN-98/3	2008-09 to 2011-12	January 2013 to December 2013	09 January 2013
Panna-Mukta and Tapti	2008-09 to 2011-12	January 2013 to November 2013	02 January 2013
RJ-ON-90/1	2008-09 to 2011-12	July 2012 to November 2012	09 July 2012

⁶ The scope of audit in respect of blocks KG-DWN-98/3, Panna-Mukta, Tapti and RJ-ON-90/1 was expanded up to 2011-12 on the request (17 May 2012) of MoPNG. As regards PY-1, PY-3, Kharsang and CB-ON-7 blocks, since the audit had already been completed, the scope in respect of these blocks was not expanded.

PY-1	2007-08 and 2008-09	February 2011 to September 2011	27 January 2011
PY-3	2007-08 and 2008-09	February 2011 to September 2011	27 January 2011
Kharsang	2007-08 and 2008-09	February 2011 to September 2011	27 January 2011
CB-ON-7	2007-08 and 2008-09	February 2011 to September 2011	27 January 2011

Audit at the Operators' premises was conducted by reviewing the records relating to Work Programme and Budget (WP&B), periodical returns/reports submitted by the Contractor to DGH, Operating Board / MC resolutions, the accounting records and project and contract documents relating to execution of projects and procurement of goods / services. Audit verified, on a test check basis, cost recovery claimed by the Contractor, revenue calculations, process followed for procurement and utilization of materials, equipment and services.

Audit requisitions were issued to obtain information and records while audit observations were issued to obtain views of the MoPNG / DGH / Contractors / Operators on subjects wherein Audit perceived non-compliance. Discussions were held at various stages of audit with MoPNG / DGH as well as with the Operators during scrutiny of their records. Interactive sessions were also held with representatives of the Contractors of the Blocks to discuss key audit issues, on which clarifications were sought.

1.5 Audit Criteria

The audit criteria adopted were drawn from the following sources:

- a) Relevant Production Sharing Contract
- b) Joint Operating Agreement
- c) Oil field (Regulation and Development) Act, 1948
- d) Petroleum & Natural Gas Rules, 1959
- e) NELP and subsidiary instructions of MoPNG
- f) Directives/Notification issued by the MoPNG / DGH from time to time in regard to petroleum operations
- g) Policies framed by GoI from time to time in regard to petroleum operations and
- h) Generally Accepted Accounting Practices / Accounting Standards

1.6 Difficulties in access to Operators' records

The field audit of the records of the Operator of KG-DWN-98/3 and Panna-Mukta and Tapti (PMT) blocks was to be taken up from May 2012 at their premises. The audit effort was interrupted due to difficulties in obtaining access to the records of the Operator(s) because of the latter's differences regarding the scope and mandate of audit. Block wise position is summarized below.

1.6.1 KG-DWN-98/3 Block

The Operator of KG-DWN-98/3 Block (RIL) raised issues about a) the C&AG's mandate to audit their records under C&AG's (DPC) Act 1971 read with Section 1.9 of Appendix C of the PSC, b) whether audit would be a performance, financial or propriety audit and c) scope of audit.

Annexure 2 depicts the series of correspondence exchanged among C&AG, MoPNG and Operator for settlement of these issues.

A kick off meeting was held with the Operator in January 2013 to start the audit. However, audit was interrupted due to disagreement on matters related to scope and mandate of audit. As these issues could not be resolved despite deliberations and correspondence with MoPNG and the Operator (and instructions issued by MoPNG to the Operator), the matter was ultimately taken up by C&AG in February 2013 with the then Minister, Petroleum and Natural Gas (PNG). These issues were finally resolved in April 2013, when MoPNG issued directions (2 April 2013) to RIL that *"the present audit is being undertaken by the C&AG as per section 20 (1) of the C&AG DPC Act with the scope, extent and manner as specified in Article 25 and Appendix C of the PSC. This audit would examine the propriety of expenditure vis-a vis the provision of PSC, with full access to records"*.

Finally, the audit started in April 2013 on the basis of the decision communicated by the MoPNG on 2 April 2013 as above.

The Operator gave its views, clarification and explanations through discussion, presentations⁷ and written responses to Audit Requisitions and Memos (Observations) which were considered. While finalising its views Audit also considered the Operator's statement that *"the KG-D6 is the first and only deep water production in India and amongst the most*

⁷ *The Operator made the following presentations during the field audit and thereafter at various levels - Production Data Management System (PDMS) presentation on 17 April 2013 to Director, PDMS presentation on 18 May 2013 to Director, Material Management presentation on 3 June 2013 to Director, Over view on KG-DWN-98/3 Block on 28 October 2013 to Principal Director (ESM), Power point presentation on 16 January 2014 to Dy. C&AG (Commercial) on (a) NELP PSC & Provisions, (b) RIL investment under NELP & KG-D6, (c) D1 D3: Allegations & Myths and (d) Issues pertinent to current CAG audit, Power point presentation on 11 April 2014 to Dy. C&AG (Commercial) on the status of audit, response to key Audit Memos and other issues.*

complex reservoirs in the world". Supplementary information and additional explanations given during the above-mentioned presentations have been duly considered.

The Operator was supposed to respond to Audit Requisitions / Memos till 15 January 2014. Audit accepted Operator's request for extension till 31 January 2014. Later, the Operator requested for extension upto 15 February 2014. In fact, Audit continued to receive replies from the Operator till 15 April 2014. The response of the Operator to the Audit Requisitions / Memos have been duly considered and relevant extracts incorporated in the paragraphs of this report.

1.6.2 Panna-Mukta and Tapti (PMT)

During the audit, the flow of records was slow. Further, the PMT JV provided scanned copies instead of original documents which resulted in further delay in the production of records. Also, SAP access was provided only in July-August 2013.

While responding to certain audit observations⁸, PMT Joint Venture (JV) stated that *the issues, being the matter of operational performance, were outside the scope of the present audit conducted under Section 1.9 of Appendix C of the PSCs of Panna-Mukta and Tapti fields*. However, it is pertinent to note that Section 1.9.1 clearly mentions that GoI shall have the right to inspect and audit all records and documents supporting costs, expenditures, expenses, receipts and income, and there should not be any restriction in accessing the records.

1.7 Response to Draft Audit Report and Exit Conference

The Draft Audit Report (DAR) was issued to MoPNG on 30 April 2014 with the request to send their response by 12 June 2014. Audit received the MoPNG response on 1 July 2014. The MoPNG's response has been duly considered and relevant portions have also been incorporated in the report.

The DAR, issued to the MoPNG, contained findings from both the performance audit conducted at the MoPNG / DGH and the financial and propriety audit conducted at Operator premises under Section 1.9 of the PSC. Accordingly, the DAR demarcated, for each block, in the relevant chapter the issues related to Performance Audit and the issues related to the financial and propriety audit of Operators. The issues related to the performance audit had emerged out of the examination of records at MoPNG/ DGH whereas the financial and propriety audit issues (mainly in the nature of expenditure/ accounting and receipts) had been taken from the examination of records of the Operators. Nonetheless, while seeking the response from the Operators, DGH issued the entire DAR to Operator. Response from the Operators of the Blocks was forwarded by the MoPNG in June / July 2014.

⁸ Para numbers 3.6.4.1, 3.6.1.5, 3.6.2.1, 3.6.2.2 and 3.6.4.2.

Operator of KG-DWN-98/3 responded to them also while stating “*it is apparent from paragraph 2.1.5 of the report that paragraph 2.4, 2.5, 2.6 and 2.10 are concerned with the CAG’s performance audit of the MoPNG / DGH and not its purported audit of the Contractor under Section 1.9 of the Accounting Procedure to the PSC. Contractor requests that the CAG distinguish between these two different audits.... However, the DGH has requested the Contractor’s response to report (including paragraphs 2.4, 2.5, 2.6, and 2.10) and our response to these paragraphs is set out above*”.

As per the mutually agreed terms for the scope of audit, performance audit issues were restricted to the audit of MoPNG / DGH records and were not extended to the Operator. However, since the Operator of KG DWN 98/3 has chosen to respond to the audit findings resulting from the Performance audit of MoPNG / DGH also, upon careful consideration, this report has included their views as well. Further, MoPNG while forwarding the replies of the Operator has not endorsed them.

However, with regard to the issues resulting from the financial and propriety audit at the Operator’s premises, the replies have been duly considered and relevant portions have also been incorporated in the report.

As per C&AG standard practice, an Exit Conference was held on 11 July 2014 to provide a final opportunity to the auditees to discuss the findings and present their views. Due to the nature of the audit conducted, the Exit Conference was scheduled to be held in four sessions, Session 1 with MoPNG and DGH, Session 2 with representatives of Operator of RJ-ON-90/1 block, Session 3 with Operator of KG-DWN-98/3 block and Session 4 with Operator of PMT block. Session 3 was not held that day as the Operator of KG-DWN-98/3 block expressed his inability to attend on 11 July 2014 and requested for another meeting, which was held on 21 July 2014. The views expressed during the Exit Conference have also been duly considered while finalizing this report.