

INFORMATION REGARDING INDICATIVE PROCUREMENT OF MACHINERY/COMPONENTS/SPARE PARTS/CATALYSTS IN THE NEXT FIVE YEARS BY CHENNAI PETROLEUM CORPORATION LIMITED

NAME OF THE CPSE: CHENNAI PETROLEUM CORPORATION LIMITED, MANALI

(A) Running Maintenance, Refinery Turnarounds and Tank Maintenance

Sl.No.	Name of Machinery / Component	Quantity of the machinery / Components likely to be procured in next 5 years.					Estimated value of these procurements in Next 5 years (INR Cr.)				
		2022-23	2023-24	2024-25	2025-26	2026-27	2022-23	2023-24	2024-25	2025-26	2026-27
1	Additional DI card for pump run indication	1					0.20				
2	9K501B VMS replacement			1					0.30		
3	DCS Operator Console Shifting	1					5				
4	FCCU PLC up gradation	1						0.40			
5	FCCU DCS Controller Upgrade	1						1.50			
6	CDU DCS Controller & IO Card Upgrade			1					1.00		
7	WAX DCS Controller & IO Card Upgrade			1					0.75		
8	Yokogawa Ref-3 DCS Controller Upgrade					4					4
9	FCCU Thermowell replacement	2						0.50			
10	FCCU slide valve spares	3						1.00			
11	FCCU slide valve controller Replacement	3						1.50			
12	WGC-1 MMS replacement	1						0.50			
13	RESID SRU - DCS Front end upgradation			1					1.50		
14	RESID DCU -DCS Front end upgradation			1					1.50		
15	Resid DCU -Other systems Front end upgradation			1					1.00		
16	Coker crane spares	3	10	10	10	10	0.20	0.30	0.30	0.30	0.50
17	Coke cutting - control system spares	2	2	2	2	2	0.10	0.10	0.10	0.10	0.50
18	EURO-IV PLC UPGRADATION	1	1			1	0.50	0.50			0.50
19	SPECIAL CRITICAL VALVES IN CATALYST TRANSFER,DUMP VALVE ETC		2	2	1			1.50	1.50	0.75	
20	OHCU Angle valve spares	6				6		1.50			2.00
21	RLNG skid valve spares								0.40		
22	Ref-III DCS system upgradation				1					2.00	
23	CPP/COGEN PLC UPGRADATION	2	3				4.00	5.00			
24	CPP/COGEN DCS UPGRADATION	1	1				3.00	1.00			
25	GT M&I SPARES-Instrumentation	50	50	50	50	50	1.00	1.00	1.00	1.00	1.00
26	Mark VI system spares	1					0.50				0.50
27	Mark VI system Upgrade				1	1				2.00	2.00
28	OPH DCS controller upgradation				1					2.00	
29	DM plant PLC	1					0.60				
30	GAS DETECTOR	50	50	50	50	50	0.50	0.50	0.50	0.50	0.50
31	STACK ANALYZERS & SPARES	2				10	0.90				1.5

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		2022-23	2023-24	2024-25	2025-26	2026-27	2022-23	2023-24	2024-25	2025-26	2026-27
32	AAQMS ANALYZERS & SPARES					4			0.50		0.50
33	PROCESS GAS ANALYZER & SPARES	5	5	3	3	3	0.50	0.25	0.25	0.50	0.50
34	ENCON ANALYZERS	5	5	5	5	4	0.25	0.25	0.25	0.25	0.25
35	Smoke detectors	10	10	15	15	15	0.20	0.20	0.20	0.20	0.20
36	Manual call points	10	10	15	15	15	0.20	0.20	0.20	0.20	0.20
37	PERSONAL GAS DETECTOR	20	20	20	20	15	0.30	0.30	0.30	0.30	0.30
38	ETP PLC upgradation		1					0.30			
39	CUSTODY MASS FLOWMETER FOR IOCL PLT lines	1					1.50				
40	Procurement of Plant CCTV Camera	22	40	40			0.75	1.00	1.00		
41	SURVEILLANCE CCTV CAMERAS	62	120				6.00	5.00			
42	RADAR FOR OMS TANKS	25	85	20	10	10	2.00	6.00	2.00	0.50	0.50
43	PSA VALVES AND SPARES	20	20	20	20	30	0.50	0.50	0.50	0.50	1.50
44	AIR COMPRESSOR CONTROLLER SPARES/ REPLACEMENT	2	10		10		0.30	0.30		0.10	
45	VIBRATION MONITORING SYSTEM SPARES	2	5	2	5	5	0.50	0.50	0.15	0.50	0.50
46	TRANSMITTERS	50	50	50	50	150	0.25	0.50	0.50	0.50	1.50
47	Ignitors and flame scanners		2		2			0.15		0.15	
48	PROCESS MASS FLOWMETERS						0.60				
49	VALVES & spares	10	10	10	10	15	0.20	0.30	0.30	0.30	0.50
50	CONSUMABLES SUCH AS PRESSURE GAUGES, FITTINGS	200	200	200	200	200	0.15	0.15	0.15	0.15	0.20
51	SOLENOID VALVES	10	50	30	10	75	0.05	0.25	0.15	0.05	0.50
52	REDUNDANT SOV	4	4	4	4		0.10	0.10	0.10	0.10	
53	CABLES	100km	50km	10km	5km	10km	8.00	4.00	0.50	0.25	0.50
54	Barrier power supply replacement	40	40	10	10	80	0.25	0.25	0.05	0.05	0.50
55	Coke cutting -DCV & Pump spares	2			1	1				1.00	1.00
56	Gas Turbines - 5 Fr5 Machines all GTs	3 CI & 1MI	2 CI & 2 Ext CI BI & 1MI	2 CI & 2 Ext CI BI	2 CI & 1 MI	1CI & 1 Ext CIBI & 2 MI	11.50	11.55	1.10	12.65	24.60
57		280 Items	280 Items	101 Items	280 Items	308 Items					
58	Steam Turbine O/H	1	3	3	1	1	0.50	1.50	1.00	0.25	0.25
59	Super Critical/Critical Compressors-Centrifugal: Spares	1	4	4	1	2	0.25	2.00	1.50	1.00	2.00
60	Critical Compressors-Reciprocating Spares	4	4	6	4	6	1.75	0.50	1.50	1.00	2.00
61	Critical Compressors-Rotary Spares	3	6	2		3	2.50	1.50	0.50		1.00
62	Dry Gas Seals refurbishment	2	2				3.00	1.00			

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		2022-23	2023-24	2024-25	2025-26	2026-27	2022-23	2023-24	2024-25	2025-26	2026-27
84	Replacement of 4TR Tower ACs which are around 5 years or more older with Ductable Split 5.5TR Ductable Split AC alongwith provision of reserve/standby unit for better reliability and cooling purpose at critical locations like UPS Room, VFD Room, FPR Room	10					0.20				
85	Procurement of test bed		1					0.20			
86	LT PCC breaker retrofiting		28					1.35			
87	Replacement of PMCC		1		9			0.30		3.20	
88	Heat tracing MCC panel replacement -		2	2				0.20	0.22		
89	Annunciator panel -DHDS		1					0.15			
90	PCC replacement			1					1.20		
91	DHDS Transformer Duct replacement -TR-51,52,53,54			2	2				0.20	0.20	
92	Numerical relays procurement					100					5.00
93	GE breaker and L&T breaker spares					50					0.25
94	DCU Coke cutting tool	1 Set	1-Set	1 Set	1 Set	1 Set	1.60	1.76	1.94	2.12	2.33
95	DCU Cutting water hose	1 No			1 No		0.45			0.54	
96	GT 4 Air intake filters		1 Set	1 Set	1 Set	1 Set		0.51	0.56	0.61	0.67
97	GT 4 Fuel filters	1 Set	1 Set	1 Set	1 Set	1 Set	0.17	0.18	0.20	0.22	0.24
98	OPH Air Compressor Coolers(Lube oil & Intercoolers)	1 Set	1 Set			1 Set	0.80	0.88			1.05
99	LEB Air Compressor Coolers(Lube oil & Intercoolers)	1 Set	1 Set			1 Set	0.80	0.88			1.05
100	Soft Spares for Coke Drum Valves & Gear Box	8	8	8	8	8	0.30	0.47	0.51	0.57	0.63
101	86F01A Radiant tube support	3	4	4	4	4	0.76	1.02	1.12	1.23	1.35
102	Hot Tapping Machine	1				1	1.60				2.34
103	Hot Tapping Machine cutter & spares	1 set			1 set		0.11			0.13	
104	Field Equipments	4	4	4	4	4	0.30	0.47	0.51	0.57	0.63
105	MS Plates IS 2062-2011 E250 GR.B0/BR, Length: 6300mm, Width: 2000mm (Thickness in mm: 3, 5, 6, 8, 10, 12, 14, 25, 30 & 32)	1260MT	1260MT	1260MT	1260MT	1260MT	6.29	6.59	6.89	7.19	7.49
106	Pipes of Sizes varying between 1/2" & 32" (OD)	21041 Metre	21042 Metre	21043 Metre	21044 Metre	21045 Metre	10.34	10.84	11.33	11.82	12.31
107	Structurals like Angle, Channel, Beam, Flat & Rods, etc.	138 MT	139 MT	140 MT	141 MT	142 MT	0.63	0.66	0.69	0.72	0.75

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		2022-23	2023-24	2024-25	2025-26	2026-27	2022-23	2023-24	2024-25	2025-26	2026-27
63	ID/FD FAN Spares	3	3	3	3	2	0.50	1.00	0.50	0.50	0.25
64	Mechanical Seal Components	5000	5000	5000	5000	5000	10.00	10.50	11.03	11.58	12.16
65	Pump Components	250	250	250	250	250	5	5.25	5.51	5.79	6.08
66	Ref-1 Pumps Procurement	2					1				
67	Relay panel retrofit	4					1.20				
68	Battery charger	1	4	2		1	0.26	0.40	0.20		0.20
69	Battery bank replacement	2				5	0.50				1.60
70	Sapre Motor Procurement	9	2	3			1.20	0.60	0.85		
71	UPS replacement	3			1	2	0.67			0.50	1.00
72	LEB LT breaker retrofitting -13 Nos.	13					0.55				
73	Excitation panel	1					0.30				
74	Replacement of Ref-III Plant Communication system	2	2				1.00	1.50			
75	Replacement of MM440 Siemens drive for 207 Finfan Motors	9					0.10				
76	Heater panel spares	1					0.50				
77	PCC spares	4					0.25				
78	Plant-76 FD fan-140 KW motor VFD upgradation (800 to 880)	1					0.20				
79	HT breaker retrofit -Phase-II,III (Total-34-Phase-I - 5 no's -alreday PO issued)	15	14				0.40	0.45			
80	Dry type lighting transformer -LEB, DHDS ELDB -75 KVA	2			40		0.20			2.50	
81	LEB MCC Feeders Retrofit (15no's)	15					0.40				
82	Replacement of Old Window & Split ACs which are older than 5 years and also to comply environment statutory compliance(R22 to R32)	175	120	65	100	60	1.30	1.00	0.50	0.60	0.50
83	HVAC plant equipment like Package AC units, AHUs, Cooling water&Chill water pumps, Cooling towers, Chill water & cooling water pipe lines and modifications & replacement and providing Stand by plant where it is not available.	15		15	30	30	2.50		2.50	5.15	5.30

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		2022-23	2023-24	2024-25	2025-26	2026-27	2022-23	2023-24	2024-25	2025-26	2026-27
108	Fittings (Elbows, flanges, reducers, couplings, valves) size from 1/2" to 42" and rating from 150# to 800# all schedules and Gratings	126864 Each	126864 Each	126864 Each	126864 Each	126864 Each	6.84	7.16	7.49	7.81	8.14
109	Heat Exchangers	8		15	10		2.50		2.00	1.50	
110	Columns / Vessels	3		10	10		0.50		2.00	2.00	
111	Spare Parts	33		50	30		1.00		5.00	3.00	
112	Exchanger tubes	22 bundle	25 bundle	27 bundle	26 bundle	12 bundle	1.30	1.50	1.50	1.50	1
113	DSS tube bundle assembly	12	12	15	10	5	6.91	10.00	12.00	8.00	3.00
114	Exchanger tube bundle assembly	16	12	15	10	5	10.44	8.00	10.00	6.00	2.00
115	Reformer tubes	60			30		10.51			5.20	
116	Burner Spares	25	25	25	25	25	1.63	2.00	2.00	2.00	2.00
117	Fin-Fan coolers	11	5	5	5	5	47.30	5.00	5.00	5.00	5.00
118	Breeck lock exchangers	2		6			10.08		30.00		
119	Columns / Vessels	9	11	9	8	6	6.34	8.00	4.00	3.00	2.00
120	Bellows	3					1.64				
121	VALVES & spares	7	25	25	25	25	11.90	2.00	2.00	2.00	2.00
122	Cyclones	6					8.10				
123	Bed packings	5	5	5	5	5	5.66	2.00	2.00	2.00	2.00
124	MS Plates IS 2062-2011 E250 GR.B0/BR, Length: 6300mm, Width: 2000mm (Thickness in mm: 3, 5, 6, 8, 10, 12, 14, 25, 30 & 32)	1260MT	1260MT	1260MT	1260MT		6.59	6.89	7.19	7.49	
125	Pipes of Sizes varying between 1/2" & 32" (OD)	21042 Metre	21043 Metre	21044 Metre	21045 Metre		10.84	11.33	11.82	12.31	
126	Structurals like Angle, Channel, Beam, Flat & Rods, etc.	139 MT	140 MT	141 MT	142 MT		0.66	0.69	0.72	0.75	
127	Fittings (Elbows, flanges, reducers, couplings, valves) size from 1/2" to 42" and rating from 150# to 800# all schedules and Gratings	126864 Each	126864 Each	126864 Each	126864 Each		7.16	7.49	7.81	8.14	
128	Mini Loader			1					0.20		
129	Suction cum jetting machine			1					0.58		
130	Refractory & Ceramic Fibre Materials		30 MT	120 MT	100 MT	30 MT		2.00	4.20	4.41	2.32

(B) Chemicals & Catalysts											
Sl.No.	Name of Chemical/Catalyst	Quantity of the Chemical/Catalyst likely to be procured in next 5 years.					Estimated value of these procurements in Next 5 years (INR Cr.)				
		2022-23	2023-24	2024-25	2025-26	2026-27	2022-23	2023-24	2024-25	2025-26	2026-27
Regular Chemicals											
1	FCC Catalyst, T	416	416	416	416	416	9.84	10.33	10.85	11.39	11.96
2	MEK, T	768	768	768	768	768	8.6	9.03	9.48	9.96	10.45
3	Toluene, T	480	480	480	480	480	8.62	9.05	9.5	9.98	10.48
4	Lubricity Additive, T	1000	1000	1000	1000	1000	8.4	8.82	9.26	9.72	10.21
5	Caustic, T	1460	1460	1460	1460	1460	4.01	4.21	4.42	4.64	4.87
6	NMP, T	282	282	282	282	282	15.54	16.32	17.13	17.99	18.89
7	MDEA, T	264	264	264	264	264	3.33	3.5	3.67	3.85	4.05
8	MFA, T	110	110	110	110	110	1.89	1.98	2.08	2.19	2.3
9	MIBK, T	93.5	93.5	93.5	93.5	93.5	1.55	1.63	1.71	1.79	1.88
10	HCl, T	4920	4920	4920	4920	4920	1.55	1.63	1.71	1.79	1.88
11	Dewaxing Aid, T	36	36	36	36	36	1.23	1.29	1.36	1.42	1.5
12	CO promoter, T	2	2	2	2	2	0.7	0.74	0.77	0.81	0.85
13	Others ^						24	25.2	26.46	27.78	29.17
14	ETP/TTP Chemicals						6.31	6.63	6.96	7.3	7.67
15	Lubricants and consumables, Lab and R&D						7.5	7.88	8.27	8.68	9.12
16	Desal Chemicals						2.58	2.71	2.84	2.99	3.14
17	Other Chemicals						30.26	31.77	33.36	35.03	36.78
One-time chemicals											
1	OHCU catalyst, T	30	-	-	335	-	6.2	0	0	68.5	-
2	DHDS catalyst, Ton	418	-	-	418	-	71	0	0	74.55	-
3	DHDS-H2 catalysts*, T	-	-	-	-	13.5	0	0	0	0	1
4	ISOM catalyst, T	-	17	-	-	-	0	20.9	0	0	0
5	CCR Catalyst, T	2.3	-	2.3	-	2.3	2.7	0	2.7	0	2.7
6	DHDT catalyst, T	-	400	-	-	400	0	61	0	0	67.1
7	HGU Catalysts (Ref-III), T	-	120	-	-	-	0	20	0	0	0
8	Membranes (Desal skids) - No. of membranes	1148	1148	-	1148	1148	6.59	6.59	0	6.59	6.59

Note:

1. FCC: Fluidized Catalytic Cracker; MEK: Methyl Ethyl Ketone; NMP: N-Methyl Pyrrolidone; MDEA: Methyl Diethanol Amine, MFA: Multi-Functional Additive; MIBK: Methyl Iso-Butyl Ketone.
2. Other chemicals include Corrosion Inhibitor, Liquid Nitrogen, Morpholine, Demulsifier, Ammonia, Antioxidant, Antistatic additive, orange dye, etc.
3. * HT Shift/ CoMox-II and ZnO reactor catalysts
4. ^ SRU catalysts, inert balls, NHT cat, merox (pre-impregnated charcoal), chloride guard, Sulphur guard, resins, etc

(C) Projects Requirement

Sl.No.	Name of Machinery / Component	Quantity of the machinery / Components likely to be procured in next 5 years.					Estimated value of these procurements in Next 5 years (INR Cr.)				
		2022-23	2023-24	2024-25	2025-26	2026-27	2022-23	2023-24	2024-25	2025-26	2026-27
1	Pressure Vessels & Reactors	3	20	10	2		0.7	12.7	15.9	15	
2	Heat Exchangers		17	14				4.4	3.9		
3	Aircoolers		5	11	8			6.8	13.7	10	
4	Pumps		10	25	15			1.6	5.8	2.9	
5	Fans/Blowers/ Compressors	7		4			0.9		33.0		
6	Furnace			2					35.0		
7	Bulk Piping components	1 lot	1 lot	1 lot	1 lot	1 lot	20.0	25.0	37.5	25	25.0
8	Bulk Electrical components	1 lot	1 lot	1 lot	1 lot	1 lot	5.0	7.0	26.8	10	10.0
9	Bulk Instrumentation components	1 lot	1 lot	1 lot	1 lot	1 lot	5.0	7.0	26.8	10	10
10*	License/Know How/BDEP Fees						0.4	68			

Note: *BDEP Fees considered for Divided Wall column package and LOBS .
Projection considered for Divided wall column in ISOM unit, VOC and LOBS

Shiv

C. Chandra 29/7/2022

सी. चन्द्रा / C. CHANDRA
महाप्रबंधक (सामग्री व ठेका) / General Manager (Materials & Contracts)
सीपीसीएल जीईएम प्राथमिक उपयोगकर्ता / CPCL GeM Primary User
सी पी सी एल / CPCL, चेन्नै / Chennai-68

(D) Business Development Requirement

Sl.No.	Name of Catalyst/Equipment	Quantity of the machinery / Catalyst likely to be procured in next 5 years.					Estimated value of these procurements in Next 5 years (INR Cr.)				
		2022-23	2023-24	2024-25	2025-26	2026-27	2022-23	2023-24	2024-25	2025-26	2026-27
1	Catalyst for CDWU										122.58
2	Benzene Hydrogenation catalyst - Isom DWC project							1.05			
3	Support balls - Isom DWC project							0.03			
4	Equipment for CDWU										7.65

J. S. S. S.

C. Chandra

सी. चन्द्रा / C. CHANDRA

बहालबंदक (सामग्री व टेका) / General Manager (Materials & Contracts)
सीपीसीएल जीईएम प्राथमिक उपयोगकर्ता / CPCL GeM Primary User
सी पी सी एल / CPCL, चेन्नै / Chennai-68