

# OIL AND GAS INDUSTRY



**THE INSTITUTE OF  
Company Secretaries of India**

**भारतीय कम्पनी सचिव संस्थान**

**IN PURSUIT OF PROFESSIONAL EXCELLENCE**

Statutory body under an Act of Parliament



August 2018

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**Published by :**

**THE INSTITUTE OF COMPANY SECRETARIES OF INDIA**

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Laser typesetting at: AArushi Graphics

Printed at: Indian Offset Press/August 2018

## PREFACE

In the liberalized economic policy regime, the corporate sector has been assigned a major role as the driver of growth and development of the Indian economy. This has resulted in a number of changes, especially in the regulatory framework applicable to specific industry sectors. As an economy is consist of different industries like agriculture, service, engineering, manufacturing etc., it provides impetus to the economy i.e. employment generation, production of goods and services, income distribution in the whole economy.

With the intent to further enhance the competitiveness of India's services sector and to boost productivity with the creation of new employment opportunities, the Central Government has focused attention on 12 sectors in the economy as 'Champion Sectors' i.e., IT & ITeS, Tourism and Hospitality, Financial, Accounting and Finance, Transport and Logistics, Construction and Related Engineering, Communication, Education, Medical Value Travel, Audio Visual, Legal and Environmental.

As part of its support to government's policy initiatives, the Institute has started an initiative by projecting Company Secretary as 'Corporate Saviour' - a person who can be relied upon by stakeholders i.e., Corporates, Promoters, Shareholders, Government and Regulators.

With this basic objective, the institute has initiated the process of developing industry specific knowledge through research, creating awareness among the members about the contribution the Company Secretary can make in specific industry, capacity building of members in the specific industry, securing recognitions for members in specific industry sector, and sensitisation of regulatory authorities about the contribution the Company Secretaries can make in specific industry.

For conducting the detailed analysis in a structured manner, a format is designed with four sections, Section-I covering the industry profile, Section-II Business Scenario, Section-III legal framework and Section-IV Contribution of Company Secretary in employment and in practice. The research publications in all the industry sector are based on exploratory research.

I wish to express my sincere thanks and gratitude to CS Ahalada Rao V, Vice-President, the ICSI for his efforts in guiding and finalizing industry specific publications.

I also appreciate Dr. Prasant Sarangi, Director (Research), and Dr. Harpreet Raman Bahl- Assistant Professor, the ICSI-Research Cell for doing in-depth study of Oil and Gas Industry

and bringing out this research publication, under the guidance of CS Sonia Baijal, Director, Professional Development, Prospective Planning and Studies and Dr. S.K. Dixit, Mentor, Research Cell.

I am sure this research publication will prove to be of immense value to professionals, corporates and researchers. The research is an ongoing process, and I welcome the readers to give suggestions to make this research publication more comprehensive.

I wish all the readers a happy reading

New Delhi  
Date: August 23, 2018

**CS Makarand Lele**  
*President*

The Institute of Company Secretaries of India

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# SECTION 1

## INTRODUCTION

### 1.1 INTRODUCTION

The roots of Oil and Gas industry in India are one and a half century old and can be traced back to the year 1889, itself when the oil deposits in the country were first discovered near the town of Digboi in the state of Assam.

Later, the foundation of the natural gas industry in India was set in the year 1960s with the discovery of gas fields in Indian states of Assam and Gujarat. However, the Natural gas industry got boosted actually with the discovery of large reserves in the South Basin fields by ONGC in the 1970s. Until 1970's, the production of petroleum and the exploration of new locations for extraction of petroleum were mainly restricted to the north-eastern state in India. However, there was a turnaround in the Indian petroleum industry when Industrial Policy Resolution in 1956 was passed that emphasized on goal of growth and promotion of industries in India. In a macro perspective, the petroleum industry has a noteworthy role to play in turning the Indian economy from an Agrarian Economy to an Industrial Economy.

#### 1.1.1 Type of Industry

The oil and gas industry is usually divided into three major sectors: upstream, midstream and downstream.

The **upstream Industry**: This sector includes searching for potential underground or underwater crude oil and natural gas fields, drilling exploratory wells, and subsequently drilling and operating the wells that recover and bring the crude oil or raw natural gas to the surface. The upstream is sometimes known as the exploration and production (E&P) sector.

The **midstream Industry**: It processes, stores, markets and transports commodities, such as crude oil, natural gas, natural gas liquids (NGLs, mainly ethane, propane and butane) and sulphur. The midstream provides the vital link between the far-flung petroleum producing areas and the population centres where most consumers are located.

The **downstream Industry**: This includes oil refineries, petrochemical plants, petroleum products distributors, retail outlets and natural gas distribution companies.

## 1.2 CLASSIFICATION OF ENERGY SECTOR

The energy sector consists of Petroleum and Natural Gas, Coal, Renewable Energy sector and power sector in India. There is some or the other inter-linkages between themselves among all these sectors. A brief outline of each sectors are as follows:

- Coal
- Renewable Energy
- Power
- Petroleum and Natural Gas
- Coal

The Ministry of Coal (MoC) has the overall responsibility of determining policies and strategies in respect of expansion and development of coal and lignite reserves, sanctioning of important projects of high value and for deciding all related issues. These key functions are exercised through its public sector undertakings, namely Coal India Limited (CIL) and Neyveli Lignite Corporation Limited (NCL) and Singareni Collieries Company Limited (SCCL), a joint sector undertaking of Government of Telengana and Government of India with equity capital ratio of 51 : 49. The overall production of coal for 2016-17 was projected at 724.71 MT.

The Geological Survey of India has estimated 308.802 billion tonnes of coal reserves in India. The reserves have been identified mainly in Jharkhand, Odisha, Chhattishgarh, West Bengal, Madhya Pradesh, Telengana and Maharashtra. Whereas the lignite reserves in the country have been estimated at around 44.59 billion tones. The major deposits are located in Tamil Nadu, Rajasthan, Gujarat, Kerala, West Bengal, Jammu and Kashmir and in the union territory of Pudducherry.

### • Renewable Energy

Ministry of New and Renewable Energy (MNRE) is the nodal ministry at the central level for all matters relating to new and renewable energy. The ministry has been facilitating the implementation of broad spectrum programmes including harnessing renewable power, renewable energy to rural areas for lighting, cooking and movie power, use of renewable energy in urban, industrial and commercial areas and development of alternate fuels and applications.

India has an estimated renewable energy potential of about 900 GW from commercially exploitable sources viz., wind – 102 GW (at 80 meter mast heights), small hydro- 20 GW, bio-energy- 25GW and solar power-750 GW, assuming 3% wasteland. Under National Solar Mission, 26 SPV projects of aggregate 330 MW capacity have been commissioned. Thus, 523 MW Solar PV project and 202.5 MW



Solar Thermal Power projects have been commissioned under the scheme. Under the 100 SPV power plants, 78 projects were selected to set up 98 MW capacity projects from 12 states. Against this, 71 projects of total capacity 90.80 MW have been connected to grid. A payment security mechanism involving a revolving fund of Rs. 486 crore has been put in place to ensure timely payment to developers in the event of delay/default in payments by the purchasing state utilities.

India has taken a voluntary commitment of reducing emission intensity of its GDP by 33-35 per cent levels from 2005 by 2030. In the recent concluded 21<sup>st</sup> Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) held at Paris, India committed to achieve about 40 per cent cumulative electric power installed capacity from non-fossil fuel based energy resources by 2030 with the help of transfer of technology and low cost international finance including from Green Climate Fund (GCF).

- **Power Sector**

India's power sector is one of the most diversified in the world. Sources of power generation range from conventional sources such as coal, lignite, natural gas, oil, hydro and nuclear power to viable non-conventional sources such as wind, solar, and agricultural and domestic waste. Electricity demand in the country has increased rapidly and is expected to rise further in the years to come. In order to meet the increasing demand for electricity in the country, massive addition to the installed generating capacity is required. Power systems across the world are witnessing significant changes on account of various external factors. Climate change is leading to increased power demand, which is putting pressure on generators as well as grid operators.













India ranks third among 40 countries in EY's Renewable Energy Country Attractiveness Index, year on the back of strong focus by the government on promoting renewable energy and implementation of projects in a time bound manner.

India has moved up 73 spots to rank 26<sup>th</sup> in the World Bank's list of electricity accessibility in 2017, as declared in a conference by Government of India. In September 2017, the Government of India launched the Saubhagya scheme to provide electricity connections to over 40 million families in rural and urban areas by December 2018 at a cost of US\$ 2.5 billion.

- **Petroleum and Natural Gas**

Oil and Natural Gas Corporation Ltd., engaged in the expansion and production of crude oil, natural gas and value-added products was incorporated in 1993 under the Companies Act, 1956, pursuant to government's decision to transform the statutory commission into Public Limited Company, through the Act of the Parliament [Oil and Natural Gas Commission (Transfer of Undertaking and Repeal, Act, 1993)]. There are other players like ONGC Videsh Limited (for production and expansion outside India), Oil India Limited (for business expansion), Gas Authority of India Limited (for natural

gas), Indian Oil Corporation (India's first flagship national oil Company), Hindustan Petroleum Corporation Limited (with navratna status), Bharat Petroleum Corporation Limited (integrated oil company) for sector's expansion.

S. No.	NAME OF THE OIL COMPANY	STATE	LOCATION OF REFINERY	CAPACITY (MMTPA)
1	 INDIAN OIL CORPORATION LIMITED (IOCL)	BIHAR	BARAUNI	6.0
2		GUJARAT	KOYALI	13.7
3		WEST BENGAL	HALDIA	7.5
4		UTTAR PRADESH	MATHURA	8.0
5		HARYANA	PANIPAT	16.0
6		ASSAM	GUWAHATI	1.0
7		ASSAM	DIGBOI	0.7
8		ASSAM	BONGAIGAON	2.4
9		ODISHA	PARADIP	15.0
		<b>IOCL TOTAL</b>		<b>69.2</b>
10	 HINDUSTAN PETROLEUM CORPORATION LIMITED (HPCL)	MAHARASTRA	MUMBAI	7.5
11		ANDHRA PRADESH	VISAKH	8.3
12	 HPCL-HINDUSTAN MITTAL ENERGY LIMITED (HMEL) (JV)	PUNJAB	BATHINDA	11.3
		<b>HPCL-TOTAL</b>		<b>27.1</b>
13	 BHARAT PETROLEUM CORPORATION LIMITED (BPCL)	MAHARASTRA	MUMBAI	12.0
14		KERALA	KOCHI	16.5
15		MADHYA PRADESH	BINA	6.0
	 BPCL-BHARAT OMAN REFINERIES LIMITED (BORL) (JV)			
		<b>BPCL-TOTAL</b>		<b>33.5</b>
16	 CHENNAI PETROLEUM CORPORATION LIMITED (CPCL)	TAMIL NADU	MANALI	10.5
17		TAMIL NADU	CAUVERY BASIN	1.0
		<b>CPCL-TOTAL</b>		<b>11.5</b>
18	 NUMALIGARH REFINERIES LIMITED (NRL)	ASSAM	NUMALIGARH	3.0
19	 OIL & NATURAL GAS CORPORATION LIMITED (ONGC)	ANDHRA PRADESH	TATIFAKA	0.1
20	 ONGC-MANGALORE REFINERIES & PETROCHEMICALS LIMITED (MRPL)	KARNATAKA	MANGALORE	16.0
		<b>ONGC TOTAL</b>		<b>16.1</b>
		<b>PSU/ JV Total</b>		<b>159.4</b>
21	 RELIANCE INDUSTRIES LIMITED (RIL)	GUJARAT	JAMNAGAR (DTA)	33.0
22		GUJARAT	JAMNAGAR (SEZ)	36.2
23	 NAYARA ENERGY LIMITED (NEL)	GUJARAT	VADINAR	20.0
	 NAYARA			
		<b>PVT Total</b>		<b>88.2</b>
		<b>ALL INDIA</b>		<b>247.6</b>

PSU : PUBLIC SECTOR UNDERTAKING      JV : JOINT VENTURE (JV)      PVT : PRIVATE

Source: Petroleum Planning and Analysis Cell, Ministry of Petroleum and Natural Gas, Government of India accessed from <http://ppac.org.in/WriteReadData/userfiles/file/RefineriesMap.pdf>

### 1.2.1 The Push to FDI in Oil and Gas Sector after Introduction of LPG Reforms

The adoption of significant policy shift in terms of liberalization and privatization in July 1991 completely changed the situation again. With this new model of economic reforms, the government started allowing the Indian petroleum industry to go into private hands and also entered into government and private joint ventures. Not only this, the government also eased the stringent regulation process on the petroleum industry. This gave a tremendous boost to the petroleum industry in India. It began to grow at a marvellous pace. The production of petroleum and petroleum products also showed a momentous rise. Through adoption of liberalization and privatization, the overall economy of India grew. Also, the demand for petroleum products increased at an annual rate of about 5.5 per cent. After 1991 economic policy shift, the demand for petroleum and petroleum products still continues to grow, and there is great potential for investors to invest in the sector and gain valuable returns while meeting the increasing demands for the petroleum products.

Not only this, but, LPG reforms have also given a push to foreign direct investment in the sector.

**Table 1: FDI Limits In Oil And Gas Industry**

Section/Activity	% of Equity/ FDI Cap	Entry Route
<ul style="list-style-type: none"> <li>• Exploration activities of oil and natural gas fields,</li> <li>• infrastructure related to marketing of petroleum products and natural gas,</li> <li>• marketing of natural gas and petroleum products,</li> <li>• petroleum product pipelines,</li> <li>• natural gas/pipelines,</li> <li>• LNG Regasification infrastructure,</li> <li>• market study and formulation and Petroleum refining in the private sector, subject to the existing sectoral policy and regulatory framework in the oil marketing sector and the policy of the Government on private participation in exploration of oil and the discovered fields of national oil companies.</li> </ul>	100%	Automatic
<ul style="list-style-type: none"> <li>• Petroleum refining by the Public Sector Undertakings (PSU), without any disinvestment or dilution of domestic equity in the existing PSUs.</li> </ul>	49%	Automatic

Source: Department of Industrial Policy and Promotion, Ministry of Commerce and Industry, Government of India accessed from <http://dipp.nic.in/sites/default/files/>

CFPC\_2017\_FINAL\_RELEASED\_28.8.17.pdf

### 1.2.2 SWOT Analysis of Oil and Gas Industry in India

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>❖ Optimistic economic growth rate</li> <li>❖ Demand is more than supply in India</li> <li>❖ Presence of large base of middle income class population in India</li> <li>❖ Deregulation</li> <li>❖ Huge natural resource base</li> </ul>	<ul style="list-style-type: none"> <li>❖ High dependence on imports</li> <li>❖ Late entry of Private and Foreign players in the market</li> <li>❖ High Political risk</li> <li>❖ High operational costs</li> <li>❖ Policy framework not too effective</li> <li>❖ Legal intricacies</li> <li>❖ Post- GST tax credit issues</li> <li>❖ Rate of technology obsolescence</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>❖ Most of the natural reserves are still untapped</li> <li>❖ India being 2<sup>nd</sup> largest populated country in world, enormous dependent on fuel</li> <li>❖ Not much use of renewable energy sources yet</li> <li>❖ Supply channels</li> <li>❖ Interdependence of Nations</li> <li>❖ Technology based</li> <li>❖ High global demand</li> <li>❖ Optimism of investors both private and foreign</li> <li>❖ Environmental friendly fuel demand with use of renewables</li> <li>❖ Necessity item</li> <li>❖ LPG reforms</li> <li>❖ Upstream and downstream integration</li> </ul>	<ul style="list-style-type: none"> <li>❖ Environmental concerns</li> <li>❖ Hefty investment and technology based</li> <li>❖ Recession</li> <li>❖ Economic instability</li> <li>❖ Increasing raw material prices</li> <li>❖ Rising competition</li> <li>❖ Prone to changes political based regulations and policies</li> <li>❖ Product substitution</li> <li>❖ Limited to a few players</li> </ul>

Source: Self-compilation after analysis of industry

## SECTION 2

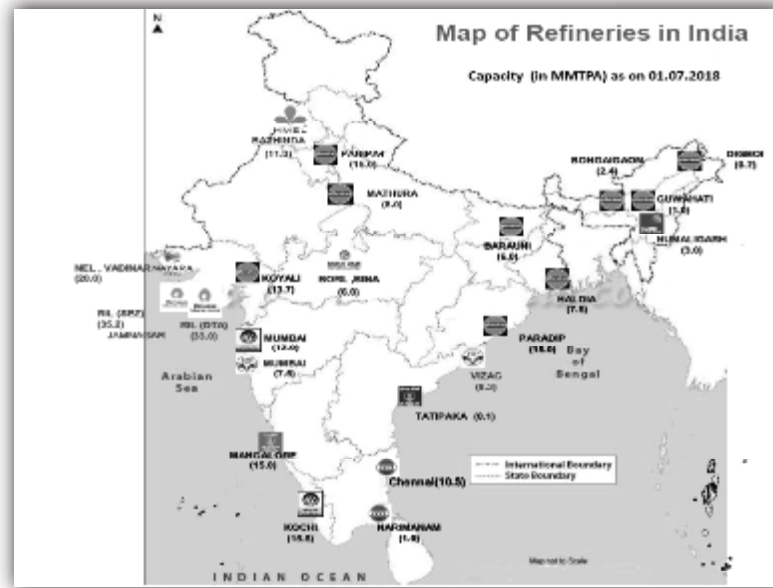
# BUSINESS SCENARIO

### 2.1 ECONOMIC SCENARIO

Oil and Gas is also one of the 25 key areas identified under the Government's "Make in India" initiative besides being among 8 core sectors in India. Some facts related to current economic scenario pertaining to Oil and Gas are given hereunder:

- ❖ Growing economy and population growth are the main drivers for oil & gas demand, increasing every year.
- ❖ Import content in oil & gas sector is in the range of 15% for refinery to 67% for upstream.
- ❖ A number of policy reforms have been taken by the Government to remove obstacles to investment and incentivize oil and gas sector on the lines of ease of doing business, minimum government maximum governance and promote Make in India initiative.
- ❖ Several private companies have emerged as important players in the past decade. Cairn India, produces more than 23% of India's crude oil production through its operation of major stakes in the Rajasthan and Gujarat regions and Krishna-Godavari basin. Reliance Industries Limited and Essar Oil have become major refiners.
- ❖ It is a transparent and level playing field for Indian private/foreign investors and national oil companies – both enjoy the same fiscal and contract terms.
- ❖ Supportive Government Regime – ease of doing business moved to sector specific policy HELP (Hydrocarbon Exploration & Licensing Policy). Also to encourage private players and global oil companies, Income generated from storage and selling of Crude Oil in Strategic crude oil reserves has been exempted from Income Tax.
- ❖ Despite being a net importer of crude oil, India has become a net exporter of petroleum products by investing in refineries designed for export, particularly in Gujarat.
- ❖ Investment opportunities are in upstream, gas pipeline, City Gas Distribution (CGD) network, LNG Terminal, Petrochemical and Refinery.
- ❖ Thrust on developing gas based economy by connecting major cities with green highways, which will have vehicles running on CNG and LNG with adequate re-fuelling stations.

The oil and gas sector is among the eight core industries of India (crude oil, natural gas, petroleum refinery products, coal, electricity, cement and finished steel, fertilizers) and has an important contribution to make for the growth of all other industry segments in India.



Source: Petroleum Planning and Analysis Cell, Ministry of Petroleum and Natural Gas, Government of India accessed from <http://ppac.org.in/WriteReadData/userfiles/file/RefineriesMap.pdf>

Keeping such contribution of Oil and Gas to other industrial sectors, the New Exploration Licensing Policy (NELP) was envisaged in the year 1997–98 to fill the ever-increasing gap between India's gas demand and supply, followed by HELP and VISION 2030.

## 2.2 FACTS AND FIGURES

- ❖ The oil and gas industry ranks amongst India's eight core industries.
- ❖ India was the third largest consumer of oil in the world in 2015, after the United States & China.
- ❖ Oil imports constitute about 81% of India's total domestic oil consumption in 2015-16.
- ❖ Oil and gas contributes about 34.4% to primary energy consumption in India.
- ❖ India had 54 Trillion cubic feet of proven natural gas reserves at the beginning of 2015. Approximately 34% of total reserves are located onshore, while 66% are offshore.

- ❖ India has 230.066 MMTPA of refining capacity with a surplus refining capacity of about 15%, making it the second largest refiner in Asia after China. Private & joint venture companies own about 41% of total capacity.
- ❖ India is the fourth-largest LNG (Liquified Natural Gas) importer in 2015 and accounted for 6.4% of global imports

### 2.3 GROWTH DRIVERS

- ❖ As part of International Energy Outlook 2016, EIA projects that India and China will account for about half of global energy demand growth through 2040, with India's energy demand growing at 3.2% per year. As per BP Energy Outlook 2016, India's energy consumption is projected to grow at 4.2% per annum upto 2035, faster than all major economies in the world.
- ❖ Oil and gas sector plays a predominant role as over one third of the energy required is met by the hydrocarbons.
- ❖ India has 16,240 km of operating Natural Gas Pipelines (June 2016). The Government further intends to enhance India's pipeline network by 15,000 km, to complete the national gas grid, the plan for which is already underway.
- ❖ The Government is focused on providing access to affordable, reliable, sustainable and modern energy to every citizen. In a bid to promote clean cooking fuel, the Government has planned to increase LPG coverage by providing 100 million new LPG connections in next 3 years till 2019.
- ❖ The government has planned to roll out BS-IV auto-fuels throughout the country progressively by April 1, 2017 and leapfrog into BS-VI auto-fuels all over the country w.e.f. April 1, 2020, which would facilitate major investment in refinery upgradation, auto industry, related manufacturing and services sector.

### 2.4 IMPORT/EXPORT OF CRUDE OIL AND PETROLEUM PRODUCTS

India imports 82 per cent of its oil needs and the same is targeted to reduced to 67 per cent by 2022 by resorting to measures such as local exploration, renewable energy and indigenous ethanol fuel (The Economic Times, 18 Jan 2018).

Table 2: Import/Export of Crude oil and Petroleum Products (Period : 1998-2017) (Million US\$)

	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 (P)
<b>IMPORTS</b>																				
CRUDE	3,518	9,210	14,403	12,635	15,759	18,268	25,990	38,776	48,389	67,988	76,876	79,553	1,00,080	1,39,690	1,44,293	1,42,962	1,12,744	63,972	70,196	87,776
PRODUCT																				
LPG	300	414	291	168	388	561	998	1,575	1,276	2,163	1,733	1,767	3,469	5,584	5,803	6,144	5,955	3,922	4,775	5,848
MS	45	0	0	0	0	0	114	293	290	281	352	266	1,403	716	160	248	375	648	239	91
Naphtha	315	452	897	724	729	626	841	1,209	3,142	4,582	3,802	1,029	1,453	2,022	1,691	982	744	1,463	1,240	1,205
ATF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	114	135	163	170
SKO	923	1,276	521	81	166	191	98	597	933	2,072	1,486	614	1,081	597	0	0	29	25	0	0
HSD	1,134	854	0	6	24	25	361	435	589	2,265	2,198	1,332	1,505	1,096	507	74	108	92	438	653
LOBS/ Lube oil	35	68	123	123	108	213	215	661	748	844	988	733	855	1,708	2,068	2,122	2,067	1,439	1,276	1,702
Fuel Oil	142	199	286	306	403	337	374	685	1,142	1,861	1,748	406	527	912	778	942	599	363	273	536
Bitumen	0	0	0	1	0	1	4	5	4	13	43	29	43	40	50	132	262	279	242	258
Others*	1	1	524	102	4	160	273	842	944	1,045	1,207	912	1,731	1,514	1,534	1,822	1,885	1,586	1,967	2,957
<b>TOTAL</b>	2,895	3,264	2,642	1,511	1,822	2,114	3,278	6,302	9,068	15,126	13,557	7,088	12,068	14,189	12,590	12,466	12,138	9,952	10,614	13,420
<b>TOTAL</b>	6,413	12,474	17,045	14,146	17,581	20,382	29,268	45,078	57,457	83,114	90,433	86,641	1,12,148	1,53,879	1,56,883	1,55,427	1,24,882	73,924	80,810	1,01,196
<b>IMPORTS</b>																				
<b>EXPORTS</b>																				
LPG	0	0	0	0	0	0	69	37	75	99	97	104	151	195	236	260	236	120	173	231
MS	0	32	315	538	623	876	1,251	1,314	2,252	3,392	4,008	6,650	10,861	15,478	17,528	15,397	13,454	9,120	7,895	8,463
Naphtha	86	120	715	479	485	577	1,123	2,426	4,741	6,791	5,643	6,419	8,161	9,482	7,992	7,584	5,176	3,071	3,666	4,505



AIF*	0	0	38	36	169	427	991	1,588	2,264	3,376	2,999	2,824	3,546	4,568	4,645	5,487	4,155	2,440	3,324	3,931
SKO	0	0	0	0	0	0	102	84	119	122	77	32	31	39	25	16	13	5	8	10
HSD	0	0	409	533	735	1,475	2,627	4,189	6,427	10,178	11,032	10,747	15,220	21,746	21,253	24,336	18,865	10,180	11,905	15,395
LDO	0	0	2	5	0	0	0	0.1	0	0.0	0.3	19	56	69	8	22	5	0	59	6
LOBS/ Lube Oil	0	0	0	0	5	8	5	80	273	171	136	26	34	36	65	27	16	20	15	18
Fuel Oil	0	0	70	53	178	204	338	522	1,101	1,696	2,737	2,250	3,318	5,312	3,757	3,671	2,321	688	583	805
Bitumen	0	0	0	0	0	1	7	6	17	13	14	12	27	6	52	40	27	6	6	18
Others	0	9	127	87	56	93	147	987	638	1,718	539	1,580	1,935	2,387	3,288	3,814	2,995	1,390	1,415	1,507
TOTAL EXPORT	86	161	1,676	1,731	2,251	3,661	6,660	11,233	17,907	27,556	27,282	30,663	43,340	59,319	58,848	60,664	47,277	27,059	29,049	34,891
<b>NET IMPORT</b>	6,327	12,313	15,369	12,415	15,330	16,721	22,608	33,845	39,550	55,558	63,151	55,978	68,808	94,560	98,035	94,763	77,605	46,865	51,760	66,305
<b>Net Product Export</b>	-2,809	-3,103	-966	220	429	1,547	3,382	4,931	8,839	12,430	13,725	23,575	31,272	45,130	46,258	48,199	35,139	17,107	18,436	21,471

Note:

Source: Petroleum Planning and Analysis Cell, Ministry of Petroleum and Natural Gas, Government of India

### 2.5 State-wise Natural Gas Production in India

It can be seen from table 3 that North-east states are leading in production of Natural Gas in India, while Rajasthan and Gujarat are the followers. Similarly, southern states such as Tamil Nadu and Andhra Pradesh are also contributing to the production of Natural Gas in India.

**Table 3: State-wise Natural Gas Production in India, 2016-17 (Month-wise) (in MMSCM)**

State	April	May	June	July	August	September	October	November	December	January	February	March	Total
Gross Production													
A) Onshore:													
(i) Assam / Arunachal Pradesh	265.63	255.10	259.31	273.57	264.21	262.29	263.97	262.59	260.93	268.11	243.20	276.51	3155.42
(ii) Rajasthan	118.84	120.09	112.20	116.48	111.99	103.10	103.36	92.15	101.60	99.36	94.31	103.87	1277.34
(iii) Gujarat	125.78	113.80	107.34	126.28	129.82	132.69	139.44	136.98	139.17	143.76	135.52	149.67	1580.27
(iv) Tamil Nadu	84.33	78.02	74.59	74.49	77.95	75.16	86.41	85.56	88.88	88.96	80.23	88.59	983.17
(v) Andhra Pradesh	55.03	57.67	68.32	73.00	75.66	77.28	76.44	74.51	78.31	79.24	71.47	80.85	867.78
(vi) Tripura	99.79	121.08	116.65	119.53	120.04	114.68	124.84	121.26	114.41	120.00	124.26	133.35	1429.91
(vii) West Bengal, MP, Jharkhand (CBM)	37.24	42.65	43.67	46.86	48.24	47.82	50.76	50.29	53.13	53.58	45.51	44.85	564.59
Onshore Total (A)	749.40	745.76	738.41	783.36	779.66	765.21	794.47	773.05	783.31	799.43	748.99	832.84	9293.88
(B) Offshore:													
Total (A+B)	1701.40	1869.81	1816.32	1874.42	1846.25	1787.07	1909.91	1846.56	1900.37	1885.48	1728.03	1872.61	22038.23
	2488.04	2658.21	2598.40	2704.63	2674.15	2600.09	2755.14	2669.90	2736.81	2738.49	2522.53	2750.30	31896.70
Net Availability <sup>1</sup>	2400.40	2575.57	2513.22	2619.59	2578.45	2503.03	2670.87	2583.56	2642.61	2645.24	2446.66	2668.70	30847.91

NOTE : <sup>1</sup> Denotes natural gas available for consumption, which is derived by deducting from gross production, the quantity of gas flared/loss by producing companies.

## 2.5 TREND OF NATURAL GAS CONSUMPTION IN INDIA (PERIOD 2007-08 TO 2017-18)

Table-4 derived below reflects natural gas consumption in India since 2007-08 to 2017-18. An increasing trend could be observed in the total consumption over the years.

**Table 4: Trend of Natural Gas Consumption in India (Period 2007-08 to 2017-18) (in BCM)**

Year	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2014-15	2015-16	2016-17	2017-18*
a) Net Availability <sup>1</sup>	31.48	31.75	46.49	51.23	46.45	39.75	32.69	31.13	30.85	31.73
b) Sale by Producing Companies <sup>2</sup>	26.97	27.06	40.83	46.04	41.17	34.35	26.78	25.30	24.99	25.93
c) LNG import	10.93	10.54	11.82	12.89	17.58	17.33	18.55	21.39	24.69	26.33
d) Total Consumption (Sale by Producing Companies + LNG import)	37.90	37.61	52.65	58.93	58.75	51.68	45.33	46.68	49.68	52.26

\*Provisional

NOTE : <sup>1</sup> Denotes net availability for consumption, which is derived by deducting gas flared and loss from gross production by producing companies.

<sup>2</sup> Denotes gas sold which is derived by deducting internal consumption of gas by producing companies from net availability.

Source: ONGC, OIL, DGH, HPL, GAIL, GSPC, RIL, TPL, BPCL and IOCL

BCM: Billion Cubic Metre

## 2.6 DEMAND OF PETROLEUM PRODUCTS

Table 5 shows that demand for types of Petroleum and Gas products is on the rise in 12<sup>th</sup> Plan, similar is the prediction for 13<sup>th</sup> plan.

Table 5: Demand: 12th Plan					
Products	2012-13	2013-14	2015-16	2016-17	
1. Petroleum Products ('000MT)					
LPG	16986	18363	20857	21831	
MS	16091	17527	20766	22588	
NAPHTHA	12353	11417	11022	11022	
AIF	6009	6587	7849	8540	
SKO	7949	7631	7033	6751	
HSDO	65040	68654	76904	81599	
LDO	400	400	400	400	
LUBES	2691	2772	2945	3036	
FO/LSHS	7954	7902	7872	7872	
BITUMEN	5254	5541	5971	6114	
PET COKE	6765	7514	9268	10294	
OTHERS	5445	6127	6085	6162	
Total POL	152937	160436	176972	186209	
2. Natural Gas (MMSCMD)	293	371	446	473	
Table 6: Demand: 13th Plan					
Products	2017-18	2018-19	2020-21	2021-22	
1. Petroleum Products ('000MT)					
LPG	22597	23271	24342	24770	
MS	24527	26587	31095	33651	

NAPHTHA	12516	14185	15388	15388	15388
ATF	9263	10022	11673	11673	12517
SKO	6549	6352	5977	5977	5798
HSDO	86762	92050	104101	104101	110785
LDO	400	400	400	400	400
LUBES	3120	3207	3389	3389	3485
FO/LSHS	7845	7845	7845	7845	7845
BITUMEN	6305	6544	6878	6878	7165
PET COKE	11419	12651	15476	15476	17089
OTHERS	6142	6071	6085	6085	6067
Total POL	197445	209185	232649	232649	244960
2. Natural Gas (MMSCMD)	494	523	586	586	606
1 BCM/yr = 2.8 MMSCMD					

Source : Working Group Report on demand estimates of the petroleum products-12<sup>th</sup> & 13<sup>th</sup> Five Year Plan.

## SECTION 3

### LEGAL FRAMEWORK

India has a quasi-federal constitution where both the federal and the state governments have legislative powers. However, under the Indian constitution, only the federal government is empowered to make laws relating to regulation and development of oil fields and mineral oil resources, petroleum and petroleum products.

From time to time, the Government of India has framed many laws and policies to develop and regulate Oil and Gas sector in India. Some sector specific laws pertaining to Oil and Gas industry are:

#### 3.1 SPECIFIC LAWS APPLICABLE TO OIL AND GAS SECTOR IN INDIA

Any E & P project in India is governed by various acts, rules, and regulations set by Government at the national level and other regulatory agencies at the state and local level. Some of the acts applicable specifically to Oil and Gas sector are:

- **Petroleum Act, 1934 (Act no. 30 of 1934) and the rules made there under:** An Act to consolidate and amend the law) relating to the import, transport, storage, production, refining and blending of petroleum [16th September, 1934] Whereas it is expedient to consolidate and amend the law relating to import, transport, storage, production, refining and blending of petroleum . Therefore, this Act was passed in 1934 to address operational issues covering the entire value chain of oil production.
- **The Oilfields (Regulation and Development) Act 1948 (53 of 1948):** 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
- **The Petroleum pipelines (Acquisition of Right of User in land) Act, 1962 (50 of 1962):** With regard to acquisition of user rights on a land where petroleum and/

or mineral pipelines were to be laid, the Petroleum and Minerals Pipeline Act got passed in 1962. This Act has provisions relating to 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 corporation<sup>2</sup> 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.

- **The Oil Industry (Development) Act, 1974 (47 of 1974) and Rules 1975:** 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.
- Other Allied Acts regulating Oil and Gas Sector
  - ❖ Kerosene (Restriction on use and fixation of price) Order, 1993
  - ❖ Kerosene (Fixation of Ceiling prices) Order, 1970
  - ❖ Paraffin Wax (supply, Distribution and Price Fixation) Order, 1972
  - ❖ Light Diesel Oil (Fixation of Ceiling Price) Order, 1973
  - ❖ The ESSO (Acquisition of Undertaking in India) Act, 1974 (4 of 1974)
  - ❖ Furnace Oil (Fixation of Ceiling Price and Distribution) Order, 1974
  - ❖ The Burmah-Shell (Acquisition of Undertaking in India) Act, 1976 (2 of 1976).
  - ❖ The Caltex Acquisition of shares of Caltex Oil Refining (India) Limited and of the Undertakings in India Caltex (India) Limited Act, 1977 (17 of 1977).
  - ❖ Domestic Gas Pvt, Limited and parcel Investment private Limited takeover of Management Act, 1979.
  - ❖ Kosan Gas Acquisition Act. 1979.
  - ❖ Lubricating Oils & Greases (Processing, Supply and Distribution) Regulation Order 1987.

- ❖ Liquefied Petroleum Gas (Regulation of supply and Distribution) Order, 1993.
- ❖ Motor Spirit and High Speed Diesel (Prevention of Malpractices in Supply and Distribution) Order, 1990.
- ❖ Explosives Act, 1884
- ❖ The Mines Act, 1952
- ❖ Mines and Minerals (Regulations and Development) Act, 1957
- ❖ The territorial Waters, Continental Shelf, Exclusive Economic Zone And Other Maritime Zones Act, 1976
- ❖ Offshore Areas Minerals (Development and Regulation) Act, 2002

### 3.2 SPECIFIC POLICIES APPLICABLE TO OIL AND GAS SECTOR IN INDIA

India is dependent on imports for about 80.2 per cent of its oil requirements and 40 per cent of its natural gas requirements. To reduce dependence on imported oil and gas, the government has in past implemented different policies on conventional and unconventional hydrocarbons. Besides this, Hydrocarbon Vision 2025 has also been shelled out to guide the policies relating to Hydrocarbon. A gist of all of these has been given hereunder:

- **Hydrocarbon Vision 2025**

The Hydrocarbons Vision – 2025, presented in the year 2000, lays down the framework to guide the policies relating to the hydrocarbons sector for the next 25 years. It was considered that the issues such as energy security, use of alternative fuels, interchangeability of technology are vital to ensure a mix of optimal and sustainable; green energy sources, which are economical as well as for use in Indian economy. As per official vision 2025 document, its key objectives are:

- ❖ To assure energy security by achieving self-reliance through increased indigenous production and investment in equity oil abroad.
- ❖ To enhance quality of life by progressively improving product standards to ensure a cleaner and greener India.
- ❖ To develop hydrocarbon sector as a globally competitive industry which could be benchmarked against the best in the world through technology up-gradation and capacity-building in all facets of the industry.
- ❖ To have a free market and promote healthy competition among players and improve the customer service.



- ❖ To ensure oil security for the country keeping in view strategic and defence considerations.

- **Hydrocarbon Vision 2030 for North-East**

The potential of hydrocarbons in India's North-East sector can be captured from the fact that the very first oil well in India was found in Digboi, Assam in British era. In spite of that, there is a huge unexplored reservoir of oil and gas in North-east. Keeping this in mind, this vision 2030 for North-East India was released in the year 2016. This vision aimed at outlining the long-term broad and objectives for the exploration, exploitation of hydrocarbons in North-east India and highlight its potential in the economic and social development of the region. This vision proposes investments of Rs 1,30,000 crore in 15 years to ramp up hydrocarbon production in North-east India.

**Objectives of Hydrocarbon Vision 2030**

- a) The objectives of the plan are to leverage the region's hydrocarbon potential, enhance access to clean fuels, improve availability of petroleum products, and facilitate economic development and to link common people to the economic activities in this sector.
- b) It outlines the steps to leverage the hydrocarbon sector for development of the region in Guwahati as well as in North-east region with involvement and inputs of various stakeholders, industry players and state governments. It not only includes the ambition for the region but also an actionable road map.
- c) It rests on 5 pillars: People, Policy, Partnership, Projects and Production. It aims at doubling Oil and Gas production by 2030, making clean fuels accessible, fast tracking projects, generating employment opportunities and promoting cooperation with neighbouring countries.
- d) The vision also focuses on other areas including exploring hydrocarbon linkages and trade opportunities with neighbouring countries like Bangladesh, Myanmar, Nepal and Bhutan.
- e) It also aims at doubling Oil and Gas production by 2030, fast tracking projects, generating employment opportunities and promoting cooperation with neighbouring countries.

- **Key Areas for Development of Oil and Gas Sector in 12th Five Year Plan**

Five-Year Plans (FYPs) are centralized and integrated national economic programs. From 1947 to 2017, the Indian economy was premised on the concept of

planning. All Five Year Plans have given due emphasis on the development of Energy sector in India, which itself is the pillar of Infrastructure growth. The latest one, the 12<sup>th</sup> Five year plan lays emphasis on important areas of Oil and Gas sector in India such as:

- ❖ Expanding Oil and Gas exploration coverage under NELP.
  - ❖ Expanding pipeline network for natural gas and LNG.
  - ❖ Developing policy for shale gas production
  - ❖ Increasing clean cooking fuel coverage from current 55 per cent to 75 per cent and to reduce the use of biomass.
  - ❖ Developing new LNG import capacity.
  - ❖ Promoting use of bio-fuels.
  - ❖ Developing city gas network in 200 cities for supply of CNG, domestic and commercial gas to reduce dependence on liquid fuels and reduce emissions.
- **NELP (New Exploration Licensing Policy)**

Applicable for all contracts entered into by the Government for an extensive period of 18 years (1997 to 2016), the New Exploration Licensing Policy (NELP) is a policy indicating the new contractual and fiscal model for award of hydrocarbon acreages towards exploration and production (E&P). Till the adoption of liberalization policy in the year 1991, exploration and production (E&P) activities in Oil and Gas sector were allowed to be carried out in India only by public sector oil companies viz, Oil and Natural Gas Corporation Limited (ONGC) and Oil India Limited (OIL). NELP was formulated during 1997 by the Government of India, with Directorate General of Hydrocarbons (DGH) as the nodal agency, to provide a level playing field for both the public and private sector companies in exploration and production (E&P) of hydrocarbons. Since then, licenses for exploration are being awarded only through a competitive bidding system and National Oil Companies (NOCs) are required to compete on an equal footing with Indian and foreign companies to secure Petroleum Exploration Licences (PELs). As a result, the activities in E&P sector have been significantly boosted by this policy and it has opened up E&P sector to private and foreign investment with 100% Foreign Direct Investment (FDI).

#### **Features of NELP**

The salient features of NELP are as under:

- ❖ Permitting 100% Foreign Direct Investment (FDI) in Oil and Gas sector
  - ❖ No mandatory state participation through ONGC/OIL by the Government.
  - ❖ Awarding of blocks through open international competitive bidding
  - ❖ Replacing grant of the petroleum exploration licenses (PEL) to ONGC and OIL on a competitive basis rather than nomination basis as done in the past.
  - ❖ Freedom to the contractors for marketing of crude oil and gas in domestic market.
  - ❖ Exemption of Cess for production from blocks offered under NELP.
  - ❖ Exemption to companies from payments of import duty for petroleum operations.
  - ❖ Creation of a Model Production Sharing Contract and putting it under review process for every NELP round. Also, contracts to be governed in accordance with applicable Indian Laws.
- **Hydrocarbon Exploration and Licensing Policy (HELP)**

HELP replaces the policy regime initiated in era of LPG reforms for exploration and production of oil and gas in the form of New Exploration Licensing Policy (NELP), which existed for 18 years (from 1997-2016). Hydrocarbon Exploration and Licensing Policy (HELP) is a new contractual and fiscal model for award of hydrocarbon acreages towards exploration and production (E&P). HELP is applicable for all future contracts to be awarded. The key objectives of HELP are:

- ❖ Enhance domestic oil and gas production
- ❖ Bring substantial investment
- ❖ Generate sizable employment
- ❖ Enhance transparency and
- ❖ Reduce administrative discretion

#### **Features of HELP**

The vital features due to which new policy regime HELP was adopted include:

- ❖ **Uniform License:** Providing for a uniform licensing system to cover all hydrocarbons, such as oil, gas and coal bed methane under a single licensing framework, instead of the system of issuing separate licenses for each kind of hydrocarbons under NELP.

- ❖ **Open Acreages:** Providing an option to a hydrocarbon company to select the exploration blocks 'throughout the year' without waiting for the formal bid round from the Government.
- ❖ **Revenue Sharing Model:** Replacing present fiscal system of 'Production Sharing Contract' (PSC) by an easy to administer "Revenue Sharing Model" to protect government's interest and minimize scrutiny and delays.
- ❖ **Marketing and Pricing Freedom:** This has been granted for new gas production from Deepwater, Ultra Deepwater and High Pressure-High Temperature Areas subject to a ceiling price limit to the gas production from existing discoveries which are yet to commence commercial production as on 1.1.2016 as well as for future discoveries.

### 3.3 REGULATORS

The regulatory structure of Oil and Gas sector in India has been divided into regulators for upstream and downstream sector.

- **Central Level: Ministry of Petroleum and Natural Gas**

The Ministry of Petroleum and Natural Gas (MOP&NG) is a Government of India Ministry which looks after regulatory concerns in exploration, production, refining, distribution, marketing, import, export, and conservation of petroleum, natural gas, petroleum products, and liquefied natural gas in India. It oversees the planning, development and control of and assistance to all industries in Oil and Gas sector. Besides this it is concerned with the administration of all acts and orders to regulate of Oil and Gas sector.

- **Key Bodies under Ministry of Petroleum and Natural Gas**

The Ministry of Petroleum and Natural Gas has a host of other bodies working under its umbrella to exercise an administrative control over this key sector.

These include :

- ❖ **The Directorate General of Hydrocarbons (Upstream)**

Established in the year 1993, under the administrative control of Ministry of Petroleum & Natural Gas through Government of India Resolution, the objectives of DGH are to promote sound management of the oil and natural gas resources having a balanced regard for environment, safety, technological and economic aspects of the petroleum activities.

DGH has been entrusted with several responsibilities, like implementation of NELP and HELP, matters concerning the Production Sharing Contracts for discovered fields and exploration blocks, promotion of investment in E&P Sector and monitoring of E&P activities including review of reservoir performance of producing fields.

In addition, DGH is also engaged in opening up of new unexplored areas for future exploration and development of non-conventional hydrocarbon energy sources like Coal Bed Methane (CBM) as also futuristic hydrocarbon energy resources like Gas Hydrates and Oil Shales.

#### **Broad Activities**

- Issue of EC (Essentiality Certificate).
- Issue of NOC (No Objection Certificate) for transfer of goods.
- Extensions and amendments of Essentiality Certificate.
- Customs Confirmation.
- Audit on utilization of Essentiality Certificate.

#### **❖ PNGRB (Downstream)**

The Petroleum and Natural Gas Regulatory Board (PNGRB) was constituted under The Petroleum and Natural Gas Regulatory Board Act, 2006 (NO. 19 OF 2006) notified via Gazette Notification dated 31st March, 2006.

The Act provides for the establishment of Petroleum and Natural Gas Regulatory Board to protect the interests of consumers and entities engaged in specified activities relating to petroleum, petroleum products and natural gas and to promote competitive markets and for matters connected therewith or incidental thereto.

Further as enshrined in the act, the board has also been mandated to 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 ensure uninterrupted and adequate supply of petroleum, petroleum products and natural gas in all parts of the country.

#### **• Linkages between the MoPNG and Other Central Ministries**

The activities involved in upstream sector require clearances from certain other ministries; therefore, a liaison is required for development of this sector. Some

linked Ministries and nature of regulations came in their purview are:

❖ **Ministry of Environment, Forests and Climate Change (MoEF&CC)**

The activities involved in oil and gas sector has a bearing affects on sustainability, therefore certain environmental clearances are required for various activities in upstream sector. These are :

- **Environmental Impact Assessment (EIA) Study:** Like all sectors listed in the Schedule to the Environmental Impact Assessment (EIA) Notification, 2006, Oil and gas sector is also supposed to carry out the Environmental Impact Assessment (EIA) under the provisions of the Environment (Protection) Act, 1986 under Article 14 of the Model Production Sharing Contract (MPSC). The offshore and onshore oil and gas exploration, development and production activities are covered under item 1(b) of the Schedule to the said notification and being category 'A' project is appraised in MoEF&CC. As per Article 14 of the MPSC, there are two such studies required to be carried out. The first study aims 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 second 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.
- **Clearance under Coastal Regulation Zone (CRZ):** Procedure for clearance under Coastal Regulation Zone (CRZ) notification 2011 also needs to be followed under Coastal Regulation Zone (CRZ) notification under the Environment (Protection) Act, 1986 as there apply restrictions on certain areas on setting up and expansion of new industries, operations or processes.
- **Color Codes of Industries for Environment Clearances**

The Ministry of Environment, Forest and Climate Change (MoEF&CC) has developed the Pollution Index 'for the purpose of categorization of industrial sectors'. These are :

1. **Red Category:** Industrial Sectors having Pollution Index score of 60 and above.
2. **Orange category:** Industrial Sectors having Pollution Index score of 41 to 59.
3. **Green Category:** Industrial Sectors having Pollution Index score of 21 to 40.
4. **White Category:** Industrial Sectors having Pollution Index score incl. & upto 20.

The Oil and Gas sector has been kept in 'Red Category' as per this color classification, which implies that sustainability aspects need to be given more priority for the companies operating in this sector.



#### ❖ Ministry of Defence

There are certain security clearances that are required for vessels in Indian waters. Therefore, such clearances may be taken up from Ministry of Defence for matters listed hereunder :

- **Naval Clearance** - As per the existing procedure of all vessels, drilling rigs, barges, platforms, supply vessels, etc. engaged in E&P activities in India are required to obtain security clearance from the Ministry of Defence (Integrated Headquarters of Ministry of Defence–Navy) and the applications are submitted to the DGH to obtain approval from Ministry of Defence on behalf of the operator.
- **Airforce Clearance** – As per the existing procedure, clearance of Aircrafts and all equipments on board the aircraft for all airborne

survey, etc., engaged in E&P activities in India are required to obtain security clearance from Ministry of Defence (Integrated Headquarters of Ministry of Defence – Air) and the applications are submitted to DGH for obtaining approval from Ministry of Defence on the behalf of operator.

- **Army Clearance** – As per the existing procedure, for land based activities in restricted or protected area etc., an E&P operator is required to obtain security clearance from Ministry of Defence (Integrated Headquarters of Ministry of Defence – Army) and the applications are submitted to the DGH for obtaining approval from the Ministry of Defence on behalf of operator.

❖ **Ministry of Home Affairs (MHA)**

Permission of this Ministry is required prior to employing all foreign nationals working with an operator in India. An E&P operator is required to obtain security clearance from the Ministry of Home Affairs and the applications are submitted to the DGH for obtaining approval from the Ministry of Home Affairs on behalf of the operator.

### 3.4 MISCELLANEOUS BODIES

❖ **The Oil Industry Safety Directorate (OISD)**

This is a technical directorate under the Ministry of Petroleum and Natural Gas, the Govt. of India to formulate and coordinate the implementation of a series of self regulatory measures aimed at enhancing the safety in the oil & gas industry in India. Main functions & responsibilities of OISD are:

- To oversee the implementation of all the decisions of the Safety Council
- To keep abreast of the latest design and operating practices in the area of safety and fire fighting in the hydrocarbon processing industry in the developed countries, so as to develop standards and codes that would be suitable for the conditions in India;
- To liaise with the statutory organizations on current views and developments and help evolve a concerted effort for the industry;
- To carry out periodic safety audits, review, suggest procedures for improvements and report on the implementation of the suggestions to Safety Council;
- To review practices in the storage and handling of dangerous chemicals



and ensure compliance with latest standards;

- To specify critical drawings / layouts that need to be vetted by Safety Specialists at the design stage and carryout spot checks of design standards based on site audit findings to serve as feed-back for establishing new standards at the design stage.

#### ❖ **Petroleum Planning and Analysis Cell**

Subsequent to the dismantling of the Administered Pricing Mechanism (APM) in the petroleum sector, Oil Coordination Committee (OCC) was abolished and a new cell called Petroleum Planning & Analysis Cell (PPAC), attached to the Ministry of Petroleum and Natural Gas, was created effective 1st April 2002. PPAC is to assist the Government in discharge of some of the functions earlier performed by OCC. The objectives of PPAC are:

- To ensure effective administration of the subsidy schemes notified by the Government.
- To monitor and analyse trends in prices of crude oil, petroleum products and natural gas and their impact on the oil companies and consumers, and prepare appropriate technical inputs for policy making.
- To monitor developments in the domestic market and analyse options for policy changes in pricing, transportation distribution of petroleum products.
- To collect, compile and disseminate data on the domestic oil and gas sector in a continuous manner and maintain the data bank.
- To ensure quality of data in terms of prescribed parameters such as accuracy, completeness and timeliness.
- To prepare periodic reports on various aspects of oil and gas sector.

#### ❖ **The Oil Industry Development Board**

The Oil Industry Development Board was established on 13th January, 1975 under the Oil Industry (Development) Act, 1974 to provide financial assistance for development of Oil Industry. The Oil Industry (Development) Act, 1974 was enacted following successive and steep increase in the international prices of crude oil and petroleum products since early 1973, when the need of progressive self-reliance in petroleum and petroleum based industrial raw materials assumed more importance. The Oil Industry Development Board is functioning under the administrative control of Ministry of Petroleum & Natural Gas.

**Table 7: A Summary of Ministries and Agencies Concerned with Functioning of Oil and Gas Sector**

<b>Body</b>	<b>Website</b>	<b>Issues</b>
<b>Ministry of Environment &amp; Forests</b>	<i>envfor.nic.in</i>	Environment Clearance Forest Clearance
<b>Ministry of Defence</b>	<i>mod.nic.in</i>	Security Clearance For Vessels In Indian Waters
<b>Directorate General of Hydrocarbons</b>	<i>dghindia.org</i>	All Technical And Psc Issues.
<b>Ministry of Petroleum And Natural Gas</b>	<i>petroleum.nic.in</i>	For Approvals As Required Under Psc.
<b>Oil Industry Safety Directorate</b>	<i>oisd.nic.in</i>	Oil Safety.
<b>Ministry Of Finance</b>	<i>finmin.nic.in</i>	Only If There Are Issues On Tax, customs, excise
<b>Chief Conservator Of Forests</b>	<i>wii.gov.in/envis/envis_pa_network/page_pccf.html</i>	Forest Clearance
<b>Director General Shipping</b>	<i>dgshipping.com</i>	Approval For Hiring Foreign Vessels
<b>Director of Explosives</b>	<i>dipp.nic.in</i>	Importing / Stocking Explosives
<b>Coast Guard</b>	<i>dipp.nic.in/explosive/dept_expl.htm</i>	Security And Hazard Issues For Offshore Installations
<b>State Pollution Control Board</b>	<i>cpcb.nic.in</i>	Pollution Control Clearance
<b>District Commissioner</b>		Land Use Permission Public Hearing For Env. Clearance Law & Order Issues
<b>Land Revenue Officer</b>		Purchase / Use Of Land
<b>Commissioner of Customs &amp; Excise</b>	<i>cbec.gov.in</i>	Imports / Exports

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<b>Commissioner of Income Tax</b>	<i>incometaxindia.gov.in</i>	Income Taxation
<b>Registrar of Companies</b>	<i>mca.gov.in/ministrywebsite/dca/mcaoffices/roc.html</i>	Registration Of Company Statutory Returns
<b>Reserve Bank of India</b>	<i>reservebank.com</i>	Payments In Foreign Currency

## SECTION 4

# CONTRIBUTION OF COMPANY SECRETARY

The Company Secretary is a key managerial person in a company, responsible to ensure the effective and efficient administration of the company and certifying the company's compliance with the provision of the Act. His role as perceived in the past, is not just limited to compliance aspect, he has become a key functionary in Board affairs as well.

### 4.1 POSITION IN THE VALUE CHAIN

As per ICSA, "It is vital that Company Secretaries have both direct and informal access to board members – executive and non-executive directors (NEDs), CEOs and chairmen... Maximizing effectiveness requires that the Company Secretary's direct reporting line should be to the chairman, and there should be parity of esteem and good team working between the 'triumvirate at the top' – the chairman, the Company Secretary and the CEO..... The role is changing: it is increasingly outward-focused (incorporating investor engagement and corporate communications), and not just about internal administration."

The above quotation taken from ICSA publication highlights the significance of a CS's position in the entire value chain.

The other is that the Company Secretary is often the only person to know first-hand how holistic decision-making outcomes are arrived at. They are closest to the Chairman and are present throughout the range of board and committee meetings. This makes them a central repository of knowledge, although often without their own voice at board meetings.

### 4.2 VERTICAL AND HORIZONTAL REPORTING

ICSA says, "The breadth of the Company Secretarial role includes additional responsibilities such as being an officer of the company, chief of staff to the chairman and adviser to the board on governance. Consequently, the secretariat needs to retain independence to rebalance power as required and demonstrate accountability."

The Company Secretary should assist and guide the directors in their pursuit of the company's aims but should also act with integrity and independence to protect

the interests of the company, and through its shareholders, its employees and other stakeholders. The Company Secretary should play a proactive and central role in the governance of the company.

As per ICSA, “The role of the Company Secretary is much more than just administrative. At its best, it delivers strategic leadership, acting as a vital bridge between the executive management and the board and facilitating the delivery of organisational objectives.”

### **4.3 OPPORTUNITIES FOR COMPANY SECRETARY**

Much beyond the ambit of compliances, The Oil and Gas Sector offers tremendous opportunities for a Company Secretary after liberalization and privatization reforms in the year 1992 and after the introduction of various policies and liberal regulations allowing the entry of foreign players in the sector. A Company Secretary being a Key Managerial Person can advise the Board on various technical and legal areas where company has to take a make strategic decision. The legal intricacies and huge volume of investment involved in Oil and gas contracts bring out the scope of a Company Secretary to provide his clients with the advice, representation, negotiation, and drafting concerning a wide variety of agreements for oil and gas exploration, acquisition, and production.

A key part of oil and gas contracts is identifying the matters that are of the most importance to clients. In addition to price issues, often there are many critical matters that must be understood, such as:

- On-time performance and allocation of risk for unknown matters (usually bitterly negotiated)
- Risk allocation
- Defining the rights and obligations of parties to ongoing contractual matters (such as joint ventures)
- Identifying special rights that may arise in certain circumstances (such as a failure to make capital contributions or achieving earn-in)
- Matters that require precise definition (such as the acceptable deductions in a net profits interest calculation)

Many oil and gas contracts include ongoing relationships between parties, such as joint ventures, earn-in agreements, and master service agreements. The role of a Company Secretary as oil and gas contract expert in these situations will be to identify potential legal risks and to neutralize them. Moreover, there might be a further role to play in full blown

disputes over such contracts. This is where good negotiation skills, experience in past deal, knowledge of the industry and regulations come real handy, which are all a part of Company Secretary's expertise.

Apart from drafting oil and gas contracts, another major area of work for Company Secretary is oil and gas projects which require some special knowledge and skills. These Company Secretaries have to handle oil and gas transactions from upstream to downstream, including pipelines, liquefied natural gas (LNG), distribution networks, trading and petrochemicals.

#### 4.3.1 Type of Contracts in Oil and Gas Sector

- ❖ Oil and Gas leases
- ❖ Joint Ventures
- ❖ Mergers and acquisitions
- ❖ Consortium Agreements<sup>1</sup>
- ❖ Technology Transfer Agreements
- ❖ Royalty/Profit sharing Agreements
- ❖ Exploration and Production Sharing Agreements,
- ❖ Gas Transmission Agreements
- ❖ Farm-in/ farm-out Agreements
- ❖ LNG Supply Agreement
- ❖ Pipeline Transportation Contracts
- ❖ Operating agreements
- ❖ Gas balancing agreements<sup>2</sup>
- ❖ Power Purchase Contracts
- ❖ Fuel Supply Agreements
- ❖ Shipping and Bulk Carriage Contracts
- ❖ Contracts for the Purchase and Leasing of Rigs and other drilling equipments,

1. A consortium agreement was signed between IOCL as Lead Member having 50 per cent stakes, BPCL and HPCL sharing 25 per cent each as partners, for setting up India's biggest oil refinery cum petrochemical complex with a ~60 MMTPA capacity and a cost of \$30 billion along the western Coast of India in the State of Maharashtra in the year 2016.

2. Gas balancing dictates how production imbalances will be reconciled between owners.

- ❖ Natural Gas Gathering and Processing Agreements
- ❖ Leasing agreements for mines etc.
- ❖ Communitization agreement<sup>1</sup>
- ❖ Storage agreements
- ❖ Pooling and Unitization agreements
- ❖ Due Diligence and legal
- ❖ Master service agreements and other agreements between oil and gas producers and oilfield service companies

#### 4.3.2 Areas of Expertise

##### 1. Production Sharing Contracts (PSC) Audit

Under a Production Sharing Contract, the contractor bears the mineral and financial risk of exploration, yet, the Government is retains ownership (participation interest) for exploration and production of hydrocarbons. The main aim of Production Sharing Audit is to provide assurance to the State’s representatives that the Contractor Company/group has conducted all PSC operations in compliance with the terms and conditions of the Production Sharing Contract. It specifically includes:

- ❖ The Contractor company/group has satisfied its operational, commercial, financial, tax, and reporting obligations, to all regulatory authorities, as stipulated in Production Sharing Contract.
- ❖ All Cost recovery expenditures, as reported, have met all terms and conditions in PSC as “allowable cost recovery expenditures, and claimed values are supported by adequate, auditable, empirical evidence.
- ❖ The contractor group has maintained adequate accounting records in accordance with the terms and conditions of PSC, and such records are in compliance with generally accepted accounting practices.
- ❖ All export sales as well as internal sales have been conducted in accordance with the terms and conditions of PSC.
- ❖ All hydrocarbon production records and sale proceeds have been accurately calculated and recorded in Cost Recovery records, have been apportioned

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1. Communitization is the agreement to combine small tracts, of which one or more is piece of land, for the purpose of committing enough acreage to form the spacing/proration unit necessary to comply with the applicable state conservation requirement and to provide for the development of these separate tracts which cannot be independently developed in conformity with said conservation requirements.

properly in Government and Contractor company/group and have been properly reflected in all Cost recovery statements and reports.

## 2. Land Acquisition and Project Development

- ❖ Assistance for reserves & resources evaluation and valuation (after fiscal modeling & economic simulation)
- ❖ Resources & reserves audit – certification
- ❖ Estimate exploration success probabilities
- ❖ Examination of titles and title abstracts
- ❖ Strategic Acquisition and divestiture, joint operating agreements
- ❖ Legal & tax considerations of exploration/development of natural resources (tax credits/other incentives)
- ❖ Energy project, real estate, oil & gas and venture capital partnerships
- ❖ Land use
- ❖ Sustainable development
- ❖ Drafting and negotiation of contractual agreements attendant to project development
- ❖ Analysis of the possible areas of disputes at various stages i.e. during the stage of floating tender, evaluation of bids, NOA stage, execution of contract and post contract issues.
- ❖ Acquisition and disposition of upstream, midstream and downstream oil and gas properties, licenses and concessions
- ❖ Advising in commercial transactions in offshore and onshore operations.
- ❖ Litigation concerning surface and subsurface title, payment of bonus monies, access to leased property
- ❖ Representation of lessors' interests in bankruptcy proceedings
- ❖ Preparation, negotiation and review of Leases,
- ❖ Preparation of Surface Use Agreements,
- ❖ Pipeline Right-of-Way and Easement Agreements, temporary and permanent easements,



- ❖ Transmission line, water, sewage and cut agreements and,
- ❖ Preparation of Special Conditions.

### **3. Facility Design/Build and Operations**

- ❖ Structuring of commercial agreements and drafting and negotiation of contractual arrangements for oil and gas exploration, production, and gathering, as well as transmission pipeline transactions, and for fossil and alternative/renewable energy facilities
- ❖ Services for operating power plants (fossil, nuclear and renewable energy)
- ❖ Transactional due diligence
- ❖ Production and storage facilities, pipelines, LNG projects
- ❖ Drilling and other offshore contracts, pipeline construction and transportation
- ❖ purchase, sale and development of LNG terminals and related pipeline facilities
- ❖ Development of crude oil terminals
- ❖ Development and financing of LPG infrastructure
- ❖ Gathering processing, treatment and storage arrangements and related contracts
- ❖ Transportation agreements for crude oil, NGLs and other liquids, by pipeline, truck, rail or barge
- ❖ Gas sale and purchase agreements
- ❖ Gas supply agreements
- ❖ Crude oil and petrochemical products sale and purchase agreements

### **4. Financial Management and Restructuring**

- ❖ Project financing, drilling program capitalization, and tax equity and debt financing
- ❖ Representing clients in the sale and acquisition of numerous strategic equity stakes in projects at various stages of development, construction and operation.
- ❖ Assistance to optimize the asset portfolio
- ❖ Mergers and acquisitions
- ❖ Acquisitions and disposals for dealing in Oil and Gas company's shares and

assets.

- ❖ Construction and financing of FPSO (Floating Production Storage and Offloading),
- ❖ Assisting upstream clients with their initial public offerings and follow-on debt and equity offerings,
- ❖ Structuring new developments and refinancing existing properties

#### **5. Matters Concerning Financial Markets**

- ❖ Banking and raising funds services
- ❖ Loan documentation, registration of charges, status and search reports
- ❖ Raising of funds from international markets ADR/GDR/FCCBs/FCEBs/ECB
- ❖ Due diligence
- ❖ Diligence Report and Certification in respect of Consortium/Multiple-banking arrangement made by Scheduled Commercial Banks/Urban Cooperative Banks.
- ❖ Loan Syndication
- ❖ Loan Documentation
- ❖ Representing developers, equity sponsors, international and domestic commercial banks and financial institutions, multilateral development agencies, export credit agencies, contractors and other participants in projects.
- ❖ Drafting and vetting of MOA, MOU, bank guarantees, indemnity bonds, undertakings and authority letters, vendor contracts, etc.

#### **6. Matters Concerning Taxation**

A Company Secretary may act as an expert for taxation aspects of offshore and onshore transactions in India. There are numerous matters wherein clients may require an expert advice on sector specific taxation intricacies such as:

- Direct Tax related matters
  - ❖ Advice on choice of business entity
  - ❖ Corporate Income Tax: Advising domestic companies on foreign tax credit to provide relief against double taxation
  - ❖ Advising upstream clients engaged in exploration, extraction and production activities, for claiming deduction and allowances available under 'Production Sharing Contract (PSC)'

- ❖ Advising on tax saving aspects
- ❖ Advising on transfer pricing regulations applicable to specified domestic transactions
- ❖ Advising on capital gains taxation
- ❖ Taxation aspects of 'farm outs' and sharing arrangements
- ❖ Advising on withholding tax payable on royalties to residents and non-residents
- Indirect tax related matters
  - ❖ Advising on Service tax
  - ❖ Advising on Custom duties on exports and imports
  - ❖ Advising on Excise tax
  - ❖ Advising on VAT matters
  - ❖ Advising on general Anti-avoidance rules
  - ❖ Advising on 'Profit Petroleum' and 'Cost Petroleum' provisions

### **7. International Litigation and Arbitration**

Arbitration is widely used in the oil and gas industry, and in particular, the UNCITRAL Rules are adopted more often in oil industry arbitrations. Therefore, Company Secretaries may have potential in this area. Several factors contribute to the use of arbitration for dispute resolution in international agreements in the petroleum industry including:

- ❖ The technical nature of the industry which requires an arbitrator with specialist knowledge.
- ❖ The high degree of use of sophisticated contracts drafted by professional advisers means that dispute are anticipated and resolution procedures put in place.
- ❖ The international nature of the operations of multinational oil and gas companies and cross border oil and gas fields, favour arbitration as a mode of dispute resolution.
- ❖ Overlapping commercial interests and long-term contractual relationships between oil and gas companies militate against litigation which is often expensive, time consuming, adversarial and destructive of good relationships.

## 8. Energy Audit and Sustainability

The upstream sector has various energy-intensive activities from driving pumps to extract hydrocarbons and to re-inject water, to drive turbines to generate electricity and heat needed for on-site operations and living quarters. A study by ONGC shows that CO<sub>2</sub> (88%) and methane (11%) are the most significant emissions for oil and gas companies. Besides, despite heavy investments to improve efficiency, energy-intensity of the extraction process has been increasing over the years. The advisory services of a Company Secretary may include advising company on :

- ❖ Assessing and mitigating environmental risks
- ❖ Reduction in Green House Gas Emissions
- ❖ Advising on Clean Development Mechanism (CDM) projects
- ❖ Developing models to increase energy efficiency by energy saving measures, improved/enhanced oil recovery measures and reduction measures in gas flaring
- ❖ Use of bio-fuel technology
- ❖ Adoption of renewable energy such as solar energy, wind energy.

### Carbon Credits: Identifying Emission Reduction Projects

#### Approved Methodologies

#### UNFCCC-Approved

##### Upstream:

- ❖ AM0009 - "Recovery and utilization of gas from oil wells that would otherwise be flared"

##### Midstream:

- ❖ AM0023 - "Leak reduction from natural gas pipeline compressor or gate stations"
- ❖ AM0037 - "Flare reduction and gas utilization at oil and gas processing facilities"
- ❖ 5 projects (India & UAE), 2 registered

##### Downstream:

- ❖ AM0055 - "Recovery and utilization of waste gas in refinery facilities"

- ❖ Water management strategies
- ❖ Energy conservation projects
- ❖ Developing measures to shorten time required to transport Oil and gas products, thereby cutting CO<sub>2</sub> emissions in midstream sector

- ❖ Advising on energy and emission trading

### 9. Labour Audit

India has a robust legislative framework for health and safety irrespective of the industry involved. The Factories Act 1948 (Factories Act) and its rules serve as the primary legislation to ensure health and safety at work. The Factories Act imposes criminal liability on both companies and individuals who breach its provisions. The penalties include monetary fines and imprisonment.

In addition, there are specific laws and regulations on safety in the oil and gas sector, such as:

- ❖ Petroleum and Natural Gas (Safety in Offshore Operations) Rules 2008.
- ❖ PNGRB (Technical Standards and Specifications including Safety Standards for City or Local Natural Gas Distribution Networks) Regulations 2008.

### 4.4 CONCLUSION

Oil and Gas Industry, the role of Company Secretary in Oil and Gas Industry goes beyond contemporary boundaries of compliance and other roles, there are plenty of other strategist's roles that can be mastered by a Company Secretary. The opportunities in this sector have also increased manifold as the sector has been thrown open after LPG reforms for Private and foreign entities. Therefore, Company Secretaries must reap the fruit.

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