Annexure - VI
Management Discussion and Analysis

(Forming part of the Directors Report for the year ended 31.03.2020)

Economic Overview:

The global economy registered a growth rate of 2.9% during 2019-20, lower than 3.6% registered during the previous year. The outbreak of COVID-19 in the last Quarter of 2019-20 has impacted the lives of people and economic activity across the world. All countries have suffered economic slowdown and protecting lives through lockdowns, isolation, closure of manufacturing activity and services, and strengthening of health systems have become priority. The present health crisis is having a significant impact on economic activity in all countries. As a result, the global economy is projected to contract sharply by –3.0 percent in 2020, as per the International Monetary Fund (IMF) report in April 2020. With effective economic policies being put in place by many countries and with expected revival of demand from second half of the year due to extensive measures to contain the pandemic, the economic growth is estimated to be robust at 5.8% in 2020-21.

Due to this weakening of global growth in 2020-21, there is likely to be an overall downward pressure on prices of commodities at large during the year due to expected supply chain disruptions, behavioural changes in customers and lower demand for services. Many economies need to adjust to lower commodity revenues, higher health costs and lower productivity. However, technology is perceived to play a major role in day to day activities of organisations as work from home will be implemented by many more companies.

The expected contraction in the GDP of many developed and developing countries and the crisis in OPEC agreement among oil producers have resulted in sharp reduction of oil prices with crude oil price dropping by 65% between January 2020 and April 2020. The price of natural gas declined by 38% during the same period. It is expected that oil prices will remain below $45 /bbl for the next 2-3 years which is beneficial for oil importing countries.

The Indian economy registered a growth rate of 4.2 % during 2019-20 as compared to 7.2% in previous year. The last quarter of the year has witnessed significant drop in GDP growth in line with the world economy on account of COVID-19 pandemic. According to IMF report, the growth for 2020-21 is projected at 1.9% due to the impact of the pandemic. However, the Indian economy is projected to reach an healthy growth to 7.4 % in 2021.

On the inflation front, the Indian economy registered an increase in Consumer Price Index (CPI) at 5.84% as on March 2020 against 2.86% at the end of March 2019. The long term economic growth is expected to be strong in India due to implementation of various fiscal policies and new measures being taken to strengthen the economy. Implementation of people oriented schemes such as UJWAL, Swachh Bharat, Give It Up, and Direct Transfer of Benefits, are expected to improve the quality of life for underprivileged people, bringing them into mainstream of economy.

Energy Scenario

Developing countries will continue to drive growth in the energy consumption in the long term though the outlook for the current year is likely to be weak with expected contraction in global energy demand. As per International Energy Agency (IEA) global Energy Review 2020, the Global Energy Demand outlook for 2020 indicates that the energy demand will fall about 6% in 2020 with gradual recovery of economy.

The impact on Global Oil Demand was immediately evident due to curtailment in mobility, freight movement and aviation. These sectors account for nearly 60% of the global oil demand. As per IEA, oil demand could drop by 9% or 9 million barrels per day (mb/d) on an average across 2020. The demand for other fuels such as Coal and Natural gas is also expected to be lower in 2020. However, the demand for renewable energy is expected to increase due to lower operating costs.

However, the long term demand for world primary energy is likely to grow from 2021 till 2040. As BP Energy Outlook 2019, the demand for primary energy is expected to increase from 13511 MTOE at present to 17866 MTOE by 2040, resulting in an additional demand of 4355 MTOE. Creation of necessary infrastructure to generate such a huge quantity of energy needs huge investment in Refining and Logistics sector. This increasing trend in energy demand is also supported by the increasing energy needs of the growing population which is expected to reach 920 crore by 2040.

As per the projections, the demand for world crude oil is expected to increase from 4538 MTOE at present to 4860 MTOE by 2040 while the demand for Natural Gas is expected to be reach 4617 MTOE by 2040, making Natural Gas as the second best fuel and almost equally as important as oil. Together, demand for Oil and Gas are expected to account for 53% of total energy consumption by 2040. The demand for world Coal is expected to remain stagnant at 3731 MTOE, dropping its share in primary energy to 20% from 28%. This is mainly on account of environmental concerns due to emissions for coal based power plants.

On the other hand, the renewable energy is expected to gain importance as the demand for these fuels, especially solar power, is likely to increase fivefold from the current level of 571 MTOE to 2748 MTOE by 2040 and its share in the overall demand will reach 15% making it as a critical energy input in the future.

The Indian crude oil basket price experienced downward trend during 2019-20 moving from $71.0 / bbl in April 2019 to $ 33.4 / bbl in Mar 2020. This downward price trend is due to the COVID-19 Pandemic and crisis in OPEC agreement among oil producing countries. The average Indian basket crude oil price for the year 2019-20 was $60.47 /bbl which is lower than the previous year price of $69.88 /bbl. The increased availability of crude oil in the global scenario coupled with lower demand for petroleum products in the short term may result in lower crude oil prices for next 3 years as per IMF report, which is good for oil importing countries like India.

Refining Industry and Oil Market Developments

Despite the demand problems in 2020-21, the global market for oil and gas are likely to be strong, continuing to account for about 50% of primary energy. Though there is a reduction for global oil demand from 98 Mb/d to 89 Mb/d in 2020-21, the level of global oil consumption is expected to increase from the present level to 108 MB/d by 2040 with most of the demand growth is likely to stem from emerging economies – China and India.

As per PPAC data, the petroleum products consumption in India has increased marginally from 213.2 MMT in the year 2018-19 to 213.7 MMT in 2019-20, registering a growth rate of 0.2 %, while the production of petroleum products has also marginally increased from 262.4 MMT in 2018-19 to 262.9 MMT in 2019-20, a growth rate of 0.2%. There is no increase in refining capacity of 249.4 MMT during the year 2019-20. However there is a reduction in crude oil processed in Indian Refineries from 257.2 MMT in 2018-19 to 254.4 MMT in 2019-20. With marginal decrease in crude oil production in India as compared to previous year, the Indian refineries continue to depend on crude oil imports from other countries. The natural gas production has also registered a very slight decrease from 32.9 BCM in 2018-19 to 31.2 BCM in 2019-20. However, the overall natural gas consumption in India has increased to 63.9 BCM during the year as compared to 60.8 BCM in the previous year.

Opportunities and Challenges

As per the report of the working group on enhancing refining capacity by 2040, the refining capacity is expected to increase from the current level of 249.4 MMT to 438.7 MMT by 2030, providing an opportunity for creation of new refining capacity in India in the immediate future. The impact on demand for petroleum products due to COVID-19 pandemic is expected to be in short term only and the long term projections are expected to remain same as earlier with minor modification.

In order to meet the ever growing energy needs in the State of Tamilnadu and in other states, CPCL is planning to set up a 9.0 MMTPA refinery with necessary secondary processing facilities and infrastructure at its existing Cauvery Basin Refinery in Tamilnadu. In principle approval has been obtained and the Detailed Feasibility Report has been completed. Environment approval for the project from MoEF is being pursued. During 2018-19, Memorandum of Understanding (MoU) was signed between CPCL and Government of Tamil Nadu for the incentive package to CPCL according to structured package of support as per the Tamil Nadu Industrial Policy 2014.

In addition to transportation, the 9.2 billion people on the planet at the middle of this century will have greater demand for food, plastic resins and fibres, detergents, consumer products, pharmaceuticals, packaging, and countless other chemicals. This requirement will create demand for increased production of petrochemicals. While the volume of refined products will continue to rise, the ratio of fuel to petrochemicals will continue to move in favour of petrochemicals.

To utilise Natural gas which is an environment friendly fuel, CPCL has undertaken a project to utilise natural gas as an internal fuel replacing the existing liquid fuels such as fuel oil and naphtha, at an estimated cost of ₹ 421 crore. Besides improving profitability, implementation of this project will also result in better environment conditions. CPCL has successfully commissioned RLNG in 3 GTs (GT-2, 3 & 4) and 2 Boilers (Boiler - 1 & 2) during the year 2019-20. The balance equipment will be converted to RLNG in the year 2021.

CPCL is continuously exploring the possibility of generating new products from the existing facilities. As part of these efforts, one batch each of JP-5 and Low sulphur PCK / PC ATF was produced from OHCU.

CPCL strongly upholds principles of Sustainability in its business operations and accordingly has taken many initiatives. The company has identified a number of energy conservation schemes and implemented ten energy conservation schemes during the year 2019-20 that resulted in reduction in internal energy consumption by 27900 SRFT per annum. New Energy conservation schemes have also been identified and will be implemented in 2020-21 which are expected to contribute further reduction in energy consumption which will benefit both the profitability and environment.

CPCL started receiving TTRO water from CMWSSB since Nov 2019. This has given flexibility to reduce overall refinery water consumption. Water production from Desal unit has been enhanced which has helped in reduction of the Metro water intake.

As per BP Outlook 2019, Renewable energy is expected to grow strongly, with its share in global power markets increasing substantially. To harness the expected growth opportunities emerging in renewable sources of energy sector, CPCL is planning to set up Roof-top Solar power generation units at Manali Refinery.

The International Maritime Organisation (IMO) has enforced a new 0.5% sulphur content cap on marine fuel from 1st January 2020 from the earlier level of 3.5% in response to heightening Environmental concerns from emissions contributed from Ships. CPCL has successfully prepared one batch of the new product and will be ready to supply it to market.

Risks and Concerns

CPCL has developed a well-defined Risk Management Policy Framework that enables the company to identify the risks and concerns including the possible mitigation measures. These risks are monitored quarterly by Risk Management Compliance Committee and mitigation measures are modified as per the requirements. The Board level Risk Management Committee review the actions taken on Risk Management twice in a year.

The High and Medium risks and concerns identified include Low Capacity Utilisation, Erosion in Refining Margin, Cost & Time overrun in projects, Safety Risk, Security Risk, Raw Water Availability, etc.

Covid related Risks

The year ahead seems to be another challenging year. In view of the lock down to contain the spread of COVID-19, demand for POL products had reduced significantly during the first quarter of FY 21. During this period, the refinery could operate at about 50% capacity utilization. The refinery is currently operating at around 80% capacity utilization. While demand for MS has largely recovered. Demand for HSD and ATF continue to be poor due to frequent lockdowns and reduced economic activities and very few domestic commercial flights. The full recovery of demand in the current financial year seems to be unlikely. The same is compounded by poor cracks in refining business currently.

Low Capacity Utilisation

Security in Crude supply is the key to continuous operation and profitability of Manali refinery. During the year 2019-20, 80% of CPCL's crude supply requirements were met through imports and the balance was allocated from indigenous sources. Crude supply position to CPCL was secured well by entering into term contracts mainly with government oil companies from various regions like Middle-East, Far-East, West African, Mediterranean etc., In addition, the crude basket of CPCL is also increased continuously by identifying new crudes that can be processed in the existing refining facilities. At present CPCL has around 100 crude oils in crude basket and thus have the capability for crude procurement from multiple sources..

To improve Reliability in operations and reduce unplanned S/Ds, Root cause analysis is done for all major unit interruptions and remedial measures are recommended. Reliability improvement strategies have been developed and action plan is being prepared for implementation.

Safety and Security

Safety and security aspects are very critical for continuous operation of units and for all stake holders in CPCL. Accordingly, well-defined safety and security management systems have been established in the company with an objective to monitor safety and security conditions in all areas within the refinery premises and also outside the refinery. The Standard Operating Procedures (SoP) pertaining to each and every unit and Equipment is kept in place to ensure proper operation of the plants and equipments and are also continuously updated with the latest changes and modifications through the system of Management of Change (MoC). Multi-level safety and security audit systems enable and ensure continuous monitoring of safety and security aspects and also identify gaps that need to be rectified. In addition, audits by external agencies are also conducted periodically which enable to implement best practices from other refineries in CPCL. On-Site mock drills are conducted periodically to test the preparedness of various components of Disaster Management System. Regular interaction is maintained with District authorities, Chennai Corporation authorities and other statutory agencies on security related issues. CCTV Cameras are used for surveillance purpose by CISF team and the system is being further strengthened with addition of new units. It is also proposed to utilise more digital technologies for improving the surveillance methods and also for close monitoring of safety and security in CPCL. Periodic inspections of pipelines are carried out and security patrolling/ surveillance system is in place. Security drills were conducted twice a month to keep the people and systems in alert.

In order to handle COVID-19 pandemic, SoPs have been developed on social distancing and hygiene inside the working place. Employees and Contractor labour have been given masks to control the spread of virus. Close monitoring of health of persons entering Refinery premises is being done to detect the affected persons and isolate them.

During the year, there were no instances of threat to safety and security of the installations.

Other risks

I. With regard to Erosion of margins due to variations in pricing of crude and products, CPCL's Refinery Business Optimisation model is able to optimise crude and product pattern in line with price trend. Further, additional investments for upgrading quality of products to BS-VI standards and for reduction of raw material cost using RLNG in place of Naphtha for production of Hydrogen and Power are being implemented partly.

II. Regarding Cost & Time overrun in projects, it is proposed to complete enabling jobs by the project start date and handover the project site without any delay. Contracts will have clauses to fix accountability for non-performance for project delay

III. To deal with the risk of non-availability of adequate crude at CBR and facilities to produce current specification products, owing to the fact that CBR at present is a simple topping refinery; CPCL proposes to set up a state of the art 9 MMTPA Capacity refinery at CBR with secondary processing facilities in place of the existing facilities.

Implementation of BS-VI specification for MS and HSD

As per BS-VI specification for auto fuels to improve environmental conditions in India, all Indian Refineries need to reduce sulphur content in automotive fuels – Motor Spirit (MS) and High Speed Diesel (HSD) and supply the same effective from April 2020. In line with this requirement, CPCL has implemented revamping of existing DHDT unit capacity to produce 100% BS-VI quality compliant HSD and started supplying BSVI MS & HSD to market from 01st December 2019 ahead of schedule. CPCL is also setting up a new FCCU Gasoline Treatment

Plant to meet MS quality standards which is in advanced stage of completion.

Internal Control Systems and their Adequacy

The Directors' Report has adequately dealt with this subject.

Financial Performance

The Directors' Report has adequately dealt with this subject.

Operational Performance

The Directors' Report has adequately dealt with this subject.

Material Developments and Human Resources / Industrial Relations

The Directors' Report has adequately dealt with this subject.

Cautionary Statement

Statements in the Management's Discussion and Analysis, describing the Company's focal objectives, expectations or anticipations may be forward looking within the meaning of applicable securities, laws and regulations. Actual results may differ materially from the expectations. Important factors that could influence the Company's operations include global and domestic demand and supply conditions affecting selling prices of products, input availability and prices, changes in Government regulations / tax laws, economic developments within the country and factors such as litigation and industrial relations.