

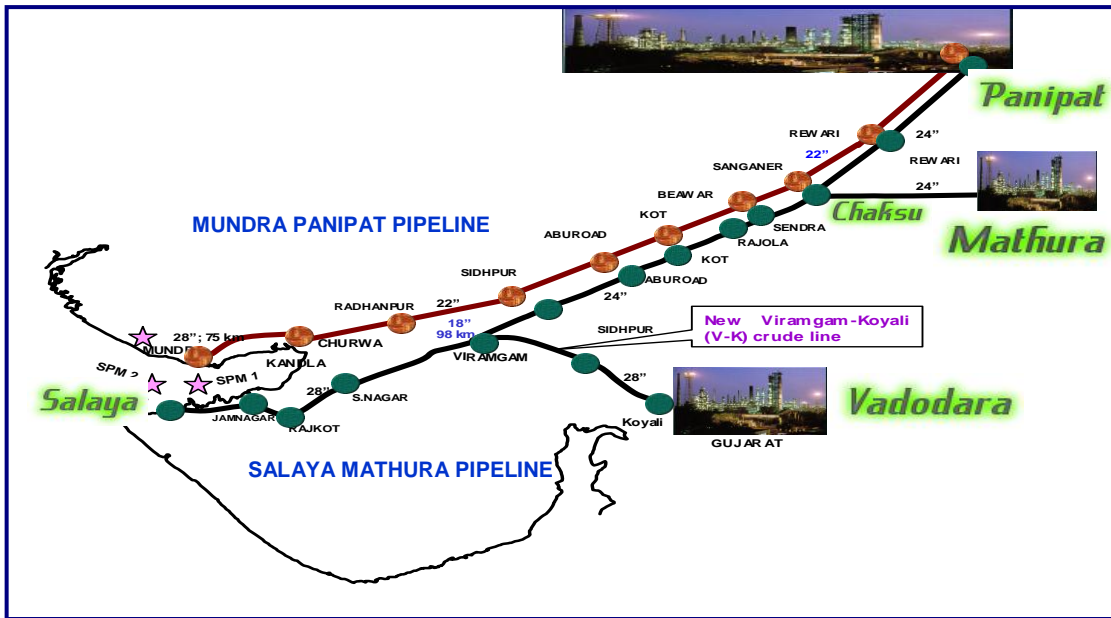
**INDIAN OIL CORPORATION LIMITED  
PANIPAT REFINERY- FUELLING INDIA'S GROWTH**



## INDIAN OIL CORPORATION LIMITED PANIPAT REFINERY

### I. UNIT PROFILE

Panipat refinery is the 7<sup>th</sup> refinery of Indian Oil Corporation. It is located about 20 kms from Panipat city and 100 km from Delhi. Panipat Refinery built at the cost of Rs. 3868 crore (including Marketing and pipelines installation) with an installed capacity of processing 6 million metric tonnes per annum of crude oil in the year 1998. Further, Refinery capacity expanded to 12 MMTA in 2006 at a cost of Rs. 4165 crore. It is India's one of the most modern refinery with global technologies from IFP, France, Haldor Topsoe Denmark, UNOCAL/ UOP, Stone & Webster, ABB Lummus USA. The refinery receives crude oil through two pipelines – Salaya-Mathura Panipat Pipeline and Mundra Panipat Pipeline.



The Refinery produces cooking gas (LPG), Petrol, jet fuel, kerosene & Diesel apart from other products such as Naphtha, Bitumen, HPS and MTO. For environment protection &



conservation, the refinery has also commenced production of BS-II and Euro-III low sulphur diesel and petrol.

To meet the demand of various petroleum products, the refinery has a number of process units along with captive power plant, utilities block and effluent treatment facilities. The various units of the refinery are :

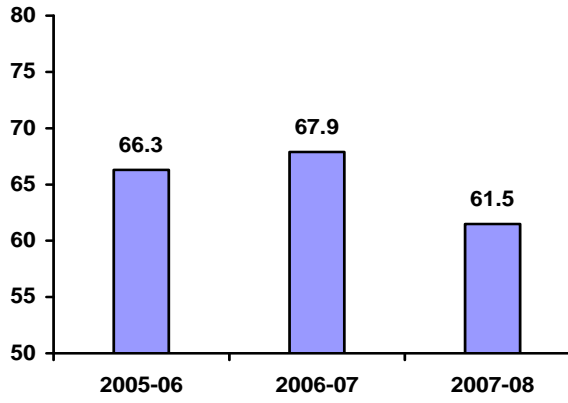
- AVUs (Atmospheric & Vacuum Distillation Units) : (6.0 x 2 = 12 Million Metric Ton Per Annum): Crude oil distillation / fractionation for further processing in secondary units
- HGUs (Hydrogen Generation Units – 1 old + 2 new) : (0.038 + 70 x 2 MMTPA): Hydrogen generation for processes requiring hydrogen
- CCRU (Continuous Catalytic Reforming Unit) : (0.64 MMTPA): For improving octane number of petrol component. This process eliminates requirement of environmentally hazardous TEL (Tetra Ethyl Lead) blending in petrol.
- RFCCU (Resid Fluidized Catalytic Cracking Unit) : (0.85 MMTPA): Catalytic cracking of heavy intermediate stocks for production of lighter products viz. LPG, Petrol, Diesel components
- BBU (Bitumen Blowing Unit) : (0.5 MMTPA) : For production of Bitumen.
- VBU (Visbreaker Unit) : (0.4 MMTPA): Thermal cracking of Vacuum Residue is carried out for viscosity reduction and production of HPS Fuel
- OHCU (Once through Hydrocracker Unit) : (1.6 MMTPA) and HCU (MMTPA) : (1.7 Million Metric Ton Per Annum) : Heavy petroleum stock is subjected to hydrocracking for production of lighter products viz. LPG, Petrol, Diesel components
- DHDS (Diesel Hydro desulphurisation Unit): (0.7 MMTPA) and DHDT (Diesel Hydrotreating Unit) (3.5 MMTPA): For removal of sulphur components and production of low sulphur environment friendly Diesel
- DCU (Delayed Coking unit) (2.4 MMTPA): Thermal cracking of Vacuum Residue is carried out for production of Distillates and HPS Fuel

## **II. ENERGY CONSUMPTION**

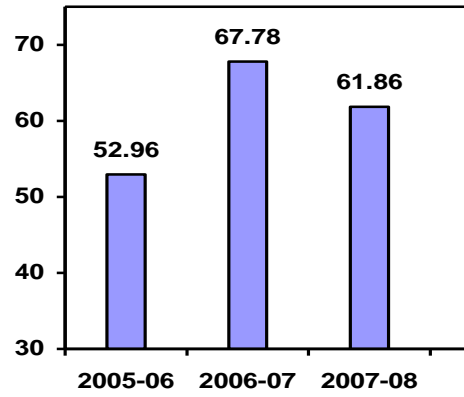
The refinery primarily consumes own generated Fuel Oil (IFO, LDO & Naphtha) and Refinery off-gas to meet its entire energy demand including power generation at its captive power plant. Power import is nominal. The total energy consumption is monitored on regular basis. Energy conservation receives top priority at Panipat refinery. The Top Management commitment to perform and outpace the international pacesetter refineries has percolated down to the line staff.

As a result of various ENCON & other operational improvements, the total energy cost of the refinery have steadily declined from a level of 8.5% in 2001-02 to the current level of 6.4% of the total manufacturing cost including crude oil cost. Specific electrical energy consumption has come down from 55.6 KWh/ MT crude processed in 2001-02 to 52.96 KWh/MT crude processed in 2005-06. Similarly, thermal energy consumption has come down from 0.738 MMKCal/ MT crude processed in 2001-02 to 0.709 MMKCal/MT crude processed in 2005-06. However, during 2006-07, both electrical and thermal energy consumption has increased due to addition of new process units, boilers, gas turbines and other associated facilities under refinery expansion and again come down in 2007-08.

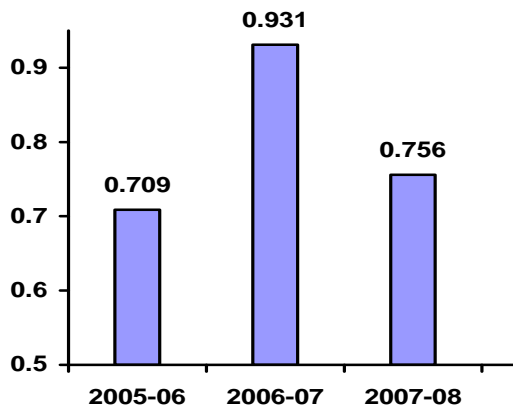
Energy & loss performance in terms of MBN (MBTU/BBL/NRGF – the measure extensively used in crude oil refining sector for energy performance evaluation) has come down from 81 in 2002-03 to 61.5 in 2007-08.



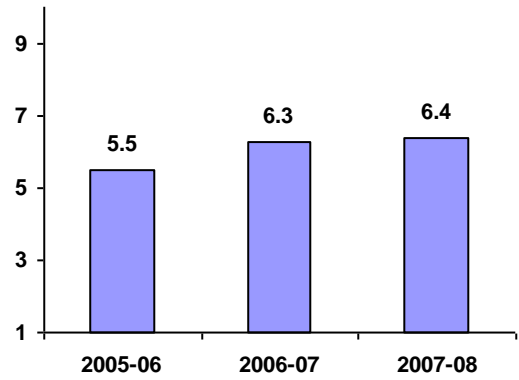
**ENERGY + LOSS PERFORMANCE :  
MBN (MBTU / BBL /NRGF)**



**SPECIFIC ELECTRICITY CONSUMPTION :  
KWH / MT CRUDE PROCESSED**



**SPECIFIC THERMAL ENERGY CONSUMPTION :  
MMKcal / MT CRUDE PROCESSED**



**ENERGY COST AS % OF MANUFACTURING COST**

### III. ENERGY CONSERVATION COMMITMENT, POLICY AND SETUP

## ENERGY POLICY

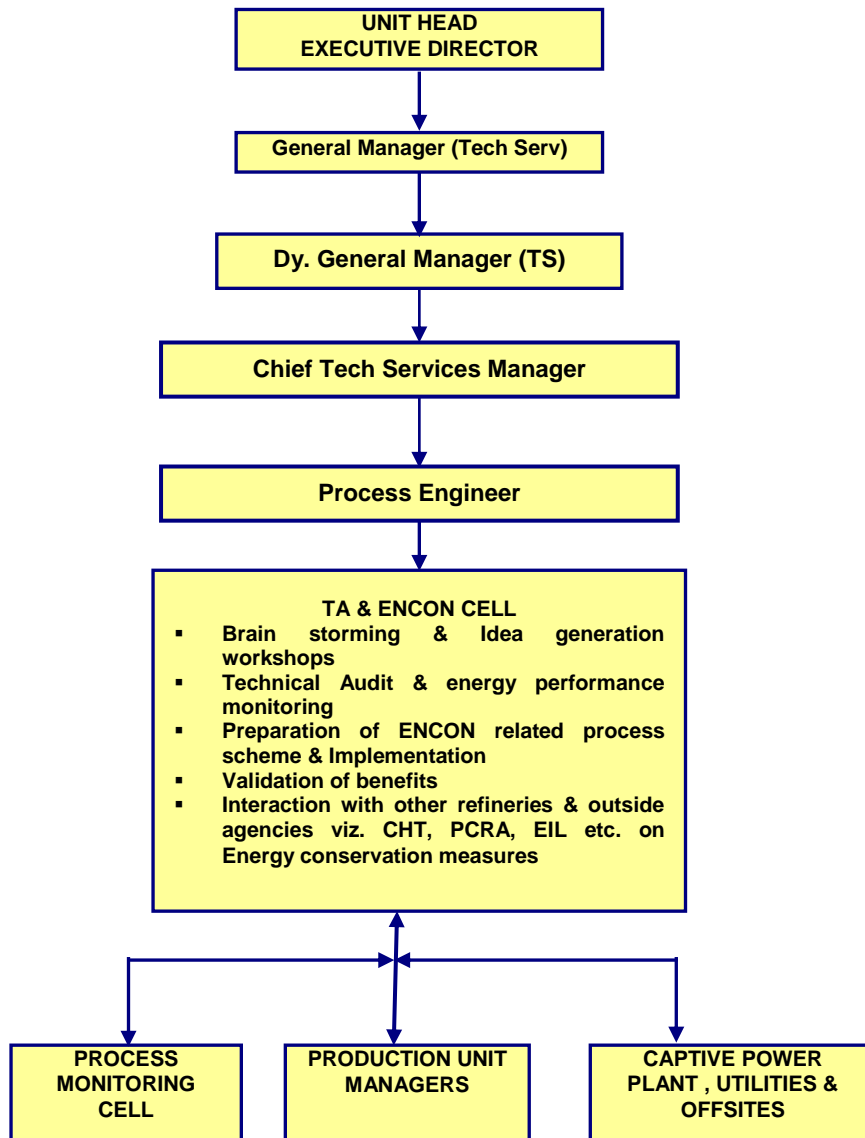
### To be a World Class Performer in Energy Management by

- Adopting energy efficient and environment friendly technologies.
- Benchmarking our performance with the best in the world and endeavoring to be ahead.
- Promoting use of renewable sources of energy.
- Fostering a culture of participation and innovation amongst stake holders for continual improvement in energy conservation.
- Propagating the message of avoiding wastage of energy to the community.



**Indian Oil Corporation Limited**

## Energy Conservation Team Structure



#### iv. Energy Conservation Achievements :

##### Details of Schemes Implemented in 2007-08 :

#### 1. Scheme : Routing Of Coker Blow Down Overhead Vapours to Wet Gas Compressor

##### Background :

Blow down of coke drums is carried out during cyclic operations in Coker unit of Panipat Refinery. Overhead vapours coming out of blow down overhead separator had to be routed to flare. Although there was a provision of vapour recovery by manual routing of these vapours to WGC suction, the line up required was very delicate and balanced due to manual operation of four valves to prevent backflow from WGC suction to flare.



Delayed Coker Unit

##### Observation :

It was observed that the following modification will facilitate the routing of Coker Blow Down Overhead Vapours to Wet Gas Compressor in stead of flaring :

- Routing the recovery line from upstream of PV5802 instead of downstream and providing a control valve.
- Provision of NRV to prevent backflow thereby saving WGC tripping on account of low suction pressure.

##### Technical / Financial Analysis :

With the modification, 10 Tons per day Flaring was reduced and FG generation increased. Equivalent fuel savings of about 37290 Million kcal per year.

##### Impact of Implementation :

Implementation of modification scheme to utilize 10 MTPH gas resulted in savings of about 3805 MT fuel per year.

Financial Savings : Rs. 7.40 Crore per year

#### 2. Scheme : Provision of Zero Leak Slab Gate Valves with electrical actuators for Naphtha and MS Tanks Manifolds

##### Background :

For transfer of Naphtha and MS from refinery tanks thru' Pipelines to other marketing locations, blinding and de-blinding operation for positive isolation leads to hydrocarbon losses at the manifold.

##### Observation :

It was observed that with the provision of 35 nos. of Zero Leak Slab Gate Valves with electrical actuators for Naphtha and MS Tanks Manifolds, 595 MT per year of hydrocarbon will be saved.

##### Technical / Financial Analysis :

Hydrocarbon savings = 595 MT.

Equivalent fuel savings = 6000 Million Kcal/Year.

##### Impact of Implementation :

Financial Savings : Rs. 119 Lac per year

**3. Scheme : Provision of CDU-1 reflux drum overhead gas routing to RFCCU WGC to reduce loss of gas to flare**

Background :

The CDU-1 reflux drum pressure control was split range type with fuel gas back up facility at low-pressure condition and flaring the excess gas during high-pressure condition. The reflux drum pressure is maintained between 2.2 – 2.6 kg/cm<sup>2</sup>g.

Observation :

During summer season, when ambient temperature is high and if overhead air fan coolers are having constraints, the reflux drum over pressure flaring occurs intermittently. To avoid this flare loss, third pressure control valve placed with intermediate pressure set point to route the gas to WGC in RFCCU. This modification facilitated saving of lighter gas which otherwise was getting lost to flare.



Crude Distillation Unit-1

Technical / Financial Analysis :

Quantity saved by routing to WGC = 600 kgs/hr.  
Equivalent Fuel savings : 52580 MKcal per year.

Impact of Implementation :

After modification, Fuel gas saving resulted in 5258 MT per year fuel saving.  
Financial Savings : Rs. 10.47 Crore per year

**4. Scheme : Optimisation of steam turbine operations for ID and FD fans of the CDU-2 by closing secondary port in the turbine driven pump.**

Background :

In line with earlier experience in new Hydrogen Unit, in CDU-2 unit also, secondary port in the turbine of ID/FD fans were closed. Steam consumption by these drives are higher than anticipated and the efficiency was comparatively low.

Observation :

The closing of the optional hand valve (jet valves) located on the outside of the turbine casing in CDU-2 ID/FD fans were gradually isolated and the steam load came down substantially by 5 MT/ Hr.

Technical / Financial Analysis :

After adjusting steam turbine operations, steam saved : 5 MT/ hr.  
Equivalent fuel saving = 26670 Mkal/Yr

Impact of Implementation :

Steam optimization resulted in 2667 MT per year fuel saving.  
Financial Savings : Rs. 5.29 Crore per year.

**5. Scheme : Optimisation of PREP Process cooling tower operation by stopping one pump and 3 nos. overhead induced draft fans**

Background :

PREP process cooling tower is having 7 CW pumps and each pump has a capacity of 4000 M3/hr. The design circulating water flow is 20000 M3/hr, which is met by running 5 pumps continuously. This cooling tower caters to the requirement of all the PREP units like AVU II, HGU II & III, DHDT, Hydro cracker, DCU and NSU II. Since commissioning of the PREP Units, 5-6 pumps were run to maintain the cooling water requirement of these units.

Observation :

It was observed that sufficient margin existed w.r.t. the approach temperature between the supply and return header. All coolers and condensers were observed for temperature approaches and wherever a margin was observed the cooling water return line isolation valve was throttled a bit.

Barring peak summer months, the cooling tower operations sustained with only four pumps in line and still a cooling water supply header pressure of 4.2 Kg/cm<sup>2</sup>g could be maintained, without affecting the operations of any of the process units.

Technical / Financial Analysis :

The savings in power consumption after stopping one cooling water pump and 3 overhead draft fans = 770 KWH  
Total power saving : 4432 MWh/year

Impact of Implementation :

Financial Savings : Rs. 2.64 Crore per year

**6. Scheme : Operation of one high capacity & one low capacity air blower for simultaneous operation of both SRU & SSRU, instead of two high capacity blowers**

Background :

Panipat Refinery Sulphur block is having two Sulphur Recovery Units, both having a capacity of 115 TPD each. Each of these units requires running of one air blower to supply necessary air for sulphur recovery operation. The PR sulphur block is provided with two high capacity blowers and two lower capacity blowers. The high capacity blowers are having a capacity of 11500 kg/hr and power consumption of 480 kW, while the low capacity blowers are having a capacity of 8500 Kg/hr and power consumption of 280 kW. The piping arrangement of these blowers is such that any of these blowers can supply air to any of the two sulphur recovery plants.

Observation :

For operation of any of the two sulphur recovery units at maximum level, it requires 11000 kg/hr of air, which could not be supplied by the running of smaller capacity blower. Therefore when both the SRU & SSRU are in operation, two high capacity air blowers are operated in parallel. This resulted in unnecessary load on these air blowers and wastage of energy.

Hence, one high capacity blower of 480 kW was stopped and operation of a low capacity blower of 200 kW instead was started.



Sulphur Recovery Unit

Technical / Financial Analysis :

The savings in power consumption after stopping one cooling water pump and 3 overhead draft fans = 770 KWH.  
Total power saving : 2240 MWh/yr.

Impact of Implementation :

Fuel gas saving resulted in 672 MT per year fuel saving.  
Financial Savings : Rs. 1.33 Crore per year

**7. Scheme : Provision of service water from new raw water plant for running the chlorinator in old raw water plant.**

Background :

Old raw water chlorinator was running from PR service water. The minimum pressure required at inlet of chlorinator is 4.0 kg/cm<sup>2</sup> for its functioning.

The PREP, PXPTA & PR service water headers are interconnected. Normally two service water pumps were running at new raw water plant and one service water pump was in operation at Old raw water plant. The service water pump at Old raw water plant was required only for running the chlorinator. The service water requirement of PR was being met by the new service water pumps on account of interconnection of the service water headers of PR, PREP and PX PTA.

Observation :

It was observed that provision for water supply to the chlorinator from PREP service water header having pressure of 8 Kg/cm<sup>2</sup> will facilitate the stopping of old service water pump. Auto start facility is available in new service water pumps and hence any drop in pressure of service water is being taken care of by starting of standby pump in auto.

Technical / Financial Analysis :

With the stopping of old service water pump, power saved : 75 KWH.  
Total power saving = 441 MW/Yr

Impact of Implementation :

Power optimization resulted in 132 MT per year fuel saving.  
Financial Savings : Rs. 26 lakhs per year.

**8. Scheme : Supply of FD fan discharge air to ID outlet gate damper sealing in Boiler no.1 & 3.**

Background :

The Guillotine gates at the inlet & outlet of the ID fans in Boiler no. 1,2&3 are provided for the Gas/ Air isolation, safety and shutdown purposes. One of these two outlet gates of ID fan is provided one air blower for supplying seal air to ensure proper sealing.

Observation :

It is observed that air to be supplied from FD fan discharge for sealing purposes and the blowers are to be removed. This hot air will also reduce the chances of corrosion inside the duct. The temperature of hot air is 55-60 deg C.



Captive Power Plant

Technical / Financial Analysis :

The savings in power consumption besides the improved life of ID fan ducts after stopping the Guillotine damper blower in Boiler-1 & 3 = 4.4 KWH  
Total power saving : 36 MW/year

Impact of Implementation :

Power optimization resulted in 110 MT per year fuel saving.  
Financial Savings : Rs. 2.0 Lac per year

## **9. Scheme : Stoppage of HRSG-1 augmenting fan**

### Background :

Presently three nos. of fans (Scanner air, Augmenting air, & SB seal air fan) are in service in HRSG. The Augmenting air fan is supplying air to pilot oil firing burners' ignitors of HRSG and main oil burners as supporting air, while the SB seal air fan is supplying air for the sealing of soot blowers, the scanner air fan supplies air for the cooling & sealing of scanners.

### Observation :

It was observed that with the interconnection of the SB seal air fan & Augmenting air fan discharge header for LHS and Scanner air fan discharge header for RHS and close all the dampers of air supply to main burners when there is no supplementary firing and stop the Augmenting air fan, the air requirement will be fulfilled by SB seal air fan and Scanner air fan.

### Technical / Financial Analysis :

Power saving by stopping the augmenting air fan = 57.0 KWH

Total power saving : 456 MWh/year

### Impact of Implementation :

Power optimization resulted in 137 MT per year fuel saving.

Financial Savings : Rs. 27 lakhs per year

## **10. Scheme : Running of 2 nos. of turbo Boiler Feed Pumps in stead of motor driven pumps**

### Background :

2 no. Boiler Feed Pumps are run for Utility boilers and 3 nos. Boiler Feed Pumps for HRSG. Earlier all were motor driven.

### Observation :

2 nos. of motor driven pumps were switching over to steam driven and thus resulted in saving of power consumption.

### Technical / Financial Analysis :

Power saving by running of turbo BFPs instead of power driven pumps = 1005 KWH

Total power saving : 8040 MWh/year

### Impact of Implementation :

Power optimization resulted in 2412 MT per year fuel saving.

Financial Savings : Rs. 4.78 Crore per year

## V) Energy Conservation Plans and Targets

Panipat refinery is committed to achieve international standards of excellence in energy consumption. The Refinery has following major plans for reduction of Energy Consumption :

Energy conservation measures (planned)	Anticipated savings in Energy		Approx. Investment (Rs. Lakhs)	Project commencement & completion year
	Energy value (MT Fuel/Yr)	Rs. Lakhs/ Yr		
Enhancing capacity of WHB in SSRU (SRU/ SSRU segregation job)	2860	956	100	2008-09
Interconnection of PX PTA LP steam header to PREP SRU LP header	1540	515	10	2008-09
Low cost RFCCU revamp - Additional steam by Heat Recovery from bottom stream	2500	836	9021 *	2008-09
Secondary seal in floating roof tanks of MS & Naphtha	190	64	142	2008-09
Optimisation in cooling tower operation by stopping three nos. cooling tower pumps each in PR, PREP and CPP.	3020	1010	0	2008-09
Installation of installation of Variable frequency Drives in CDU-2 Crude Feed Pumps	1210	405	500	2009-10
Flare gas recovery in PR+PX and PREP	5800	1940	2800	2009-10
Provision of Plug Valves/ Zero Leak Slab Gate Valves for HSD Tanks Manifolds	500	167	400	2009-10
Secondary seal in floating roof tanks of crude oil	115	38	130	2009-10
Replacement of gas AC compressor with Vapour absorbed Machine	870	291	484	2009-10
<b>Total</b>	<b>18605</b>	<b>6222</b>	<b>13587</b>	

\* total project cost including Encon.

## VI) ENVIRONMENT & SAFETY

### • ENVIRONMENT MANAGEMENT

Panipat Refinery's Environment Management System is accredited with ISO-14001 since 2001. Panipat Refinery bagged the Golden Peacock Award in 2000 and also in 2003 for Environment Management initiatives from the World Environment Foundation. Panipat Refinery is also maintaining zero discharge of treated effluent since inception. Extensive efforts have gone in for these distinct achievements which comprise:



### 1. Measures Taken At Design Stage

- Provision of Tall Stacks (100 m and above) for better dispersion of pollutants
- Desulphurization of Fuel Gas
- Provision of 100 % Stand by Sulphur Recovery Unit with guaranteed 99 % recovery
- Provision of CO Boiler in RFCCU Unit
- Low Sulphur Fuel Oil use in Furnaces
- Provision of on line continuous Sulphur di oxide analyzers in major stacks of refinery.
- Establishment and commissioning of 10 continuous Ambient Air Monitoring Stations to monitor Ground level SO<sub>2</sub> concentrations.
- State of art Effluent Treatment Plant with Physical , Chemical & Biological Treatment facilities
- Recycling, Reusing resulting zero effluent discharges refinery.

## 2. Actions Taken After Commissioning of the Refinery

- **Zero Discharge of Treated Effluent:** - To ensure zero discharge, it became imperative to reuse / recycle the treated effluent in our own refinery system right from the commissioning of refinery. Schemes were implemented and the reuse / recycle system further strengthened in the following areas :-

1. Cooling tower water Make-up
2. Fire Water Make-up
3. Irrigation of Green Belt developed and maintained by the Refinery.
4. Treated Effluent reuse for solution preparation in Wastewater Treatment Plant.
5. R.O. plant water after treatment of ETP effluent



- **Use of Storm Water in Green Belt & Firewater network :** Rain water is harvested in the refinery and collected in storm water pond. This storm water is used for the irrigation of Green belt and make-up to fire water network
- **Hydrogen peroxide Treatment of Process Effluent:** Traditionally Ferrous Sulphate Treatment was used for sulfide treatment of Process Effluent. However, this resulted in generation of chemical sludge, which was difficult to dispose. Panipat Refinery introduced hydrogen per oxide treatment of sulfides, which has eliminated chemical sludge generation.
- **Bio-remediation of oily sludge :** Oil content of Oily sludge is degraded with the oilyvorous bacteria developed by IOCL R&D center and The Energy Research Institute. This process of bio-remediation is used in the refinery to treat the oily sludge generated from tank cleaning and waste water treatment.

## (B) SAFETY & OCCUPATIONAL HEALTH MANAGEMENT

- **Panipat Refinery is the first refinery in the country to get OHSAS-18001** for Occupational Health & Safety Management System.
- **Panipat Refinery is the first industrial unit in India to be certified at level 7** in the base audit itself of ISRS( International Safety Rating System) which is a unique achievement of Panipat Refinery within a short span of operation.
- Refinery accredited **International Safety Rating System (ISRS) Level 9** by M/s DNV in 2004.

- Panipat Refinery's Occupational Health and Safety Management System is certified at level 5 star ( the highest level under 5 star audit program) and is also awarded the Sword of Honour by British Safety Council, United Kingdom . **Panipat Refinery is the first industrial unit in India to achieve this distinction in the first audit itself.**
- **Occupational Health and safety Management system** re-certified for 3 years as per OHSAS – 18001 by M/S DNV in May'2003.
- The three certificates for ISO-9001, ISO-14001 & OHSAS-18001 revalidated after two surveillance audits in Dec'2006 and July 2007 conducted by M/s DNV.
- National Safety Council conducted a safety awareness survey at Panipat Refinery in Jan'2002. **Safety awareness level was found to be the highest amongst all IOC refineries.**
- Refinery received **Golden Safety Award** from National Safety Council, in 2007 for efforts in playing leadership role in guiding the contractors and motivating the contractors to improve safety at the PTA project site.
- **Yogyata Param Patra** instituted by National safety council for the safety performance of the year 2002.
- Refinery received **A.V. Ogale running shield for safety and fire protection** for 2006-07 as joint winner with Mathura refinery.
- Panipat Refinery bagged **Haryana State Safety Award** for year 2006 for lowest accident frequency rate & longest accident free period among chemical (large scale) factories.

## **VI AWARDS / ACCREDIATIONS :**

Panipat Refinery bagged the following awards in the recent past :

### **A) Energy Conservation Awards**

1. Panipat Refinery has won **1st position in Jawaharlal Nehru Centenary award: 2001-02** by Centre for High Technology for best improvement in energy consumption over past best performance as well as 2nd position in Jawaharlal Nehru Centenary award : 2001-02 by for best performance in energy consumption.
2. PR also won **2 nd prize in Group-I - Jawaharlal Nehru Centenary awards for 2002-03, 2003-04, 2004-05 AND 2005-06**, instituted by Centre for High Technology, Ministry Of Petroleum & Natural Gas for annual performance in the area of Energy consumption measured in terms of MBTU/ BBL/ NRGF.
3. PR received **first prize-“National Energy Conservation Award”** (Refineries Sector) from Ministry of Power, **consecutively for two years – 2002 and 2003.**
4. PR was recipient of PCRA's award for **Exemplary Work in Energy Conservation – 2003, 2004 and 2005.**
5. PR won the **first prize in furnace/boiler efficiency** (category -2 : total heat duty more than 400 mmkcal/hr), in Furnace / Boiler Efficiency survey conducted **by Centre For High Technology, Ministry Of Petroleum & NG** during Oil & Gas Conservation Fortnight-Jan'2004.
6. PR won the **third prize in steam leaks survey** conducted **by Centre For High Technology, Ministry Of Petroleum & NG** during Oil & Gas Conservation Fortnight-Jan'2007.

7. Refinery received '**National award for excellence in Energy Management 2004**' as an "Energy Efficient Unit", from **Confederation of Indian Industry**.
8. Panipat Refinery has been awarded the **second prize for excellence in the implementation of Energy conservation measures under State level Industrial Sector-HT** category during the year 2006-07 by Department of Renewable energy, Government of Haryana. Under this award, a check of Rs 50000 has also been received.
9. PR has won **Anil Raj Trophy** for best improvement in Energy Consumption (amongst IOC refineries), **consecutively for three years – 2000-01, 2001-02 & 2002-03**.

#### **B) Environment & Safety Awards**

1. Won **Golden Peacock Environment Management Award –2003** from the World Environment Foundation.
2. Won **Greentech Safety Silver Award 2002-03** in June'03.
3. Declared Runners Up for **National Safety Award-2003** by Ministry of Labour, Govt. Of India under Scheme-I (Lowest Average Frequency Rate) & Scheme-II (Longest Accident Free Period)
4. Received **National Safety Award** for outstanding performance in industrial safety **during year 2005** for achieving "accident Free Year".

#### **C) Others :**

1. Commendation certificate for **Rajiv Gandhi National Quality award-2003** for quality management system in industry. Also won the prestigious **Rajiv Gandhi National Award for the Year 2005** in the category of Large Scale Manufacturing Organisation at National level
2. **NPMP award** for excellence in project management of SSRU project.
3. **Shram Shree award** by Hon'ble Prime Minister to one of our employees for exemplary job carried out in RFCC unit avoiding shutdown.
4. **NABL Accreditation** of Quality Control laboratory was obtained in May'03 as per new system ISO/IEC -17025. NABL accreditation has been continued for the year 2005 & 2006 after surveillance audit by NABL.
5. **CII-Exim Bank award for Business Excellence 2004** - Commendation Certificate received for Strong Commitment to Excel.
6. **Rajbhasha Shield - 2003-04** - Town Official Language Implementation Committee (TOLIC), Panipat Refinery declared first position by Ministry of Home Affairs, for commendable work for propagation of Official language.
7. Refinery has received **Rajbhasha Shield Puraskar (1st Prize) for the year 2006-07** also from Official Language Deptt., Ministry of Home Affairs for commendable work in Hindi implementation in Town Official Language Implementation Committee (TOLIC).
8. **Gold certificate** under the category of Process Industries, under **India Manufacturing Excellence Award-2005**.
9. **Second Prize in the national Kaizen conference** held at Kolkata on 18-19th Oct'05, under the auspices of TPM Club India. With this, Indian Oil has become the **first public sector company to bag the Kaizen award in any TPM competition** at national level.
10. Panipat Refinery was among the **top five winning companies at National Kaizen Conference** held under the auspices of TPM Club India, at New Delhi on 09-10<sup>th</sup> Oct'07.

This is the second time that **an Indian Oil refinery or a PSU has won the Kaizen award at a national level competition.**

11. **Sahstrabdi Rajbhasha Shield Samman** awarded in 2007 by Rashtriya Hindi Academy, Kolkata for popularizing Official Language in day-to-day official work.