



Oil and Gas Sector

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01

OIL AND GAS SECTOR

- According to IEA (India Energy Outlook 2021), primary energy demand is expected to nearly double to 1,123 million tonnes of oil
- Nifty Oil & Gas Sector Index constitutes 15 stocks with total market cap 2,740,164.39,Cr

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- India is the world's **third largest** energy consumer
 - India's oil consumption stood at almost 4.9 million barrels per day (BPD) in 2021, up from 4.65 million BPD in 2020.
 - As of September 2021, India's oil refining capacity stood at 248.9 MMTPA, making it the **second-largest refiner** in Asia.
 - Private companies owned about 35% of the total refining capacity.
 - India is the **fourth largest** importer of LNG in the world.
 - India's LNG import stood at 2,442 million metric standard cubic meters (MMSCM) in April, 2022.

PESTLE ANALYSIS

Political

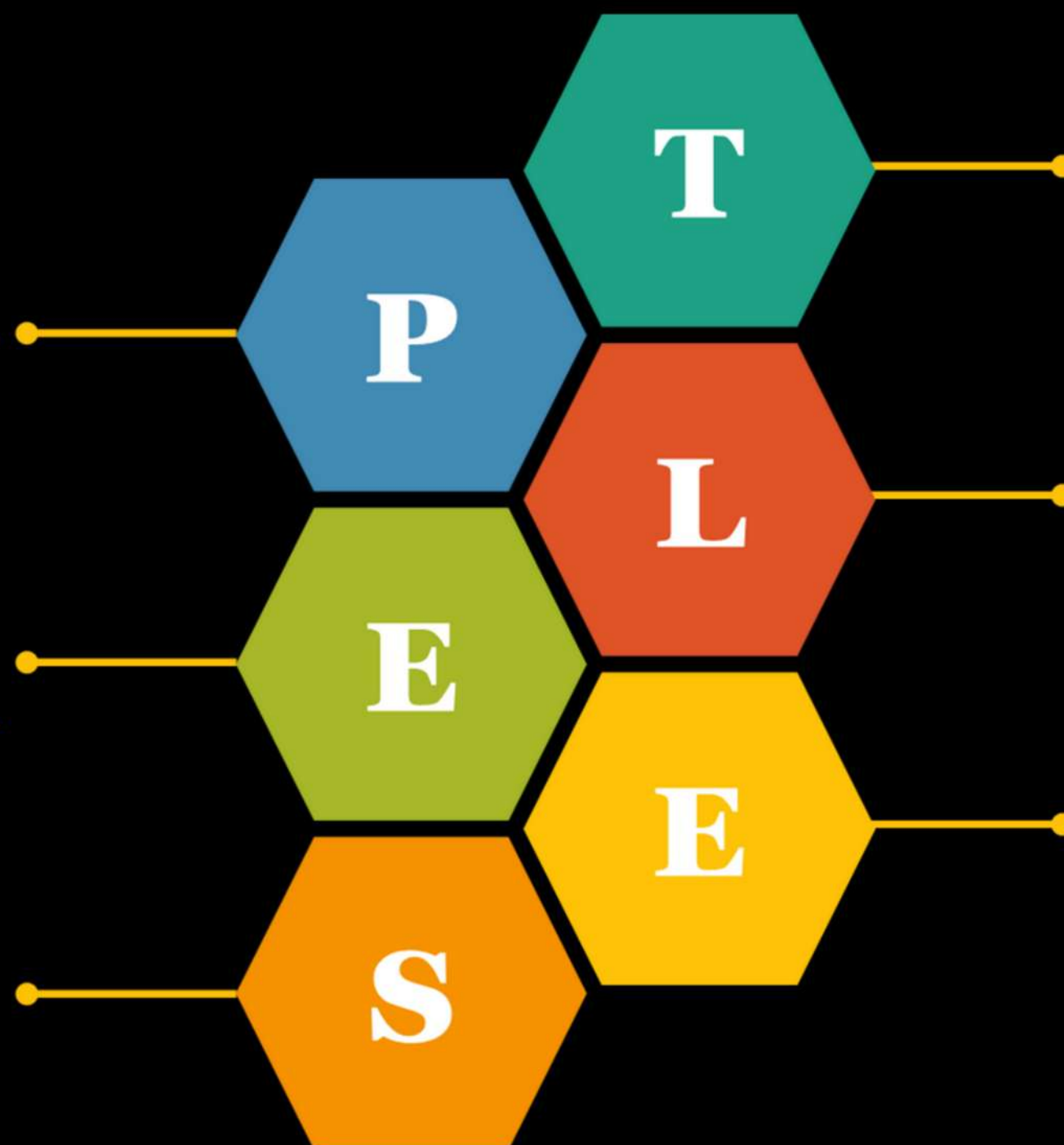
- Government Intervention
- International relations
- Energy security

Economic

- Rising oil price
- Increasing transportation cost
- Rising extraction cost

Social

- Increasing Income levels
- Less public transport use
- More automobiles



Technology

- Use of analytics, drones, AI
- Better communication solution in offshore
- Internet of things integration

Legal

- Various government laws
- Laws regarding safety and health of employees
- Laws regarding pollution and emission

Environment

- Damaged caused by extraction
- Greenhouse effect and global warming
- Weather and season drive demand

CLASSIFICATION

Upstream Segment

1.Exploration

2.Drilling

3.Production



Midstream Segment

1.Process and Storage

2.Pipeline

3.Transportation



Downstream Segment

1.Refining

2.Purifying

3.Distribution



REFINERIES- PORTER'S 5 FORCES

01

Low bargaining power of Supplier

- Variation in crude oil prices
- Cartels

03

Low threat of new Entrants

- High Capital investment
- Government intervention
- Product Differentiation

05

High threat of Substitutes

- Biofuel
- Threat to ban IC engine vehicles
- Transportation fuel is main revenue driver

02

Low bargaining power of Buyers

- No current substitute of energy resources for crude oil
- difficult to achieve great price variation

04

High rivalry among existing Competitors

- Standardization of the products
- Pressure to improve operational efficiency

BOUNDARY LINES

From Crude Oil to Chemicals: Refineries adapting to the shifting demand





COMPETITORS



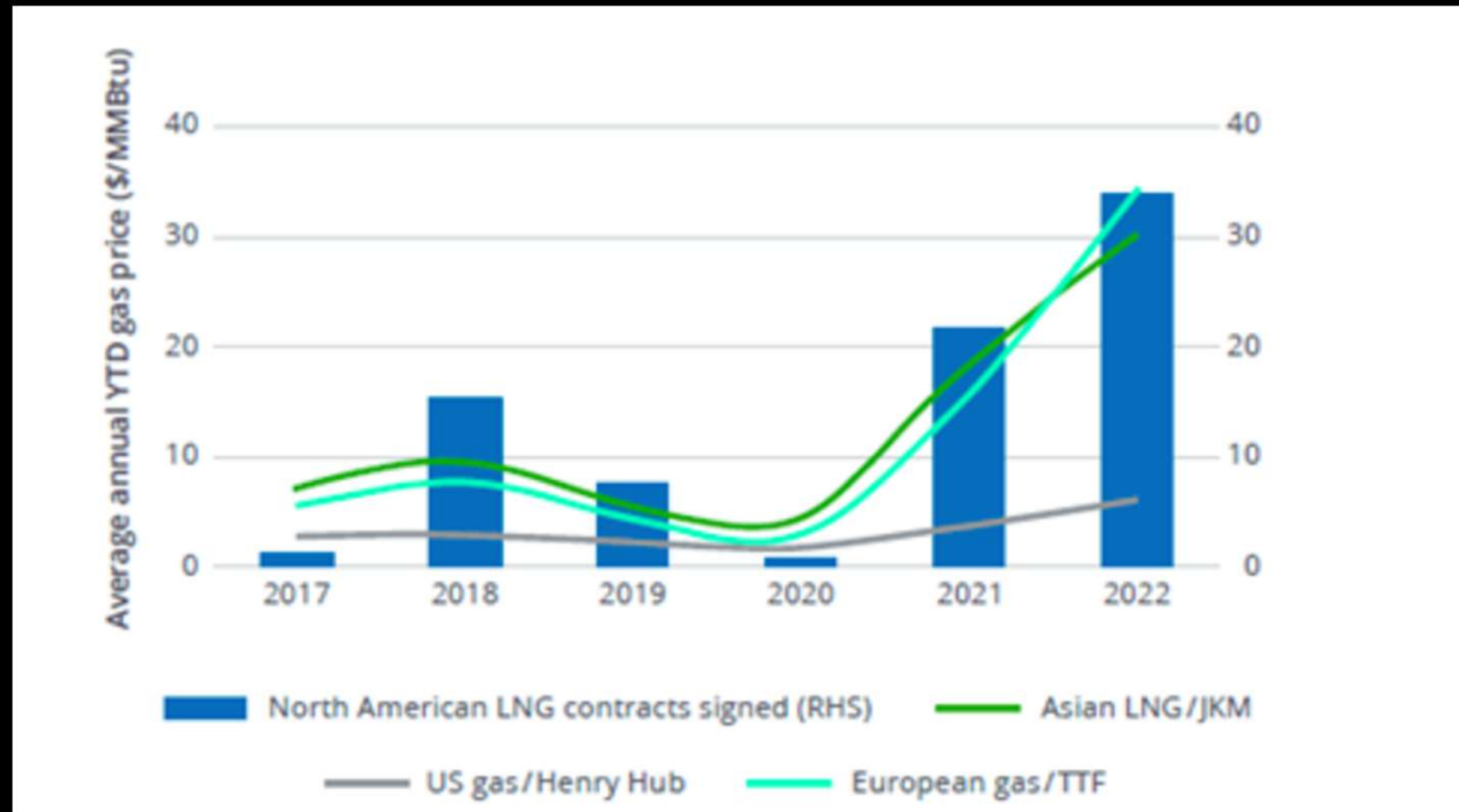
The By-Products formed by the refining and processing of Natural Gas & Oil are innumerable.

However, Many alternate materials are being used these days as a substitute for the same.

- ① Natural Fibres
- ② Bio-diesel
- ③ Organic/Plant based materials

PRICE AND SUPPLY CHAIN ISSUE

- The **Russia-Ukraine crisis** has to lead to an increase in oil and natural gas prices due to supply chain disruptions
- **OPEC** had refused to increase oil production to keep prices high
- The Russia-Ukraine war had a huge impact on the global **oil prices**. Oil prices rose from \$88 per barrel on 20th February 2022 to a 14-year high of \$140 per barrel on March 7th 2022
- Recently, The Damage caused to the **Nord Stream Pipeline** by sabotage has thwarted the Natural Gas Supply to Germany. The Nord Stream Pipeline supplies nearly 40% of the Gas to Germany so its a huge blow for the nations involved.



TRENDS



INDIA

- 1 Diversification of import of oil from various sources
- 2 One nation One Gas Grid
- 3 Oil Companies diversifying into renewable energy
- 4 Oil and Gas companies investing more in India for exploration and production

WORLD

- 1 Resurgence in the Demand for Natural Gas which is now growing faster than oil
- 2 Increased use of IOT, AI in industry for exploration, maintenance and automation
- 3 High oil prices for a long time has led to increase in adoption of alternate sources of energy
- 4 Looming Energy Crisis in Europe as a result of the Russia-Ukraine Conflict

GROWTH DRIVERS

**FDI in the form of tie-ups
with countries like Russia
and US for innovation**

**Robust demand growth
and increasing exports
of petroleum products**

**Indian companies
investing a lot in
expansion within India
Projects like Shale gas
production, Open
Acreage Licensing Policy**



MAJOR PLAYERS

Indian Oil Corporation Limited

- Largest Refiner with 32% marketshare in India
- Largest Oil Marketer with 43.9% marketshare in India
- Control 11 out of 22 refineries in India
- 14,000+ km pipelines for crude oil and products
- Subsidiaries across SriLanka, Mauritius and Middle East



Reliance Industries Limited

- Owns the world's largest refining hub
- Capacity of 1.4 million barrels per day
- 30% market share in refining in India
- 1,300+ fuel retail outlets network
- Partnered with Shell, ONGC for exploration and production business

