



Governance of the Petroleum and Natural Gas Sector in India: A Status Note

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Abstract

Petroleum and natural gas are second only to coal in India's commercial energy mix, contributing more than 40 per cent of the country's conventional energy supply. The sector plays a critical role in determining India's energy security. Since India does not have sufficient domestic crude reserves to meet the growing demand for petroleum products, it has to import 80 per cent of its total crude consumption. Natural gas imports are also expected to increase in the future. The level of import dependence coupled with the heavy reliance on oil and gas in India makes governance of this sector crucial for ensuring energy security. Moreover, since energy supply and access are crucial drivers of economic development, good governance practices in this sector are all the more important. However, even a cursory glance at the current scenario shows a number of lacunae which are impeding development of this sector. A closer look reveals the multiplicity of interconnected issues that would need to be addressed in detail to improve performance of the oil and gas sector in the country.

With this objective, this paper provides an analysis of the governance issues in the oil and gas sector in India. The paper first provides a background of the laws and regulations governing the sector and the structure of government organizations and companies — private and public — involved. Thereafter, the paper focuses on five key aspects of governance and takes a look at the oil and gas sector through these separate lenses. These include regulation, level of competition in the sector, Centre–State relations in oil and gas governance, financial health of oil companies, and community participation in the sector. Wherever necessary, upstream-, midstream, and downstream-related issues have been examined separately. The paper concludes with some key short-, medium-, and long-term recommendations for improving oil and gas governance in India.

The paper has been informed by a detailed literature review and one-on-one interactions with numerous sector experts in the government as well as public sector companies and private majors.

Introduction

Accounting for nearly 40% of the country's energy demand, the petroleum and natural gas sector forms a major source of energy in India. The share of oil and gas in India's energy mix is projected to increase in the near to medium term. Further, for both these sources, the dependence on imports is also projected to rise. Even though the two products are used differently, their exploration processes are similar and this has often led to them to being addressed in the same category, particularly in legislations.

Given this dependence on the sector and the linkages of energy with economic development, it is essential to examine and identify key issues that affect the development of the sector. This background paper on the oil and gas sector of India provides an understanding of key governance-related issues that affect the sector. It lays out the key laws and regulations that have shaped the development of the sector in the country. Subsequently, the paper discusses various organizations within the sector and examines the roles that each of these perform. Finally, key issues related to regulation, competition, Centre–State relations, financial health of utilities, and community participation are discussed in detail.

Laws and Regulations Governing the Sector

The Petroleum Act was passed in 1934 to address operational issues covering the entire value chain of oil production. The objective of the Act was to *consolidate laws relating to the import, transport, storage, production, refining and blending of petroleum* with powers for regulating these aspects being vested primarily with the Central government.

Following the Petroleum Act, the next major legislation was the **Oilfields (Regulation and Development) Act of 1948**. Under this Act, the central government was granted the power to make rules for regulating the authorization of mining leases (for offshore blocks). Further, the Act also empowers the central government to determine rates of royalty payable by the holder of the mining lease for onshore as well as the offshore blocks.¹

The authority of the central government over the development of the sector is further re-affirmed by the powers awarded to it under the **Petroleum and Natural Gas Rules 1959** (last amended in 2009). Under the said Rules, even though the respective states own the blocks found within their territory and are therefore, responsible for awarding the licenses for onshore blocks, they can, however, do so only with prior approval from the central government. Therefore, taking into consideration the Oilfields Act of 1948 and the Petroleum and Natural Gas Rules of 1959, it is clear that the powers enjoyed by the state governments are restricted by the central government in so far as granting of onshore mining licenses and deciding upon the royalty and surface rent rates are concerned (Noronha and Srivastava, 2012).

With regard to acquisition of user rights on a land where petroleum and/or mineral pipelines have to be laid, the **Petroleum and Minerals Pipeline Act** was passed in 1962. This Act has provisions relating to

¹ In addition to royalty, the holder of a mining lease for onshore blocks has to pay surface rent to the concerned state government. The rates of surface rents are determined by the central government.

the acquisition and utilization of land for laying pipelines. The central government has been given the authority to acquire the land. Once the land has been acquired, the central government has the option of either keeping the acquired land or transferring it to either the state government or the corporation² for which the land has been acquired. The Act also provides for compensation in case of *any damage, loss or injury is sustained by any person interested in the land under which the pipeline is proposed to be, or is being, or has been laid*. Further, the liability of paying the compensation lies with the concerned authority, i.e., the central or state governments or corporation.

In addition to the aforementioned legislations, the **Oil Industry (Development) Act** was passed in 1974 under which the Oil Industry Development Board (OIDB) was created at a time when the need to promote self-reliance in the oil and gas sector was realized. The mandate of the Board is to facilitate development of the sector. The Board is responsible for collecting the oil industry development cess on the blocks that have been awarded to upstream oil companies on a nomination basis. It also extends financial assistance to companies in the sector in the form of loans.

The most recent legislation in the sector was passed in 2006 when the **Petroleum and Natural Gas Regulatory Board (PNGRB) Act** was passed under which the PNGRB was established as a statutory regulatory body for the downstream petroleum.

As per the PNGRB Act, the objective of the establishment of PNGRB is to:

<indent quote begins>

regulate the refining, processing, storage, transportation, distribution, marketing and sale of petroleum, petroleum products and natural gas excluding production of crude oil and natural gas so as to protect the interests of consumers and entities engaged in specified activities relating to petroleum, petroleum products and natural gas and to ensure uninterrupted and adequate supply of petroleum, petroleum products and natural gas in all parts of the country and to promote competitive markets and for matters connected therewith or incidental thereto.

<indent quote ends>

In addition to these, the Ministry of Petroleum and Natural Gas (MoPNG) is actively considering policies on exploration and production of unconventional hydrocarbons, especially shale gas and coal bed methane (CBM). The draft policy on shale gas has been formulated and shale gas blocks may begin to be awarded in the next few years. However, there are significant environmental concerns regarding shale gas explorations which would need to be addressed. The country's CBM reserves are estimated to be quite large. However, CBM production remains very low and there are inter-ministerial conflicts between the MoPNG and the Ministry of Coal (MoC) over governance of this particular resource (TERI, 2013).

² Corporation means any body corporate established under any Central, Provincial or State Act, and includes:
(i) a company formed and registered under the Companies Act, 1956 (1 of 1956); and
(ii) a company formed and registered under any law relating to companies formerly in force in any part of India.

Box 1 List of major Acts governing the oil and gas sector in India

1. The Petroleum Act, 1934
2. The Oilfields (Regulation and Development) Act, 1948
3. The Petroleum and Minerals Pipeline Act, 1962
4. The Oil Industry (Development) Act, 1974
5. Petroleum and Natural Gas Regulatory Board Act, 2006

Source: TERI (2012a)

Government Bodies in the Oil and Gas Sector

In India, the regulation and development of oilfields and mineral oil resources, petroleum and petroleum products, and other liquids and substances declared under law by the Parliament as dangerously inflammable, falls under the Union List (Article 246, Seventh Schedule). The principle government body at the central level is the MoPNG. At the state level, there are departments and directorates that regulate and control activities related to petroleum and natural gas in onshore fields.

Central level

Ministry of Petroleum and Natural Gas

At the central government level, the MoPNG is entrusted with the responsibility of exploration and production of oil and natural gas as well as their refining, distribution and marketing, import, export, and conservation of petroleum products and Liquefied Natural Gas (LNG).

Apart from the MoPNG, which is an overarching central policy-making body, other bodies (such as Centre for High Technology, Petroleum Conservation and Research Association, and Oil Industry Safety Directorate) and other central ministries (such as Ministry of Environment and Forests [MoEF], Ministry of Finance, Ministry of Power, etc.) are also involved in various aspects of the oil and gas sector. Figure 1 presents the various government bodies engaged in the overall governance of the sector.

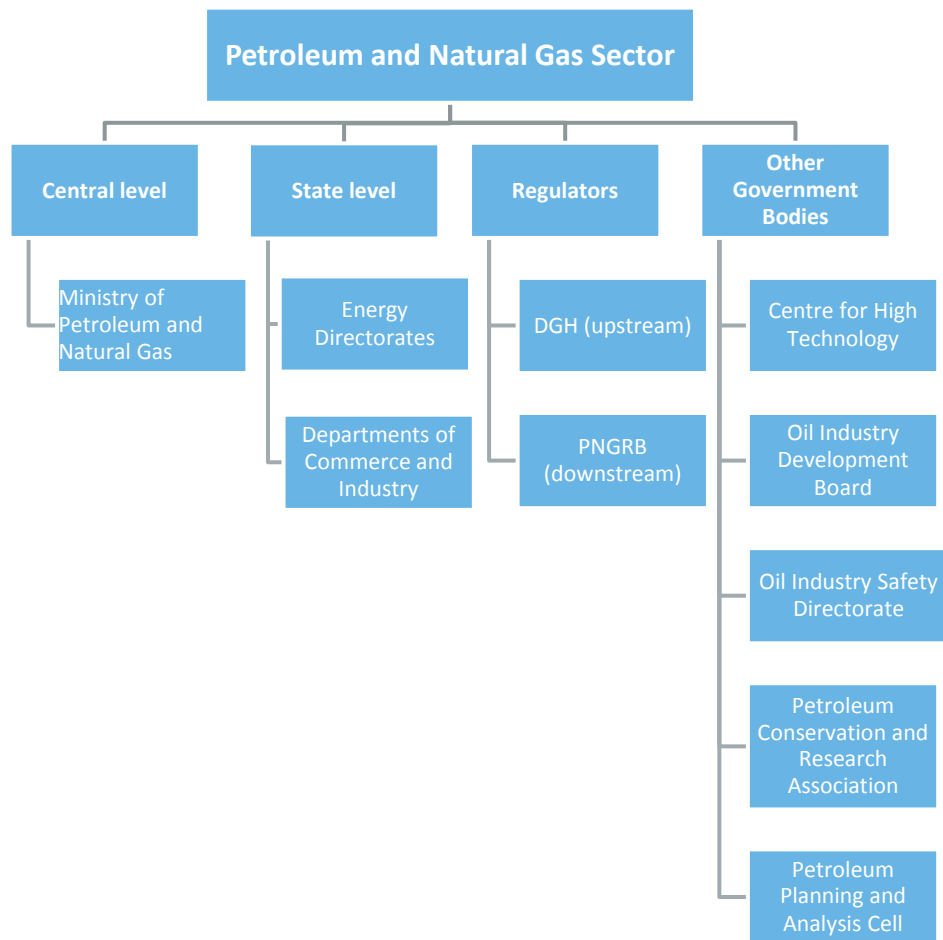


Figure 1 Government and regulatory bodies involved in the oil and natural gas sector in India
Source: TERI compilation

State level

While the central government — through MoPNG and the Directorate General of Hydrocarbons (DGH) — monitors offshore oil and gas resources, the responsibility and ownership of onshore oil and gas reserves lies with the state governments wherever such reserves are to be found. To facilitate state governments in managing their responsibilities insofar as onshore oil and gas activities are concerned, a few state governments have established dedicated petroleum directorates to monitor oil and gas activities in their states (such as in Rajasthan, Gujarat, etc.) while in others, the departments of industry and commerce of the respective states are performing such tasks (such as in Assam, Tripura, etc.).

Linkages between the MoPNG and other central ministries for obtaining clearances

Ministry of Environment and Forests

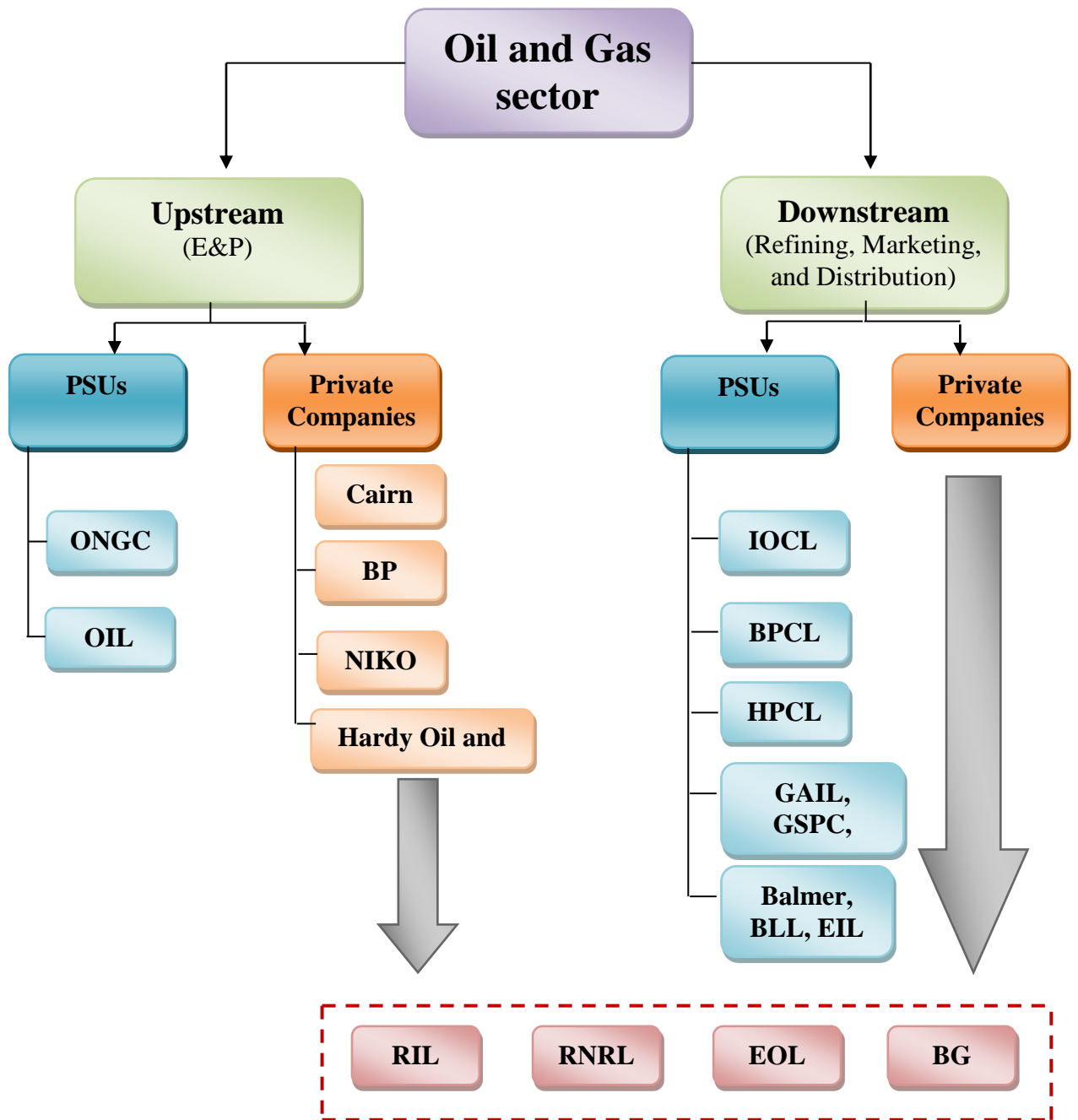
Since exploration and of oil and gas as well as their production affects the environment, the concerned contractor is mandated to undertake Environmental Impact Assessment studies, under Article 14 of the Model Production Sharing Contract (MPSC), wherein the effect of the said activity on the environment of the affected area is assessed in detail. These studies are carried out in phases, before the commencement of certain operations. Article 14 of the MPSC stipulates the contractor to carry out two such studies. The objective of the first study is to determine the prevailing situation relating to the environment, human beings, flora, and fauna in the contract area and its adjoining regions. The first study is required to be carried out in two parts, namely, a preliminary part which must be concluded before commencement of any field work relating to a seismographic or other survey, and a final part relating to drilling in the Exploration Period. The latter part of the study requires approval from the government before commencement of any drilling operations. The second Environmental Impact Assessment (EIA) study needs to be completed before the commencement of Development Operations with approval from the government.

The government, on its part, will grant environmental clearances in accordance with the relevant notifications, rules, regulations, and orders concerning EIA issued by the MoEF from time to time. However, wherever forest land is involved, the Contractor shall have to obtain approval of the central government through the state government concerned under the Forest (Conservation) Act, 1980, and Rules made thereunder.

Ministry of Defence

As per the existing procedure, all foreign vessels, drilling rigs, barges, platforms, supply vessels, etc., engaged in Exploration and Production (E&P) activities in India are required to obtain security clearance from Ministry of Defence.

Although the oil and gas sector has been predominantly dominated by Public Sector Utilities (PSUs), in the last decade or so (especially post NELP), private players have also entered the market with most of them operating throughout the petroleum and natural gas value chain. Figure 2 highlights various players operating in the Indian oil and gas sector.



Vertically Integrated Private Companies

Figure 2 Public and private sector companies operating in the Indian oil and natural gas sector
Source: TERI compilation

Key aspects of governance in the Indian Petroleum and Natural Gas Sector

Several factors affect and determine governance of the petroleum and natural gas sector. As stated earlier, in this paper, we consider five key aspects to analyse the level and impact of governance in this sector in India. These include regulation, competition in the sector, interaction between the state and central government, financial health of the oil companies, and community participation in the sector.

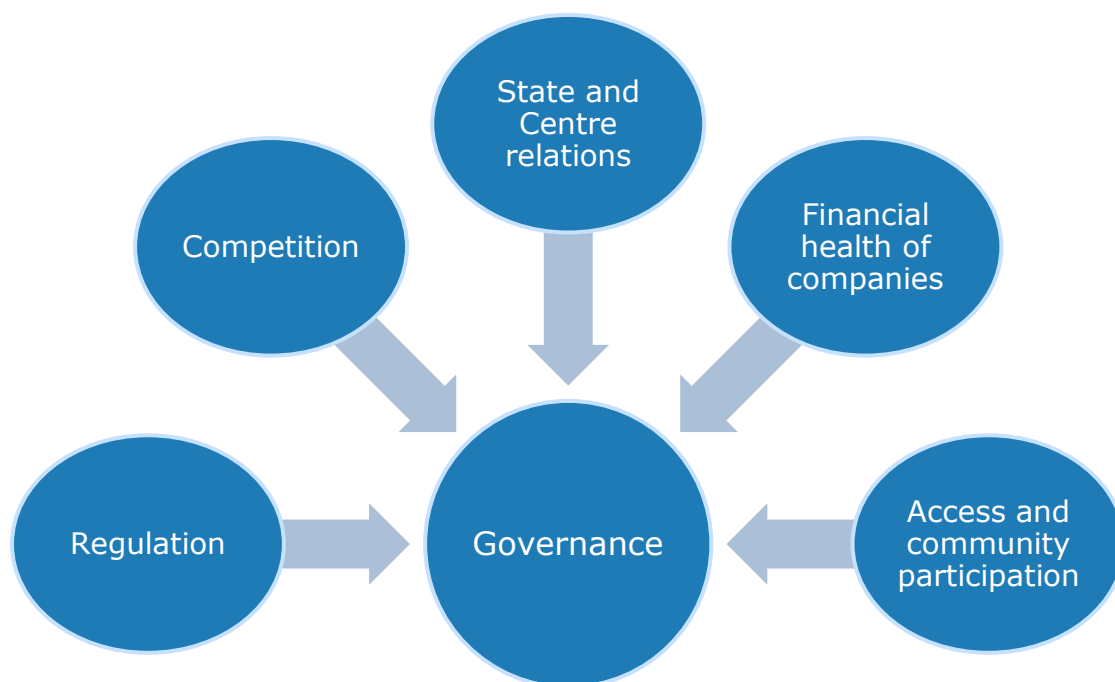


Figure 3 Aspects of governance in the petroleum and natural gas sector

Regulation

Presence and independence of regulator

Effective, unbiased, and stable regulation in the natural resources sector is necessary for ensuring equitable and efficient development of the sector. The petroleum and natural gas sector in India has, for the past several years, suffered from a *regulatory deficit*, which has been reflected in various issues in the sector that have been widely debated and discussed. In addition to the issues discussed here, there have been various other cases where regulatory deficit was observed but these have been resolved over time.³

Upstream

The upstream segment of the petroleum and natural gas sector does not have an independent regulatory authority. The Directorate General of Hydrocarbons (DGH), which is the technical arm of the MoPNG, was formed in 1993 vide a government resolution dated 8 April 1993.⁴ The stated objective of the body is “to promote exploration and sound management of the petroleum and natural gas resources as also non-

³ For instance, the conflict of jurisdiction between MoPNG and PNGRB on the notification of Section 16 of PNGRB Act and the issue of differential pricing of gas by RIL for RNRL and NTPC.

⁴ The resolution is available at <http://www.dghindia.org/pdf/Resolution.pdf>

conventional hydrocarbon energy resources having balanced regard for the environment, safety, technological and economic aspects”.

Although the DGH has been entrusted with the task of overseeing the holistic development of the upstream oil and gas sector — and is envisaged to evolve as the technical regulatory body for the same — it, however, falls under the administrative control of MoPNG. Moreover, the absence of a statutory status limits its powers, which reduces the effectiveness of the functioning of the DGH. Further, concerns have been raised regarding the composition and independence of the members of the DGH, since they are mostly appointed on deputation from oil companies whose activities fall under the regulatory purview of the DGH. This could lead to a conflict of interest between the DGH’s objectives and the oil companies operating in the sector.

Here, the Norwegian petroleum industry provides an interesting example where the Norwegian Petroleum Directorate (NPD) is responsible for regulating the activities of the industry. While the DGH operates on similar principles as the NPD, its powers have, however, been limited to technical advisory roles. On the other hand, the NPD is authorised to stipulate regulations and make decisions in the sector.⁵

Recommendations for creating an independent upstream regulator have been made by various expert groups and committees over time — the latest among them being the Chawla Committee (Cabinet Secretariat, 2011). The MoPNG has however dissented to this suggestion stating that the government, as the owner of the natural resources (in this case, oil and gas), has a major role to play in their management and development and therefore, establishing an independent regulator may not be tenable.⁶

A dedicated organisation, either under the direct control of the Ministry or as an independent set-up that works on regulating the upstream petroleum and natural gas sector in the country is, therefore, necessary to speed up and enhance the exploration activities in the country.

Midstream and downstream

Continued involvement of the government in appointment of the regulatory bodies has affected the independence of regulation in the downstream sector as well.⁷ Further, members of the Board, have, in the past, faced charges related to corruption and misuse of position (Delhi High Court, 2010). As in the case of the DGH, the Board continues to draw in players from the oil and gas industry for meeting its staffing requirements. Issues of legacy of the members of the board to their parent organizations have also affected the independence of functioning of the members. In addition to these, the relation between the MoPNG and PNGRB has also affected the pace of development of the sector (Standing Committee on Petroleum and Natural Gas, 2012).

⁵ For more details, refer to <http://npd.no/en/Publications/Facts/Facts-2013/Chapter-2/>, accessed on February 25, 2014

⁶ The dissent note from the Secretary, MoPNG, is annexed to the Report of the Committee.

⁷ The Selection Criteria is clearly laid out in the Act.

Another issue that reflects the persisting lack of clarity on the role and jurisdiction of the downstream regulator is the recent case in the CGD sector in Delhi NCR. The PNGRB had issued an order for Indraprastha Gas Limited (IGL) — the sole gas distributor in the region — to reduce its network tariff and compression charge. This was challenged by IGL in the Delhi High Court where it questioned the authority of PNGRB to regulate tariffs and compression charge. The Delhi High Court ruled in favour of IGL and stated that the “Petroleum and Natural Gas Regulatory Board is not empowered to fix or regulate the maximum retail price at which gas is to be sold by entities as the petitioner, to the consumers. We further hold that the Board is also not empowered to fix any component of Network Tariff or Compression Charge for an entity such as the petitioner having its own distribution network” (Delhi High Court, 2012).

The PNGRB, since then has approached the Supreme Court which, in turn, has refused to stay the order issued by the Delhi High Court and has sought a response from IGL. As per latest available news reports, the next hearing of the case at the Supreme Court will be held in August 2014.

In addition to sector-specific regulators, issues related to competition are also governed by the Competition Commission of India (CCI) and the concerned regulation is the Competition Act 2002. For the oil and gas sector, the PNGRB is also mandated to look into issues of competition. Overlaps between the provisions of both the acts are present and have led to conflict between the two bodies as well. This was observed in the complaint filed by Reliance Industries Limited (RIL) against public sector Oil Marketing Companies (OMCs) (See Box 2).

Box 2: Overlap in jurisdiction of CCI and PNGRB

India’s competition regulator, the CCI was stopped by the Delhi High Court from investigating alleged anti-competitive practices in aviation fuel supply. Earlier, Reliance Industries Limited (RIL) had filed a complaint with the CCI alleging that Indian Oil Corporation Limited (IOC), Bharat Petroleum Corporation Limited (BPCL), and Hindustan Petroleum Corporation Limited (HPCL) had formed a cartel to supply aviation turbine fuel to Air India. RIL approached the CCI after the company lost the concerned tender. In response to the complaint filed by RIL, the aforementioned OMCs approached the Delhi High Court challenging CCI’s jurisdiction, stating that the case fell under the purview of PNGRB.

The court in its interim order dated 8 December 2010 stayed CCI’s probe and did not allow the commission to be a party to the proceedings. In April 2011, it was decided that the aforementioned interim order would stay with CCI’s name being deleted from the list of respondents to the proceedings.

As of 4 October 2012, the Union Cabinet had approved a set of amendments to the Competition Act which included a provision requiring other regulators to mandatorily refer matters impinging on ‘Competition’ to the Competition Commission of India, and vice-versa to concerned regulators by CCI, on matters relating to those regulators

Source: PIB (2012)

Multiple clearances from line ministries

In the upstream oil and gas sector, there are substantial roadblocks to the development of oilfields, particularly due to inordinate delays in getting approvals from the respective line ministries. Detailed

ecological assessment of the blocks are carried out for blocks allocated under the New Exploration Licensing Policy (NELP), only after bidding is completed and the block has been awarded.

Further, delays on account of obtaining clearances from the Department of Space and the Ministry of Defence have also been reported for many blocks (*The Hindu*, 2012). Such clearances also need to be obtained from the concerned ministries, only after a particular block has been awarded to a company or consortium. A total of around 70 clearances (Petrofed cited in TERI, 2007) may have to be obtained by the operator(s) before undertaking E&P operations in a particular acreage. This lengthy process and high level of uncertainty dampens investor spirit, leads to delays in the actual development activities, and discourages participation of major players the sector. There have been instances where acreages have been carved out, auctioned, and awarded to E&P companies only to be later blocked off as ‘No Go’ areas by the Ministry of Defence after the petroleum exploration license had been granted (Standing Committee on Petroleum and Natural Gas, 2013). This sort of inordinate delay in grant of clearances exists not only in the upstream segment but also in the creation of other infrastructure — transportation and processing.

In late 2012, the government announced plans to constitute a National Investment Board (NIB), which will seek to expedite clearances for ‘big-ticket’ infrastructure projects costing more than Rs 1,000 crore. The proposal initially faced opposition in the Parliament from the MoEF as well as from opposition parties. Thereafter, it was changed considerably and after assurances from the finance minister that the NIB would not take away the right of line ministries to grant/refuse clearances to specific projects, the body has been formulated and will be housed within the cabinet secretariat as the Cabinet Committee on investment. Its powers have however been ‘toned down’. For instance, it will not be an appellate body where investors can appeal against any decision by the line ministries (Sikarwar, 2012).

However, there has been criticism against the idea of an NIB from civil society and the MoEF. The major criticism is that the NIB would undermine/overlook valid concerns raised by the MoEF regarding the potential environmental impact of large projects (*Business Today*, 2012).

Competition in the sector

The governance of a sector in general and its regulatory structure in particular should be aimed at providing a level playing field to companies. The conduciveness to new investment and enhancing competition in the sector is dependent on policies in the sector and institutional arrangements to ensure that a fair stage is made available all operators.

Policies in the Indian oil and gas sector have been aimed at encouraging competition in all segments of the industry. The level of competition however varies across these segments. Section 4.2 examines the status of policies which are aimed at encouraging participation in the oil and gas sector in each of the three segments – upstream, midstream and downstream — and also identifies issues that affect competition in the sector. Further, two specific issues that could affect the level of competition in the sector are examined, viz., policies on allocation of resources and those on local content requirement.

Upstream

New Exploration and Licensing Policy

The NELP was a departure from the previous exploration contracts as it provided for 100 per cent FDI, with no carried interest of the government or the public sector oil companies. The rounds prior to Round IX also offered a seven-year income tax rebate on the proceeds from sales of mineral oil. These provisions were made to encourage private participation and enhance competition in the sector. Table 1 provides a snapshot on the participation by different players in the last nine rounds.

Table 1: Public and private participation in NELP I – NELP IX bidding rounds

Round	Public/Public JV companies	Private/Private JV companies	Public/private JVs	Total Blocks
NELP 1	8	13	3	24
NELP 2	16	5	2	23
NELP 3	11	9	3	23
NELP 4	11	2	7	20
NELP 5	3	8	9	20
NELP 6	18	17	17	52
NELP 7	18*	17	6	41
NELP 8	12	14	6	32
NELP 9	7	10	4	21
Total Holdings	104	95	57	256

Source: TERI compilation

Notes: JV – Joint venture; NELP – New Exploration Licensing Policy; NOC – National Oil Company

* Includes HPCL–Mittal which had 10 per cent stake in one block

All foreign players in the sector are classified as ‘Private’; private company/private JV includes JVs formed by public companies with private sector companies

Table is updated up to 10 January 2013

While it may be difficult to isolate the main cause for the reluctance of more private players and international companies to get involved in the sector, it may, to some extent, be due to the procedural and process delays and policy uncertainty as discussed in the preceding sections (Sections 1.1 and 1.2). Many stakeholders have identified delays in clearances and uncertainties regarding the future course of government policy as the primary factor deterring companies from participation in upstream activities in the country. Even companies that were awarded blocks for exploration are reported to be discontented due to the delays in getting approvals and authorization for mining (Mahajan, 2013).

Further, companies have also expressed concerns regarding the gas utilization policy of the government. While the presence of a utilization policy reduces supply uncertainty for gas consumers, it takes away independence and freedom from the producers (Jain and Sen, 2011). Further, there have been frequent revisions in the policy of the government in terms of allocation to priority and non-priority sectors.

A similar ambiguity is also present in the pricing of natural gas; even though, the freedom to determine prices on a competitive bidding/arm's length basis has been provided in the policy, a final approval from the government is still needed. Moreover, since prices that are determined once remain fixed for a specified term, there is little flexibility to adjust regulated gas prices in tune with new developments in technology or unforeseen geological conditions. This aspect has become amply clear in the recent slew of demands from RIL to raise the price of gas from its KG-D6 block. The decision to revise the pricing mechanism and prices of natural gas was taken and the new formula will be introduced starting April 2014.

Allocation of resources

Several issues related to allocation of petroleum and natural gas reflects the uncertainty in the sector affecting the level of competition and investments in the development of these resources in the country. Allocation of petroleum and natural gas in India can be analysed from two aspects – allocation of acreages for exploration and the allocation of discovered resources (Cabinet Secretariat, 2011).

Regarding the former, upstream exploration and production policies in the country have evolved from those based solely on PSU participation to the current NELP regime that encourages private and foreign participation. However, even with the existing Production Sharing Contract (PSC)-based mechanism in the NELP, several issues have been identified regarding the management and monitoring required in the system. The Comptroller and Auditor General (CAG) in its report had also expressed concerns relating to the use of the Investment Multiple Mechanism in the exploration process (CAG, 2011).

Following the concerns expressed, the government had appointed an expert group under the chairmanship of Dr C Rangarajan to study the PSC mechanism and to suggest alternatives to the existing regime.⁸ The committee has recommended doing away with the cost recovery mechanism and suggested sharing of oil revenue between the government and the operator. The prevailing uncertainty and government's indecisiveness have also affected the participation in the E&P sector in the country.

The second dimension of resource allocation, i.e., allocation of the extracted resources has also been an area of significant discussion and debate in the hydrocarbons sector. This is particularly true of natural gas where the government has defined an allocation policy wherein natural gas is allocated to the identified sectors. The allocation of gas has however been fraught with issues where the government's policy on allocation of natural gas has changed over the years. The NELP–MPSC initially allowed producers the freedom to market the gas. However, the amendment in 2007 — when the gas utilization policy was introduced — contained a clause which was introduced in to the model contract stating that the government

⁸ The detailed report is available at http://www.eac.gov.in/reports/rep_psc0201.pdf

could frame the utilization policy from ‘time to time’.⁹ These clauses effectively take away the freedom of the producers to market gas. While this may be essential, such an allocation policy does not necessarily take into account the economic value of gas and also affects the development of the sector adversely.

Midstream

The midstream sector was opened for private participation in 2002. The pipeline tariffs are based on the principle of common carrier and the sector is regulated by the PNGRB. The sector has seen participation from domestic players such as Reliance Gas Transportation Infrastructure limited (RGTIL) which operates the East West Gas Pipeline and one of its subsidiaries, Relogistics, which is in the process of laying additional pipelines. Provision of third party access/common carriers in natural gas pipelines has also led to a development of the natural gas transmission networks in the country. Long-distance natural gas pipelines are by nature, a natural monopoly and provision of excess capacity for usage by parties other than the owner/operator, is fundamental to providing access to infrastructure in the sector.

In the refining sector too, there has been an increase in the number of participants in the market. Operators such as RIL and Essar Oil Limited (EOL) are currently operating large refineries in the country. The sector has also seen joint ventures between PSUs and international players such as Oman Oil Company and Mittal Energy Limited.

Another initiative of the PNGRB towards fostering competition in the sector is the unbundling of the transportation and marketing activities. The Board had circulated a note¹⁰ regarding this and invited comments on the proposed note. The note examines three forms of unbundling — accounting segregation, legal separation, and ownership segregation.

Most stakeholders who are gas consumers (such as Tata Power) have expressed support to the proposed unbundling of these two segments. However, GAIL has objected to the idea, saying that India’s natural gas markets are not adequately developed, with regulated pricing mechanisms and absence of gas trading hubs. Therefore, if transportation and marketing activities are unbundled, it would only increase operation and administrative expenses which would be detrimental to the development of India’s natural gas market. The **Gujarat State Petroleum Corporation Ltd (GSPC)** has agreed with the idea but has argued a case for leaving LNG terminals out of the purview of these regulations.

Therefore, it seems that the regulator will have to strive harder to arrive at a workable consensus regarding unbundling and third party access.

⁹ The said clauses can be found in Article 21 of the Model Production Sharing Contract.

¹⁰ Available at <http://www.pngrb.gov.in/newsite/pdf/public-notice/Public-Notice-Document11sep.pdf> (Retrieved on 17 December 2012).

Downstream

In the downstream sector, the prices of key products — diesel, kerosene, and domestic LPG — are still controlled by the government and oil marketing companies (OMCs) are mandated to sell these products at prices lower than the cost price/international reference prices. In addition to the adverse ramifications on the fiscal balances of the economy and the financial situation of OMCs, this skewed pricing mechanism has also adversely affected the level of private participation in the sector. While private/foreign marketers are free to sell the products at market prices, they cannot compete with the lower prices offered by the government-owned OMCs (discussed later).

To sum up, policies throughout the oil and natural gas value chain have moved towards encouraging investments from all players. In fact, the NELP was introduced with this objective in mind. The policy allows for 100 per cent FDI in the sector with zero carried interest for the government. However, the uncertainty regarding pricing and allocation policy of natural gas acts as a deterrent in attracting investments from large multinational players. Further while PSU companies in the upstream sector have been investing in the exploration and development of oil blocks, there is need to improve the technology used for exploration, particularly in the offshore sector which is not available with the domestic companies. In the downstream sector too, as mentioned, the control on prices has deterred private players from participating and/or expanding their presence in the market.

While regulations in all three segments have been made conducive to private investments, the ad hoc nature of government policies and the prevailing uncertainty have adversely affected the level of competition in the sector.

Role of States and relationship with the centre

Participation from both state and central governments is essential in managing the oil and gas sector to ensure optimal resource development of the sector, efficient pricing, and delivery of the resources. This is also crucial for addressing the concerns of the local communities that get displaced during the development of onshore projects.

The following sections examine the involvement of state governments in the oil and gas sector in three aspects — licensing and revenue sharing, taxation, and product delivery.

Licensing and revenue sharing

Petroleum and natural gas sector is managed largely at the central level in the country. However, the procedures for onshore and offshore licensing are different. As per the Petroleum and Natural Gas Rules (PNGR), states are to grant the licenses for exploration of onshore blocks with prior approval from the central government. In this regard, the license fee and royalty from production from that field accrues to the respective state government. The rates of royalty, however, are determined by the central government. Moreover, as onshore blocks have come online, and the crude oil prices have increased, the states have also

demanded a larger share in the profit petroleum¹¹ (Noronha and Srivastava, 2012). This demand was considered by the Twelfth Finance Commission, which recommended that the profit petroleum from onshore NELP blocks be shared with state governments in the ratio of 50:50 (Twelfth Finance Commission, 2004). Further, the Thirteenth Finance Commission has also recommended the sharing of royalty from offshore blocks and to make it available at the disposal of the state governments as well. Table 2 presents the current revenue sharing mechanism between the state and centre.

Table 2: Revenue sharing between state and Central government

	Tax Revenue	Non-tax Revenue
State Government	Share in the corporate income tax Sales tax/VAT on petroleum products	Royalty (for onshore blocks) Income from lease and mining fee 50 per cent profit petroleum from NELP blocks
Central Government	Corporate income tax	Royalty (for offshore blocks) 50 per cent Profit Petroleum from NELP blocks and all of the profit petroleum from nomination and pre-NELP blocks Oil Industry Development Cess on crude oil (in the case of nominated blocks)

A look at the breakup of the oil and gas sector's contribution to the central and state exchequers reveals that this has indeed been the case over the past two years as the contribution to state exchequer has increased whereas that to the central government has declined in the past two years.

Table 3: Contribution to the central and state exchequers

	2010-11	2011-12	2012-13	2013-14
Contribution to central exchequer	1,36,497	1,19,850	117,422	1,23,316
Contribution to state exchequer	88,997	1,12,919	1,26,516	1,40,881

Source: Petroleum Planning and Analysis Cell

Other dimensions of state participation in development of the sector

Assistance of state and district authorities is essential while acquiring land for exploration activities and while obtaining right of use and right of way for laying pipelines.

In the downstream sector too, the state governments play a major role in determining the final prices of products since sales tax/VAT rates are determined at the state level. Different taxes rates have also led to

¹¹ Profit petroleum accrues to the central government revenues.

different prices in the final products across states. Further, the state and central government need to collaborate and jointly follow a roadmap if any rationalization of taxes and prices of products needs to be undertaken in the future. As most state-level taxes and duties are based on ad valorem rates whereas central-level duties are set at fixed rates, over time, a change in revenue patterns from the sector for state and central government has been observed.

As can be noted, the revenue accruing to central governments has declined whereas those in case of state governments have increased in the past two years. This is primarily on account of reductions in the customs and excise duty by the central government and increase in state government revenue from Sales Tax and VAT. There have been further reduction in central level duties in the current year which will be reflected the data for 2012–13.

The state government machinery is also responsible for the delivery of kerosene through the public distribution system (PDS). The persisting leakages of subsidized kerosene and revisions in state-level allocation further necessitate coordinated action between the state and central governments to address the issue. The state governments also have a role to play in ensuring equitable access to energy. The introduction of caps on number of subsidized LPG cylinders to be allocated to households by the central government has led various state governments to introduce higher state-level limits which will be met from the state budgets. Similarly, states have also introduced schemes for encouraging consumption of LPG and effecting a transition away from biomass for cooking purposes. The Andhra Pradesh government had introduced the Deepam Scheme and the Government of Delhi has also introduced a programme to phase out the consumption of kerosene by providing LPG connections.

However, more inclusive participation from the states particularly in the case of upstream oil and gas sector will be necessary to ensure timely development of the sector. There is also a need to reduce the regional disparities by giving more powers and revenues to the states subject to reviews by Centre (Noronha and Srivastava, 2012).

Financial health of energy supplying companies: Subsidies

In order to encourage investments in the sector, it is essential that financial viability of the companies be maintained in order to ensure timely investments and encourage development in the sector. In this context, public sector OMCs — IOCL, BPCL, and HPCL — continue to face difficulties due to the prevailing uncertainties in the current pricing regime.

Even after the deregulation of prices of petroleum products in general and the dismantling of APM in 2002, the government continues to maintain control over prices of key final products petrol,¹² diesel, kerosene, and LPG. The prices are not revised in tandem with the rising international prices. This directly impacts the

¹² Even though the prices of petrol were decontrolled by the government in 2010, OMCs still need to seek approval from the government before revising the prices.

financial health of OMCs that bear the under-recoveries. Under-recovery refers to the difference between the desired price¹³ of a product and its retail price (excluding VAT/sales taxes).¹⁴

Table 4: Under-recoveries on sensitive products (in Rs Crore) from 2005–06 to 2013-14

	2005–06	2006–07	2007–08	2008–09	2009–10	2010–11	2011–12	2012-13	2013-14
Petrol*	2,723	2,027	7,332	5,181	5,151	2,227	-	-	-
Diesel	12,647	18,776	35,166	52,286	9,279	34,706	81,192	92,061	62,837
Domestic LPG	10,246	10,701	15,523	17,600	14,257	21,772	29,997	39,558	46,458
PDS Kerosene	14,384	17,883	19,102	28,225	17,364	19,484	27,352	29,410	30,574
Total	40,000	49,387	77,123	1,03,292	46,051	78,190	1,38,541	1,61,029	1,39,869

Source: Petroleum Planning and Analysis Cell

Note: *Petrol prices were officially decontrolled in June 2010 and therefore the subsidies/under recoveries incurred by companies thereafter are not included here

From Table 4, it is clear that the under-recoveries have shown an increasing trend (except in 2009–10). The rate of increase of the under-recovery burden was highest from 2010–11 to 2011–12, at 77 per cent. The largest under-recovery for most of the years has been on account of diesel. To address this, the government has devised a mechanism for sharing of these under-recoveries through cash assistance from governments and price discounts from upstream and midstream companies — ONGC, GAIL, and OIL. However, assistance from the government is uncertain and piecemeal. This affects the funds available with these OMCs for investments. Further, the rising share of up/mid-stream companies in the sharing of this burden has also constrained their ability to invest in expanding their activities and further.

Table 4: Sharing of under-recoveries (in Rs Crore)

	2008–09	2009–10	2010–11
Total under-recovery	1,03,292	46,051	78,190
Government share*	71,292	26,000	41,000
Upstream oil companies and GAIL	32,000	14,430	30,297
Oil Marketing Companies	0	5,621	6,893

Note: *Until 2009–10, the government share of under-recoveries was paid in the form of oil bonds issued to OMCs

¹³ Desired price of a product is determined by adding the marketing margins and costs, freight and transportation charges and bottling charge (if any) to the price paid by OMCs to refineries

¹⁴ A detailed description of current pricing and under-recoveries can be found in (TERI, 2012b).

In a first step to address the rising burden of diesel under-recovery, the retail prices of diesel were increased by Rs 5/litre in September 2012. Further, the prices of premium diesel were completely deregulated. As per government press releases, this will help in reducing the under-recovery by Rs 15,000 crore. In addition to this, the excise duty on petrol was reduced by Rs 5.30 per litre and a cap was introduced on purchase of subsidized domestic LPG cylinders at six cylinders per household per annum. Demand for cylinders in excess of this cap will have to be met by purchasing cylinders from the open market at prices that are nearly twice the subsidized price. As per press releases by the Government of India, despite the increase in diesel prices and the capping of domestic LPG cylinders, the under-recoveries for 2013–14 were Rs 1,39,869 crore.

Community participation in governance of the oil and gas sector in India

Community participation is a crucial bridge between oil and gas companies and the people affected by their activities. Strong participatory principles foster sustainable growth of the oil and gas business as well as development in the areas of its operation. Since the existing regulations in the sector do not mandate strict community participation in the upstream sector, only the prevailing Corporate Social Responsibility (CSR) Guidelines determine the role of operators in developing the area that they work in. A critical issue that needs to be analysed in this context is the sharing of revenues with the local communities where exploration activities take place. Segal and Sen (2011) examine the sharing of revenues from onshore exploration activities in the oilfields in Barmer, Rajasthan, and have found the need to establish an independent body that monitors the spending of oil revenues. Similarly, in the midstream sector, acquiring land for laying of pipelines has associated issues of displacement of local communities and impacts on their livelihoods.

In order to understand the issues of concern regarding community participation in the upstream oil and gas sector, two case studies were undertaken in Rajasthan and Assam. The following section summarises the key findings from these case studies.

Case study: Community participation in upstream oil and gas

The team carried out two field visits in March and April 2013 to interact with stakeholders and assess the impacts of exploration activities in Rajasthan and Assam. The first visit was to the Barmer district in Rajasthan where Cairn India Limited is carrying out exploration activities and the second to various oil and gas facilities in the state of Assam. These include the refinery in Numaligarh and the oil exploration and collection facilities in Digboi and Duliajan, respectively. Meetings were carried out with the local residents and government officials as well as the officials of the oil companies. Interactions with the community representatives were focused on discussing the process of land acquisition and the impact of the companies' operations and CSR activities. These case studies provide a good comparison as the oil industry in Assam is well developed and has been in existence for several decades whereas the operations by Cairn India have commenced recently.

There are two forms of engagement of companies with local communities. Firstly, land is acquired by the companies from the people through the government.¹⁵ Secondly, the companies generate employment and carry out social development work for people living in and around the area of operations through their CSR activities. Primarily, the companies have undertaken projects that contribute to improving livelihoods, vocational training, and establishment of social and development infrastructure in the local areas.

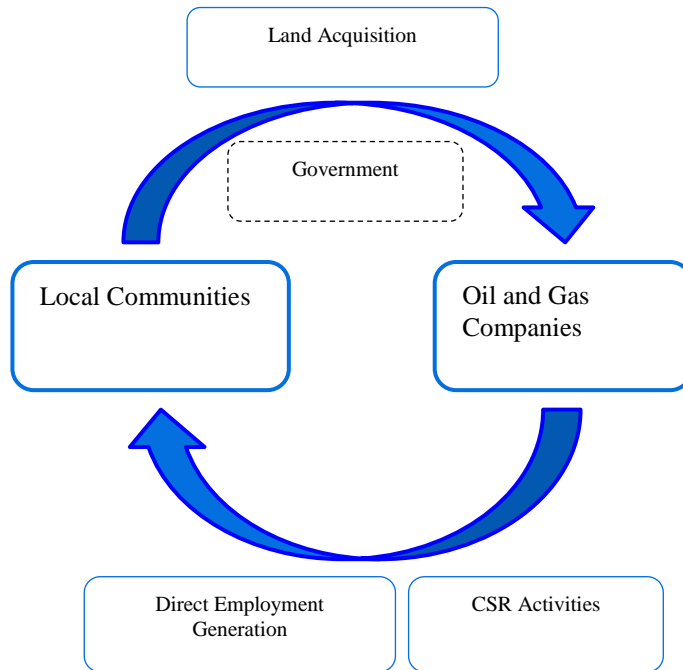


Figure 4 Engagement between companies and the local community

Land acquisition

Land acquisition in both regions has been carried out by approaching the local government authorities. In Barmer, where land acquisition took place only recently, people perceive that the operator provided remunerative rates. Given the relatively large size of landholdings in the area, the acquisition of small tracts of land for exploratory drilling has not affected the economic activities in the region. In fact, in many cases, these have added supplementary incomes to the households. However, very little of these earnings were perceived to have been reinvested on increasing productive capacity or for generating future income by the people.

In Assam, on the other hand, most of the land acquisition had been carried out decades ago. So a direct comparison could not be drawn. Small tracts of land are still being acquired for additional facilities such as pipelines/oil wells. This process is possibly more difficult in and around Digboi or Numaligarh since the

¹⁵ In both Barmer and Assam, the government has first acquired land from residents and paid them compensation. Thereafter, the land has been sold to the companies.

average landholdings are much smaller, population density is higher, and they are closer to urban centres. Some local community representatives felt that while the landowners who had proof of ownership had been given adequate compensation, while tenants or people without documentation to prove ownership were not considered adequately while disbursing compensations.

A concern that was expressed at both Barmer and Digboi was the lack of a plan for resettlement and rehabilitation of the displaced people.

Employment generation

One common issue that the residents in both the regions reported was the mismatch between expectation of the numbers of jobs that would be generated and the actual employment of local people in the oil and gas activities. Particularly in Barmer, since the presence of oil and gas activities has attracted migrant labour, the local residents showed some discontent. Even though they did recognize the general lack of training among the local population due to which a demand for migrant labour has been created, the absorption of the local community in these activities is a matter that they report as one of the most important factors. While the issue of migrant labour did not seem to be as prominent in Assam as in Rajasthan, respondents reported that the number of permanent jobs generated is lower than what was expected. However, since the refinery in Numaligarh was established following the 'Assam Accord' of 1985, the socio-political and economic significance of the refinery is recognized by most stakeholders.

Corporate social responsibility

Another factor that was observed in the both the locations relates to the approach towards designing the CSR engagement and activities of the operators. While efforts towards developing capabilities in the local communities are apparent, coherent policies and roadmap for sustained community engagement seemed to be lacking. For instance, in Assam, a significant proportion of the operators' efforts seemed to be devoted towards meeting the immediate requirements emerging from local representatives, civil society agencies and even the local government.

In areas where skill development programmes are undertaken, a policy of selecting candidates for these programmes was not clear. For example, it seems to be that only a few people are given the opportunity to avail of these training programmes. Often, the same person undertakes multiple training programmes while many others do not get any training at all.

Conclusion

It is amply clear that regulation and governance play a crucial role in determining the trajectory of development in any sector. On the whole, the oil and gas sector in India has evolved and performed well in certain segments, especially the midstream refineries segment where participation and the level of competition have increased and the level of technology used in the sector has also improved significantly.

This is reflected in the additional refining capacity currently in place in the country and the high complexity indices in many of the newly established units. However, there are still some lacunae in governance of the sector, which need to be addressed for it to perform better. This paper has identified certain issues that need to be addressed for sustaining development in the sector and to foster competitive practices.

Firstly, the absence of an autonomous regulator in the upstream segment affects the level of clarity and therefore the development of exploration and production activities and regulatory uncertainty discourages competition and entry of new players.

Secondly, regulated pricing of major petroleum products has created barriers to entry of private players in the downstream retail-marketing segment. The government has recently taken some steps to address this issue, such as the phased increase of the price of diesel (ultimately aiming to deregulate prices), the capping of consumption of subsidized LPG cylinders and the initiation of pilots for direct benefit transfers (DBTs) for PDS kerosene and domestic LPG. These reform measures need to be taken to their logical conclusion which is deregulation of prices and an efficient system of targeted provision of benefits.

Thirdly, fostering collaboration between central and state governments at various stages in upstream, midstream, and downstream oil and gas business has become imperative in the current context. Equitable sharing of resource revenues, including a transparent scheme for channelling revenues into development of areas affected by oil and gas activities is necessary to ensure inclusive development. States would also play a crucial role in operating and maintaining direct transfer schemes linked to PDS kerosene and domestic LPG consumption. The current system of subsidy delivery, i.e., the PDS, is administered jointly¹⁶ by the central and state governments and requires collaboration between them for improving performance. Computerizing the ration cards, monitoring the allocation and uptake of subsidized products in order to identify and checking leakages from the system can be carried out jointly by the state and central government agencies.

Finally, the two case studies on community participation in the oil and gas sector have shown that there is a lack of public involvement in the decision making at the local levels. Communication gaps between the operating companies and local communities affect their perception regarding the sector. Moreover, as mentioned before, there is a clearly felt need for formulating a transparent scheme of revenue distribution for development of project affected areas.

¹⁶ The centre allocates the quantity of products distributed through the PDS to various states, while the respective state governments are responsible for operating and managing the delivery of these products.

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