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# Additional Information

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for Stakeholder

## Financial Performance Trend

Sl. No.	Particulars	Units	2021-22	2020-21	2019-20	2018-19	2017-18
	Order Received	₹ in crore	23693	13472	23547	23859	40932
	Orders Outstanding	₹ in crore	102542	102090	108443	108680	118000
<b>A.</b>	<b>Operating Results</b>						
<b>I</b>	<b>Total Income</b>						
	Revenue	₹ in crore	20153	16296	20491	29423	27850
	Other operational income	₹ in crore	1058	1012	968	1000	963
	<b>Revenue from operations (a)</b>	₹ in crore	21211	17308	21459	30423	28813
	Other income (b)	₹ in crore	368	370	581	678	694
	<b>Total (I= a+b)</b>	₹ in crore	21579	17678	22040	31101	29507
<b>II</b>	<b>Operating expenses</b>						
	Material consumption, Bought Out items, Erection and engg. expenses	₹ in crore	13990	11071	14727	18837	15407
	Consumables Stores & Spares	₹ in crore	271	289	353	412	386
	Changes in inventories of FG , WIP & scrap	₹ in crore	532	511	(1042)	(991)	736
	Employee benefits expenses	₹ in crore	5517	5372	5427	5502	5911
	Power & Fuel	₹ in crore	415	319	459	497	463
	Other expenses of Mfg, Admn. & S&D in nature	₹ in crore	1355	1480	1970	2263	2059
	Exchange variation (gain) / loss (net)	₹ in crore	(82)	(66)	(435)	(67)	(520)
	Provisions	₹ in crore	(1526)	1467	233	1837	2438
	Depreciation & amortisation expenses	₹ in crore	314	473	503	475	786
	Finance costs	₹ in crore	355	373	507	287	255
	<b>Total (II)</b>	₹ in crore	21142	21290	22702	29053	27922
<b>III</b>	<b>Operating Profit/(loss) (a-II)</b>	₹ in crore	69	(3982)	(1243)	1370	891
<b>IV</b>	<b>Profit / (Loss) before tax (I-II)</b>	₹ in crore	437	(3612)	(662)	2048	1585
	Tax expense (Net)	₹ in crore	27	(894)	811	839	778
<b>V</b>	<b>Profit /(Loss) after tax</b>	₹ in crore	410	(2717)	(1473)	1209	807
	<b>Other Comprehensive Income</b>	₹ in crore	77	20	(274)	(120)	83
<b>VI</b>	<b>Total comprehensive income</b>	₹ in crore	487	(2697)	(1747)	1089	890
	Dividend payout	₹ in crore	139	-	-	696	668
	Dividend distribution tax	₹ in crore	-	-	-	143	136
	EBIT	₹ in crore	792	(3239)	(155)	2335	1840
	EBITDA	₹ in crore	1106	(2765)	348	2810	2626
	<b>Cash Flow:</b>						
	From Operating Activities	₹ in crore	660	560	(2892)	(3856)	991
	From Investing Activities	₹ in crore	(1125)	(43)	1877	1915	964
	From Financing Activities	₹ in crore	(330)	(393)	1622	(32)	(671)

## Financial Performance Trend

Sl. No.	Particulars	Units	2021-22	2020-21	2019-20	2018-19	2017-18
<b>B.</b>	<b>Financial Position (Assets, Equity &amp; Liabilities)</b>						
<b>VII</b>	<b>Assets</b>						
	Property, plant & equipment and intangible assets	₹ in crore	<b>2398</b>	2488	2814	2967	3069
	Capital WIP and intangible assets under development	₹ in crore	<b>431</b>	420	314	235	203
	Non-current investments	₹ in crore	<b>670</b>	670	670	669	691
	Other non current assets	₹ in crore	<b>365</b>	365	321	362	291
	Trade Receivables (Net)	₹ in crore	<b>6229</b>	7213	11641	15796	17303
	Contract Assets (Net)	₹ in crore	<b>26940</b>	24079	23794	22819	18491
	Cash & Bank Balances	₹ in crore	<b>7154</b>	6701	6419	7503	11176
	Inventory	₹ in crore	<b>6560</b>	7191	8905	7797	6025
	Deferred tax assets(Net)	₹ in crore	<b>3530</b>	3660	2756	3497	3605
	Other Current assets	₹ in crore	<b>2432</b>	2913	2601	2784	2911
	<b>Total Assets</b>	₹ in crore	<b>56708</b>	55701	60236	64431	63764
<b>VIII</b>	<b>Equity</b>						
	Equity share capital	₹ in crore	<b>696</b>	696	696	696	734
	Other equity	₹ in crore	<b>26275</b>	25788	28485	30735	31905
	<b>Total Equity</b>	₹ in crore	<b>26971</b>	26484	29181	31432	32640
<b>IX</b>	<b>Liabilities</b>						
	Borrowings	₹ in crore	<b>4745</b>	4834	4933	2432	-
	Trade Payables	₹ in crore	<b>9882</b>	8559	9900	12078	11066
	Contract Liabilities	₹ in crore	<b>6048</b>	6864	6718	6839	7573
	Other Non current liabilities	₹ in crore	<b>269</b>	295	266	225	199
	Non current provisions	₹ in crore	<b>3771</b>	3913	4212	5463	4923
	Other Current liabilities	₹ in crore	<b>1956</b>	1589	1943	3477	3574
	Current provisions	₹ in crore	<b>3067</b>	3164	3082	2486	3790
	<b>Total liabilities</b>	₹ in crore	<b>29737</b>	29217	31055	32999	31124
<b>X</b>	<b>Total Equity &amp; Liabilities (VIII+IX)</b>	₹ in crore	<b>56708</b>	55701	60236	64431	63764
	Equity shares (Face Value of ₹ 2 each)	No. in crore	<b>348</b>	348	348	348	367
	Market Capitalisation as at year end	₹ in crore	<b>17184</b>	16975	7243	26081	29885
	Net worth	₹ in crore	<b>26971</b>	26484	29181	31432	32640
	Net worth (excl. OCI)	₹ in crore	<b>27289</b>	26879	29596	31573	32662
	Capital employed	₹ in crore	<b>23010</b>	22405	26111	27699	28832
<b>XI</b>	<b>Human Resources</b>	No.	<b>30758</b>	32131	33752	35471	37540
	Executives	No.	<b>10280</b>	9742	10075	10400	10943
	Non Executives	No.	<b>20478</b>	22389	23677	25071	26597

## Financial Performance Trend

Sl. No.	Particulars	Units	2021-22	2020-21	2019-20	2018-19	2017-18
<b>XII</b>	<b>Financial Performance Ratios</b>						
1	Return on Net worth	%	<b>1.51</b>	(9.62)	(4.82)	3.76	2.48
2	Return on capital Employed	%	<b>3.44</b>	(14.45)	(0.59)	8.43	6.38
3	EBIDTA margin	%	<b>5.49</b>	(16.97)	1.70	9.55	9.43
4	Operating Profit margin	%	<b>0.33</b>	(23.01)	(5.79)	4.50	3.09
5	Revenue per employee	₹ in lakhs	<b>66</b>	51	61	83	74
6	Revenue per rupee of employee benefit expenses	₹	<b>3.65</b>	3.03	3.78	5.35	4.71
<b>XIII</b>	<b>Balance Sheet Ratios</b>						
1	Current ratio	Ratio	<b>1.30</b>	1.39	1.45	1.67	1.92
2	% liquidation of current year net billing	%	<b>86</b>	82	73	59	56
3	Trade receivable (no. of days)	Days	<b>94</b>	134	175	165	192
4	Inventory (no. of days)	Days	<b>119</b>	161	159	97	79
5	Assets Turnover	Times	<b>0.36</b>	0.29	0.34	0.46	0.44
<b>XIV</b>	<b>Contribution to exchequer</b>	₹ in crore	<b>3053</b>	2948	3999	5732	4682
<b>XV</b>	<b>Per Share data</b>						
1	Earning per share	(₹)	<b>1.18</b>	(7.80)	(4.23)	3.33	2.20
2	Net worth per share	(₹)	<b>77.46</b>	76.06	83.80	90.27	88.90
3	Market Price per share (BSE) as at year end	(₹)	<b>49.35</b>	48.75	20.80	74.90	81.40
4	Market Price to Book Value	Ratio	<b>0.64</b>	0.64	0.25	0.83	0.92
<b>XVI</b>	<b>Segment Revenue</b>						
	Power Segment	₹ in crore	<b>15361</b>	11386	14960	23474	22881
	Industry Segment	₹ in crore	<b>4792</b>	4910	5530	5949	4969
	<b>Total</b>	<b>₹ in crore</b>	<b>20153</b>	16296	20491	29423	27850
	<b>Segment Share</b>						
	Power Segment	%	<b>76</b>	70	73	80	82
	Industry Segment	%	<b>24</b>	30	27	20	18

I Previous year's figures have been regrouped / rearranged, wherever considered necessary.

II Revenue from operations excludes Goods & Service Tax.

III Dividend payout is interim dividend and proposed final dividend for the year.

IV Equity share capital at the end of FY 2018-19 is post buyback in January 2019.

V Bonus shares were issued in 2017-18 in the ratio of 1:2.

### Notes:

1 EBIT = PBT+Finance cost

2 EBITDA = EBIT+Depreciation & Amortisation

3 Capital employed=Net Worth-capital WIP & Intangible Assets under development -Deferred tax

4 Return on Net worth = (PAT/Average Net Worth excld. OCI)\*100

5 Return on capital Employed = EBIT/Capital Employed\*100

6 EBIDTA Margin % = EBIDTA/Revenue \*100

7 Operating Profit Margin = Operating profit/Revenue from operations \*100

8 Current ratio = Current Assets/Current liabilities

9 Trade receivable (no. of days) = Trade receivable \*365/Revenue from operations (incl. GST)

10 Inventory (no. of days) = Inventory \*365/Revenue

11 Assets Turnover = Revenue/Total Assets

## Value Added Statement

(₹ in Crore)

Particulars	2021-22		2020-21	
Revenue (incl GST)	23123		18688	
Other revenues	1426	24549	1383	20071
<b>Less:</b>				
Cost of Material, Erection & Engineering Expenses	14794		11871	
Power & fuel	415		319	
Other Operational Expenses / Income (net)	(253)	14956	2882	15072
<b>Total Value Added</b>		<b>9593</b>		4999
<b>Distribution:</b>				
To employees:				
Employee benefits expenses		5517		5372
To Provider of capital				
Finance Cost	355	355	373	373
To Government:				
Goods & Service Tax	2970		2392	
Income Tax	(77)	2893	16	2408
Retained in business:				
Depreciation & Amortisation	314		473	
Deferred IncomeTax (Assets) / Liabilities	104		(910)	
Transfer to Other Equity - (Loss) / Profit	410	828	(2717)	(3154)
<b>Total</b>		<b>9593</b>		4999

## BHEL's Product Profile

### Thermal Power Plants

- Capability for manufacture and supply of Steam Generators, Steam Turbines, Turbo Generators with auxiliary systems along with regenerative feed cycle upto 1000 MW capacities for fossil-fuel and upto 350 MW for combined-cycle applications
- Air and water cooled Condensers, Condensate Extraction Pumps, Boiler Feed Pumps, Duplex Heaters, Valves and Heat Exchangers meeting above requirement of TG Sets upto 1000 MW
- Energy Efficient Renovation and Modernisation (EE R&M) and Life Extension (LE) of old thermal power plants and Residual Life Assessment (RLA) studies

### Nuclear Power Plants

- Reactor side components like Steam generators, Reactor headers, End shields, special purpose Heat Exchangers, Pressure Vessels, Motors etc. for Nuclear Power plants.
- TG island equipment of PHWRs (Pressurised Heavy Water Reactors), FBRs (Fast Breeder Reactors) and AHWRs (Advanced Heavy Water Reactors) covering Steam Turbine, Turbo Generators, MSRs (Moisture Separator Reheaters), other heat exchangers and pumps including 'EPC' solutions.

### Gas-Based Power Plants

- Gas turbines and matching generators ranging from 26 MW to 299 MW (ISO) rating with following features:
  - Gas turbine based co-generation and combined-cycle systems for industry and utility applications
  - Capability to burn a variety of fuels (both gaseous and liquids) along with mixed firing in different combinations of fuels
  - Low exhaust emission levels upto 15ppm of NO<sub>x</sub> with Dry Low NO<sub>x</sub> (DLN) combustors & noise requirement.

### Hydro Power Plants

- Turnkey Contract with custom-built conventional hydro turbines of Kaplan, Francis and Pelton types with matching generators upto 300 MW
- Pump turbines with matching motor-generators upto 250 MW
- Bulb turbine with matching generators upto 10 MW
- High capacity pumps along with matching motors for Lift Irrigation Schemes (upto 150 MW)
- Mini/Micro and small hydro power plants upto 25 MW unit rating
- Microprocessor based Digital Governing system for all

types of Hydro Power plants

- Renovation, Modernization and uprating of Hydro power plants
- Spherical (rotary) valves, butterfly valves and auxiliaries for hydro stations
- Balance of Plant & System Integration

### Solar Power System

- EPC solutions of Solar PV Power Plants:
  - Grid Interactive systems with & without BESS (Battery Energy Storage System)
  - Standalone systems
  - Roof Top systems
  - Hybrid systems
  - Canal Top Systems
  - Floating Solar power plants
  - Solar PV System feeding to Railway Traction power network
- Solar based water pumping systems

### DG Power Plants

- HSD, LDO, FO, LSHS, natural gas based diesel generator power plants, unit rating of upto 20 MW and voltage upto 11 kV, for emergency, peaking as well as base load operations on turnkey basis

### Desalination And Water Treatment Plants

- Complete Water Management Solutions for Power Plants, Industrial applications and Municipal applications with different treatment technologies:
  - Pre Treatment Plants (PT)
  - Desalination Plants
  - Demineralization Plants (DM)
  - Electro Deionization plants
  - Effluent Treatment Plants (ETP)
  - Sewage Treatment Plants (STP)
  - Zero Liquid Discharge (ZLD) System
  - Cooling water treatment plants
  - Tertiary Treatment Plants
  - Membrane Based Treatment Systems like Ultrafiltration for Pre-treatment (UF), Reverse Osmosis (RO) & Electro Deionisation (EDI).
  - Electro-dialysis plants for Drinking water.

### Systems And Services

- Power Generation Systems
  - Turnkey power stations/ EPC contracts

- Combined-cycle power plants
- Cogeneration systems
- Captive power plants
- Modernization and renovation of power stations and RLA studies.
- Software packages including simulators for utilities
- Erection, commissioning, support services, spares management and consultancy services for all the above systems
- Railway Track Electrification

## Industrial Systems

- Coal Handling Plant and Ash Handling Plant including Civil & Structural, Mechanical, Electrical works and Automation systems
- Mine Winder systems
- Electrics, Drives, Controls & Automation Systems for Processing & Compacting of Raw Materials, Iron Making, Primary & Secondary Steel Making, Casters & steel Finishing like Mills & process Lines for both long products & flat products
- Raw Material Handling System including Civil & Structural, Mechanical, Electrical and Automation systems for Steel and other industries
- Electrics & Automation Systems for High Current Rectifiers of Smelters and Processing Mills for Aluminium Plants
- Automated Storage & Retrieval Systems (ASRS)

## Boilers

- Steam generators for utilities, ranging from 30 to 800 MW capacity, using coal, lignite, oil, natural gas or a combination of these fuels; capability to manufacture boilers with supercritical parameters upto 1000 MW unit size
- Fuel Flexible boilers capable of all combination of blending / co-firing diverse qualities of imported/ indigenised coals, blending of lignite, petcoke, etc
- Steam Generators for Nuclear Power Plant
- Steam generators for industrial applications of the following types ranging from 40 to 450 T/Hour capacity, using coal, natural gas, industrial gases, biomass, lignite, oil, Bagasse or a combination thereof
  - Pulverized coal / lignite fired boilers
  - Stoker fired boilers
  - Bubbling fluidized bed combustion (BFBC) boilers
  - Circulating fluidized bed combustion (CFBC) boilers
  - Heat-recovery steam generators (HRSG)
  - Chemical recovery boilers for paper industry, ranging from capacity of 100 to 1000 T/Day of dry solids

- Gravimetric feeder/ Volumetric feeder
- Acoustic Tube leak Detection systems

## Boiler Auxiliaries

- Fans
  - Axial reaction fans of single stage and double stage for clean air application and dust laden hot gases applications upto 200°C, with capacity ranging from 40 to 1300m<sup>3</sup>/s and pressure ranging from 225 to 1,500 mmwc
  - Axial impulse fans for both clean air and flue gas applications upto 200°C, with capacity ranging from 25 to 300 m<sup>3</sup>/s and pressure from 300 to 700 mmwc
  - Single and double-suction radial fans (plate aerofoil bladed) for clean air and dust-laden hot gases applications upto 400°C, with capacity ranging from 4 to 660m<sup>3</sup>/s and pressure ranging from 200 to 3000 mmwc
- Air Preheaters
  - Tubular Air Preheaters for industrial, utility boilers and CFBC boilers
  - Rotary regenerative Air-Preheaters (different types like Bisector, Tri Sector and Quad Sector) for utilities of capacity upto 1000 MW
  - Air PreHeater for boilers with Selective Catalytic Reduction (SCR) for De-NO<sub>x</sub> application
- Pulverizers
  - Bowl mills of slow and medium speed (for both pressurized & suction environment) for coal fired thermal stations with capacity from 10 T /Hr to 120 T/ Hr suitable upto 1000 MW thermal power stations.
  - Ball Tube mills for pulverizing low-grade coal with high ash content from 30 T/ Hr to 110 T/ Hr catering to 110 MW to 500 MW thermal power stations
  - Bowl Mills for Blast Furnace Application with capacity from 15 T /Hr to 120 T/ Hr.
  - Bowl Mills for grinding of Pond Ash, Steel Plant Blast Furnace Slag & Clinker
  - Wet Ball Milling System for grinding of Lime stone for FGD Application with Day Silo and its structure.
- Electrostatic Precipitators (ESP)
- Electrostatic precipitators with outlet emission as low as 17 mg/Nm<sup>3</sup> (efficiency upto 99.97%) for coal fired utility, captive and industrial applications including Bio mass fired boilers, cement plants, steel plants, soda recovery boilers etc
- Bag Filters for utility and industrial applications
- Mechanical Dust Collector for SCR application
- Ammonia Flue Gas Conditioning System
- Guillotine Gates & Dampers



- Guillotine gates with electric/ pneumatic actuator. 100% leak proof with seal air width: 7 m & duct height: 14.5 meters
- Bi-plane dampers with electric/ pneumatic actuator. 100% leak proof with seal air Type -1: width: 7 m & duct height: 14.5, Type -2 : width 12 m & duct height 10.5 m
- Louver dampers (open close/ regulating) with electric/ pneumatic actuator: Type -1: width: 7 m & duct height: 14.5, Type -2 : width 12 m & duct height 10.5 m
- Control dampers (regulating) with electric/ pneumatic actuator Type -1: width: 7 m & duct height: 14.5, Type -2: width 12 m & duct height 10.5 m
- Flue Gas Desulphurization (FGD) systems
  - Wet Limestone & Seawater based FGD systems to Power plants and any other Industrial applications
- Steel Chimney
  - Steel Chimneys for Heat Recovery Steam Generators (HRSG), Industrial Boilers, auxiliary boilers and other flue gas exhaust applications
- Selective Catalytic Reduction (SCR) systems
  - SCR System (Honeycomb & Plate type) with anhydrous Ammonia/ Aqueous Ammonia/ Urea reagent for NOx emission control
- Selective Non- Catalytic Reduction (SNCR) systems
  - Selective Non- Catalytic Reduction (SNCR) systems with Urea & Ammonia handling systems
- Hot reheat and cold reheat Isolating Devices upto 900 mm pipe size class 1500 and steam temp upto 650°C
- High capacity Spring Loaded Safety Valves for set pressure upto 372 kg/cm<sup>2</sup> and temperature upto 718°C,
- Automatic electrically operated pressure relief valves for set pressure upto 316 kg/cm<sup>2</sup> and temperature upto 630°C
- Safety relief valves for applications in power, process and other industries for set pressure upto 421 kg/cm<sup>2</sup> and temperature upto 537° C
- Helical compression springs (Chrome alloy steel and Tungsten alloy steel materials) of wire diameters ranging from 18mm to 60mm for safety valves and safety relief valves.
- Reactive cum absorptive type vent Silencers maximum diameter of 2700 mm.
- Direct Water Level Gauges
- Angle Drain Valves - Single & Multi Stage for Turbine Drain Application
- Severe Service Control Valves for RH & SH Spray Lines
- Quick Closing Non return Valves for Extraction lines and Cold Reheat Non Return valves, upto 850 mm diameter, 158 kg/cm<sup>2</sup> pressure and 540°C temperature
- Butterfly valves upto 2800 NB for water application
- Spring Loaded Bypass valves for HP heater bypass applications
- Knife Edge Gate Valve 1300NB and 1400NB for limestone slurry application, 3.5 bar and 100°C.

## Soot Blowers

- Long retractable soot blowers (LRSB) for travel upto 12.2m
- Rotary soot Blowers for Furnace widths up to 6m
- Furnace temperature probe (FTP) for travel length 10 m
- Long retractable Non-rotating (LRNR) soot blowers with forward blowing for Air heaters
- Ash discharge valve for CFBC boiler application
- Soot blowers with sequential PLC, control panel and integral starter
  - Rack type Long retractable soot blowers
  - Rotary soot blowers
- Wall blowers

## Valves

- High and Low-pressure Turbines Bypass Valves & hydraulic system for utilities and industrial application
- High and medium-pressure Valves, Cast and Forged Steel Valves of Gate, Globe, Non-Return (Swing-Check and Piston Lift-Check) types for steam, oil and gas duties upto 950 mm diameter, maximum pressure class 4500 (791 kg/cm<sup>2</sup>) and 650 °C temperature

## Piping Systems

- Power cycle piping, Constant load Hangers, Variable spring Hangers, Hanger components, Low Pressure piping including circulating water piping for power stations upto 1000 MW capacity including Super Critical sets
- Piping systems for Nuclear Power Stations, Combined Cycle Power Plants & Industrial boilers and process industries
- Prefabricated piping/ duck spools to cater to refinery segment complying with National Association of Corrosion Engineers (NACE) requirements

## Seamless Steel Tubes

- Hot-finished and cold-drawn seamless steel tubes with a range varying from outer diameter of 21 to 133 mm and wall thickness of 2 to 12.5 mm, in carbon steel and low-alloy steels to suit ASTM/ASME and other international specifications.
- Rifled tubes (ribbed) with a range varying from tube outer diameter of 38.1 to 63.5 mm and wall thickness of 5.6mm



to 7.1mm, in carbon steel and low-alloy steels to suit ASME and other international specifications.

- Spiral finned Tubes with a range varying from tube outer diameter of 31.8 to 114.3 mm and wall thickness of 2.4mm to 9.5mm and with fin height of 12.5mm to 21mm and fin density ranges from 40 to 240 fins per metre, in carbon steel and alloy steels to suit ASME standards.

## Steam Turbines

- Steam Turbines upto 1000 MW rating for thermal sets and upto 700MW ratings for Nuclear Power Plants.

## Turbogenerators

- Turbogenerators of higher rating upto 1000 MW for Thermal and Nuclear Power Plants and upto 195 MW for Combined Cycle plant.

## Industrial Sets

- Steam Turbine based Captive Power Plants
  - STG/Boilers/BTG/EPC: Unit rating upto 200 MW
  - Non Reheat upto 120 MW unit rating
  - Reheat upto 200 MW unit rating
  - Single Stage Drive Turbines for Pump and other Industrial Drives
  - Marine Turbines for marine propulsion upto 36MW.
- Gas Turbine based Captive Power Plants GTG/HRS/G/EPC: Fr-5 (26 MW) to Fr-9E (126 MW)

## Castings And Forgings

- Heavy castings and forgings of creep resistant alloy steels, stainless steel and other grades of alloy steels meeting stringent international specifications for components of sub critical, supercritical and Ultra-super critical technology.

### CONDENSER AND HEAT EXCHANGERS

- Surface Condenser:
  - For thermal power plants upto 800 MW
  - For Nuclear power plants
  - 12.5 MW Marine applications
  - Industrial Condensers
  - Condensers for defence application
- Feed Water Heaters (HP Heaters, LP Heaters, Drain Coolers, Duplex Heater, De-Super Heaters, etc.)
  - Thermal : 7 to 500 MW (sub-critical) & 300-800 MW (super critical with single stream)
  - Moisture Separator & Reheater (MSR) and other Feed Water Heaters for Nuclear Power Plants (236 MW, 500 MW & 700 MW Nuclear sets).

- Replacement feed water heaters for Non BHEL sets
- Live Steam Reheater (LSR):
  - 500 MW Fast Breeder Reactor (FBR) Nuclear sets
- Auxiliary Heat Exchangers for Turbo and Hydro Generators :
  - Air Coolers (Frame & Tube Type)
  - Oil Coolers (Shell & Tube Type and Plug in Type)
  - Hydrogen Coolers (Frame & Tube Type)
- Auxiliary Heat Exchangers for Transformers :
  - Oil Coolers (Shell & Tube Type Single Tube or Concentric Double Tube Type) (Frame & Tube Type)
- Auxiliary Heat Exchangers for general application
  - Water - Water Coolers (Shell & Tube Type)
- Gland steam condensers
  - Industrial applications upto 7 MW to 150 MW
  - Thermal Plants upto 500 MW
  - Nuclear Plants upto 700 MW
- Air-cooled heat exchangers for GTG upto Fr-9E, and Compressor applications of all ratings
- Steam jet air ejectors for condensers upto 150 MW
- Deaerators from 7 MW to 800 MW
- Gas coolers for compressor applications
- Oil coolers- STG upto 150 MW, GTG upto Fr-9E
- Generator Air coolers upto 150 MW STG and GTG upto 9 FA
- D2O and Moderator Heat Exchangers for Nuclear primary cycle
- Air cooled Lube oil cooler for refinery application
- Heat exchangers for downstream Oil and Gas application.

## Pumps

- Pumps for various utility power plant applications upto a capacity of 1000 MW:
  - Boiler feed pumps (motor or steam turbine driven) and Boiler feed booster pumps.
  - Condensate extraction pumps including Drip Pumps
  - Circulating water pumps (also known as Cooling water Pumps)
  - Concrete Volute Cooling Water Pumps
  - Pumps for Secondary Side of Nuclear Power Plants

## Compressors

- Multi stage Centrifugal compressors along with Drives (Steam Turbine, Electric Motor and Gas Turbine) and auxiliary system with capacity upto 300000 m<sup>3</sup>/hr for various gases (Air, CO<sub>2</sub>, N<sub>2</sub>, H<sub>2</sub>, NH<sub>3</sub>, Natural Gas, Wet Gas, Propylene etc.) for applications in Refineries, Fertilizers, Petrochemicals, Oil & Gas, Steel, Power & Natural Gas

Transportation sectors and oxidation blowers for FGD applications in power plants.

- Horizontally split type upto 40 bar design pressure
- Vertically split type upto 350 bar design pressure

## Solar Photovoltaics

- Mono/ Multi Crystalline Solar cells
- Mono/ Multi Crystalline PV Modules (upto 330 Wp)
- Power Conditioning Unit (upto 1.25 MW)
- Single phase Power Conditioning Unit for Traction Grid application (0.85 MW)
- Outdoor, Dry type 1 MVA/25kV Single Phase Inverter Transformer
- Power Transformers (15 MVA and above)
- Passive Solar Tracking System
- Space grade solar panels

## Automation And Control Systems

- Automation and Control Systems for
  - Steam Generator/ Boiler Controls including Boiler Protection
  - Steam Turbine Controls
  - Boiler Feed Pump (BFP) Drive Turbine Control
  - Station Control and Instrumentation/ DCS
  - Offsite/Off base controls/ Balance of Plant Controls
    - » Ash Handling Plant (AHP)
    - » Coal Handling Plant(CHP)
    - » Water System for power plant
    - » Mill Reject System (MRS)
    - » Condensate On-Load Tube Cleaning system (COLTCS)
    - » Gas Booster Compressor (GBC)
    - » Condensate Polishing Unit (CPU)
    - » Heating, Ventilation & Air conditioning (HVAC)
    - » Fuel Oil Unloading System (FOUS)
  - Hydro Power Plant Control System
  - Gas Turbine Control System
  - Nuclear Power Plant Primary Cycle Control Centre Instrumentation Package (CCIP)
  - Nuclear Power Plant Turbine & Secondary Cycle control system
  - Power block of solar thermal power plant
  - Industrial Automation
  - Sub-Station Automation (SAS)
  - Non-FST HVDC control panels
  - Electrical Control System (ECS) for Refineries
  - Energy Management System (EMS) for Power Plant

- Electrical Interface System for MV/LV Switchgear

## Transmission Systems Control

- EHV & UHV Sub-stations/switchyards both AIS & GIS type ranging from 33kV to 765kV.
- HVDC transmission systems.
- Flexible AC Transmission system (FACTS) solutions
  - Fixed Series Compensation(FSC)
  - Static VAR Compensation (SVC)
  - STATCOM
  - Controlled Shunt Reactor (CSR)
  - Phase Shifting Transformer (PST)
- Converter Valves and controls for HVDC & FACTS.

## Software System Solution

- Merit Order Rating
- Performance Analysis, Diagnostics & Optimization (PADO) for Thermal Utilities
- Performance Calculation & Optimization system and Real Time Performance Data Monitoring system
- OPC connectivity from DCS to third party systems
- Enterprise Asset Management System (EAMS)
- Operator Training Simulator

## Switchgear

Medium Voltage Vacuum Switchgear for indoor and outdoor applications for voltage ratings upto 36 kV and Gas insulated switchgears upto 420kV.

- Indoor switchgears
  - Upto 12 kV, 50 kA, 4000 Amp for thermal, nuclear, hydro and combined cycle Power Plant Projects
  - Upto 36 kV, 31.5 kA, 2500 Amp for Industries, solar power plants and refineries
  - Compact switchgear 12 kV, 25 kA, 2000 Amp for distribution system
- Outdoor Vacuum circuit breakers
  - 12 kV, 25 kA, 1250 Amp for distribution segment
  - 36 kV, 25 kA, 1600 Amp for transmission and distribution segment
  - Upto 25 kV, 20 kA, 2000Amp for track side railway application
  - 36 kV, 31.5 kA, 2500 Amp Outdoor Metalclad switchgear for Solar Power Plants
- Gas insulated switchgears
  - 36 kV, 40kA, 2000 Amp for Refineries, Urban Sector
  - 145 kV, 31.5 kA, 2500 Amp for transmission & distribution network

- 420 kV, 40 kA, 3150 Amp for transmission sector (hydro station / EHV SS).

## On Load Tap Changers (OLTC)

- On Load Tap Changer upto 765 kV class Transformer & Off Circuit Tap Switch upto 765 kV class Transformer for various application like Power Transformer, Furnace Transformer, Station Transformer, Rectifier Transformer etc.

## LT Switchgear & Bus Ducts

- Bus-ducts with associated equipment to suit generator power output of utilities of upto 800 MW capacity.
- 415 V LT Switchgear for Thermal Power Plant, Hydro, Nuclear, CPP & Steel industry.

## Transformers & Reactors

- Power transformers for voltage upto 1200 kV
  - Generator transformers (upto 600 MVA, 420 kV, 3 Ph / 400 MVA, 765 kV, 1 Ph/500 MVA, 420 kV, 1 Ph)
  - Auto transformers (upto 1000 MVA, 400 kV, 3 Ph / 600 MVA, 400 kV, 1 Ph / 500 MVA, 765 kV, 1 Ph / 1000 MVA, 1200 kV, 1 Ph)
- Converter Transformers / Smoothing Reactors (upto 600 MVA,  $\pm 800$  kV) / (upto 254 MVA,  $\pm 500$  kV) for HVDC transmission.
- Shunt Reactors (upto 150 MVA, 420 kV, 3 Ph / 110 MVA, 765 kV, 1 Ph)
- Controlled Shunt Reactors (upto 200 MVA, 420 kV, 3 Ph/ 200 MVA, 420 kV, 1 Ph / 200 MVA, 765 kV, 1 Ph) for Flexible AC Transmission system applications.
- Phase Shifting Transformers (upto 500 MVA, 400 kV, 3 Ph/ Upto 500 MVA 400 kV 1 Ph) for transmission lines
- Instrument transformers
  - Current transformers upto 400 kV
  - Electro-magnetic voltage transformers upto 220 kV
  - Capacitor voltage transformers ( 33kV to 1200 kV)
  - 24kV PR class Current Transformer for HVDC Projects
- Special Transformers
  - Rectifier transformer (upto 120 kA, 132 kV)
  - Furnace transformer (upto 33 kV, 60 MVA)
- ESP transformers upto 95 kVp, 1600 mA
- Smoothing reactors upto 3.3 mH , 2700 Amp.
- Dry Type reactor upto 300 mH , 120 Amp.
- DC Choke upto 0.5 mH , 4600 Amp.
- Dry type transformers upto 15 MVA 33 kV.
- Composite Monitoring System for Power Transformers & Reactors

## Capacitors

- H.T. Capacitors
  - Motors Capacitors for Power factor correction (3.3 to 11 kV delta connected Capacitor banks)
  - Shunt, Series & SVC (Static VAR compensation), Harmonic filter & HVDC applications (3.3 kV to 500 kV, 1 Ph/ 3 Ph capacitor banks)
- Capacitor Divider for CVT
- Coupling Capacitor (33kV to 800 kV, 4400pF to 13200 pF) for transmission lines
- Surge Capacitor for protection of Generators & Transformers (11kV to 40 kV)
- Roof Capacitor for traction locomotive
  - Capacitor Divider for CVT upto 1200 kV
  - Coupling Capacitor for PLCC upto 400kV
  - Fuse-less capacitor

## Bushings

- Oil Impregnated Paper (OIP) condenser bushings 52 to 525 kV for transformer applications
- 25 kV Locomotive bushings

## Control Gear

- Electronic controllers for ESPs in industries/ power plants
- Digital Static Excitation control system (2000 A, 400 V DC with redundant thyristor stacks & DC field breaker)
- Large current rectifiers with PLC Based digital controls
- Control & Protection Panels (upto 400 kV) For EHV Transmission projects
- SCAP, Thyristor, RAPCON and STATCON Panels.

## Insulators

- Porcelain Insulators
  - Hollow insulators upto 765 kV for Transformers & SF6 circuit breakers.
  - Solid core insulators upto 400 kV for Bus Post & Isolators for substation applications.
- Composite Long Rod Insulators
  - Upto  $\pm 800$  kV, 420kN for HVDC application
  - Upto 765kV, 210kN for HVAC application.
  - Traction Insulators Stayarm, Bracket & 9 Tonne Insulators for Indian railways.
- Ceramic Lining (CERALIN) wear resistant material for Thermal Power Plant & Ash Slurry Application.
- Industrial and Special Ceramics
  - EWLI –Electronic Water Level Indicators used in Boiler Drum Water Level Monitoring (BHELVISION system)

- Ceramic and Tungsten Carbide Flow Beans for Christmas tree valves.
- Grinding Media for Pulverizing in Thermal Power Plant.

## Electrical Machines

- AC Machines for Safe Area Application
  - Squirrel cage induction motors -150 kW to 22000 kW
  - Slip ring induction motors - 150 kW to 10000 kW
  - Synchronous motors- 1000 kW to 25000 kW
  - Variable speed Motors- 150 kW to 22000 kW (Squirrel cage motors)
  - Variable speed Motors- 1000 kW to 25000 kW (Synchronous motors)
- AC Machines for Hazardous Area Application (Fixed speed or with VFD)
  - Flame-proof squirrel cage Induction motors (Ex 'd') (150 kW to 1500 kW)
  - Non-sparking squirrel cage Induction motors (Ex 'n') (150 kW to 4000 kW (higher ratings on request))
  - Increased safety squirrel cage Induction motors (Ex 'e') (150 kW to 4000 kW (higher ratings on request))
  - Pressurized Squirrel cage induction motors (Ex 'p') (150 kW to 22000 kW)
  - Pressurized Synchronous motors (Ex 'p') (1000 kW to 25000 kW)
- Industrial Alternators (Steam turbine, Gas turbine and Diesel engine driven) (3000 kVA to 25000 kVA)
- Vertical Motors for Primary Coolant Pumps for nuclear power plants
- Induction Generators (300 kVA to 6000 kVA) for mini/micro hydro plant.
- 2 Pole Air cooled Steam/ Gas Turbine driven Generators (3 MW to 160 MW)
- 4 Pole Air cooled Steam/ Gas Turbine driven Generators (3 MW to 40 MW)
- 2 Pole Hydrogen cooled Steam/ Gas Turbine driven Generators from 36 MW to 270 MW
- Permanent Magnet Based Generators upto 5 MW.
- Gas Turbine generators upto 270MW.
- Alternators for industrial applications with single bearing upto 2 MW.

## Rail Transportation

### Transportation Systems

- AC electric locomotives (upto 6000 HP, 25 kV AC)
- AC-DC dual voltage electric locomotives

- ACEMU Coaches
- Traction Propulsion Systems for:
  - 9000 HP IGBT based AC Locomotives
  - 6000 HP IGBT based AC Locomotives
  - IGBT based Composite Propulsion Systems for 6000-HP Locomotives
  - 3-phase IGBT based AC Electrical Multiple Units (EMUs)
  - Air-conditioned ACEMU
  - ACEMU electrics for DC drives
  - 1600HP IGBT based DEMU
  - 3-phase IGBT based MEMU
  - 1600HP Multi-Genset Locomotive
- Regeneration system for DC Propulsion system of WAG7 Locomotive
- Diesel Electric Tower Car
- Diesel-Electric Shunting Locomotives (upto 1400 HP)
- Battery powered Locomotive
- OHE recording-cum-test car
- Battery Powered Road Vehicles
- Dynamic track stabilizers
- Rail cum Road vehicle

## Transportation Equipment

- Traction Converter & Auxiliary Converter
- Vehicle Control Electronics
- Hotel Load Converter
- Composite Converter comprising Traction Converter and Hotel Load Converter
- Traction Transformer
  - Upto 5400 kVA for conventional locomotives
  - Upto 7775 kVA for 3 phase drive locomotives.
  - Upto 1050 kVA conventional AC EMU/ MEMUs
  - Upto 3400 kVA for 3 phase EMU/ trainsets
- 3- phase AC Traction Motors (upto 1200 kW) for Locomotives & EMUs
- DC Traction Motors (up to 630 kW) for Locomotives & EMUs
- AC Traction Alternators (up to 3860 kW) for Locomotives & EMUs
- DC Blower motors (up to 50kW) for dynamic braking system
- Motor Generator sets (upto 25 kW) for auxiliary requirements
- Traction gears and pinions for Locomotives & EMUs

- Wagon (upto 28 axle, 296 Tonne)

## Defence And Aerospace

- Super Rapid Gun Mount (SRGM) 76/62 gun for naval ships
- Integrated Platform Management system (IPMS) for naval ships
- Static Main Motor Generator (SMMG)
- Rotary Main Motor Generator with Controls (RMMG)
- Training Simulator for Vehicles, platforms, radars, weapons, missiles and Computer Based Training (CBT) for all defence and para-military forces
- Turret Casting for T-72 Tanks
- Casting and Forgings for ships
- Compact Heat Exchangers for various aircraft platforms
- Permanent Magnet Frequency converters with drive unit
- Reserve Propulsion motor with drive unit
- Compact Brushless Alternators
- Fuel Tanks and other components for Launch Vehicles and Satellites.
- Space grade Batteries for launch vehicles and Satellites

## Energy Storage System & E- Mobility

- Powertrains for Electric Vehicles including motors
- Charging Infrastructure for Electric Vehicles
- Battery Energy Storage System

## Oil Field Equipment

- Oil Rigs – On-shore drilling rigs with AC-VFD and AC-SCR technology for drilling upto depths of 9,000 metres, work-over rigs for servicing upto depths of 6,100 metres, mobile rigs for drilling upto depths of 3,000 metres, complete with matching draw-works and hoisting equipment including:
  - Mast and substructure
  - Rotating equipment : Draw works ; Rotary ; Swivels; Travelling Blocks
  - Independent Rotary drive unit
  - Mud storage and handling Systems, Mud agitators
  - Triplex Mud pumps 1700 PT, 5000 PSI Working pressure
  - Air Utility Systems (Utility House), Water system and Fuel systems
  - Dead line anchors
  - Vacuum Degassers, Mud gas separators
  - Desanders
  - Sucker Rod Pump Surface units
  - Refurbishment and up gradation of BHEL and Non

BHEL make Oil Rigs

- 3-phase AC Oil rig motor upto 1150 HP
- DC Oil rig motors upto 1000 HP (Draw works, mud pump, drilling)
- Oil rig alternators upto 1750 kVa
- AC/ DC Power Control Room for E760, E1400, E2000 & E3000 Rig
- AC Acoustic Power Pack upto 1430 kVA Rating as per applicable CPCB Norms
  - » AC Control Module
  - » DC Control Module
- Driller's Console upto 3 mud pumps, IRD & draw work control & monitoring, load rating (0-1800 A, 0-1000V)
- Mobile lightening Tower, Rig Lightening Tower
- AC- VFD Controls for AC Rigs
- STATCOM for power Factor improvement in AC SCR Rigs
- Well heads and X-mas Trees upto 10,000 psi, Mud Line Suspension, Choke and Kill manifold, CBM Wellheads, DSPM H- Manifold Assembly, Mud valves.

## Fabricated Equipment And Mechanical Packages

- Cryogenic Air Separation Units
- Cryogenic storage tanks, Mounded storage systems and storage spheres
- Pressure Vessels, Columns, Reactors/Separators, Heat Exchangers
- Fired Heaters
- Purge Gas Recovery Unit

## Glossary

APGENCO	Andhra Pradesh Power Generation Corporation	ISRO	Indian Space Research Organisation
ARAI	Automotive Research Association of India	KPCL	Karnataka Power Corporation Limited
AUSC	Advanced Ultra Super Critical	LCA	Light Combat Aircraft
BESS	Battery Energy Storage System	LIS	Lift Irrigation Scheme
BPCL	Bharat Petroleum Corporation Limited	LP Turbine	Low Pressure Turbine
BSE	Bombay Stock Exchange	LSTK	Lump sum turnkey
BTG	Boiler Turbine Generator	MEIL	Megha Engineering & Infrastructures Limited
C&I	Control & Instrumentation	MEMU	Mainline Electric Multiple Unit
CEA	Central Electricity Authority	MHI	Ministry of Heavy Industries
CPP	Captive Power Plant	MoU	Memorandum of Understanding
CFBC	Circulating Fluidised Bed Combustion	MUs	Manufacturing Units
CPIO	Central Public Information Officer	MSME	Micro, Small and Medium Enterprises
CMIE	Centre for Monitoring Indian Economy	MSR	Molten Salt Reactor
CPSE	Central Public Sector Enterprise	NIT	National Institute of Technology
CSIR	Council of Scientific & Industrial Research	NPCIL	Nuclear Power Corporation of India Limited
CSPGCL	Chhattisgarh State Power Generation Company	NSE	National Stock Exchange
CSR	Corporate Social Responsibility	OEM	Original Equipment Manufacturer
CVC	Central Vigilance Commission	ONGC	Oil and Natural Gas Corporation Limited
DEMU	Diesel Electric Multiple Unit	PCP	Power Cycle Piping
DPE	Department of Public Enterprises	PGCIL	Power Grid Corporation of India Limited
ED	Executive Director	PLM	Product Lifecycle Management
EHV	Extra High Voltage	R&D	Research & Development
EMU	Electric Multiple Unit	R&M	Renovation & Modernisation
EPC	Engineering, Procurement & Construction	RESCO	Renewable Energy Service Company
ESP	Electrostatic Precipitator	RPCL	Raichur Power Company Limited
EV	Electric Vehicle	SCOPE	Standing Conference of Public Enterprises
FACTS	Flexible Alternating Current Transmission System	SCR	Selective Catalytic Reduction
FGD	Flue Gas Desulphurization	SD	Sustainable Development
GeM	Government e-Marketplace	SEBI	Securities and Exchange Board of India
GIS	Gas Insulated Substation	SG	Steam Generator
GSECL	Gujarat State Electricity Corporation Limited	SOP	Standard Operating Procedure
HAL	Hindustan Aeronautics Ltd	SPV	Solar Photo Voltaic
HP Turbine	High Pressure Turbine	SRGM	Super Rapid Gun Mount
HVDC	High Voltage Direct Current	SRU	Sulfur Recovery Unit
ICAI	The Institute of Chartered Accountants of India	STG	Steam Turbine Generator
ICF	Integral Coach Factory	TANGEDCO	Tamil Nadu Generation and Distribution Corporation
IGBT	Insulated-Gate Bipolar Transistor	TG	Turbine & Generator
IGCAR	Indira Gandhi Centre for Atomic Research	TPD	Tonnes Per Day
IIT	Indian Institute of Technology	TPS	Thermal Power Station
IOCL	Indian Oil Corporation Ltd	UB	Utility Boiler
IPMS	Integrated Platform Management system	UHV	Ultra High Voltage
IPR	Intellectual Property Right	VFD	Variable Frequency Drive
IR	Indian Railway	WAG	W (broad gauge), A (AC traction), G (goods duty)
ISMS	Information Security Management System	WBPDCCL	West Bengal Power Development Corporation Limited
ISO	International Organization for Standardization		



## Glossary (Financial Terms)

**Accounting policies:** Accounting policies are the specific accounting principles and the method of applying those principles adopted by the company in preparation and presentation of the financial statements.

**Accrual:** Financial statement is prepared on mercantile system. The effects of transaction and other events are recognised when they occur and they are recorded in the accounting records and reported in the financial statement of that period to which they relate.

**Amortization:** Amortisation is the systematic allocation of the depreciable amount of an intangible asset over its useful life.

**Balance sheet:** A balance sheet is a statement of the financial position of an entity which states the assets, liabilities, and owners' equity at a particular point of time

**Bonus shares:** Bonus shares are additional shares given to the shareholders without any additional cost out of free reserves, based upon the number of shares that a shareholder owns.

**Book value:** The amount at which an item appears in the books of account or in financial statements.

**Buy back of shares:** A buyback, also known as a share repurchase, is when a company buys its own outstanding shares to reduce the number of shares available in the open market.

**Capital employed** is calculated by subtracting Capital WIP, Intangible assets under development and Deferred tax assets from the entity's net worth.

**Capital reserve:** A reserve of an entity which is not available for distribution as dividend.

**Capital redemption reserve:** The Company has recognised Capital Redemption Reserve on buy back of equity shares from its general reserve. The amount in capital redemption reserve is equal to nominal amount of equity shares bought back.

**Cash & cash equivalent:** Cash comprises cash in hand and demand deposits. Cash equivalents are short term, highly liquid investments that are readily convertible to known amount of cash and which are subject to an insignificant risk of change in value.

**Contract assets :** Contract assets (deferred debts and unbilled revenue) represent the amount not yet due for payment as per contract terms / agreed schedule with customers. The same will be contractually due on completion of related activities / milestones.

**Contract liability:** An entity's obligation to transfer goods or services to a customer for which the entity has received consideration (or the amount is due) from the customer.

**Contingent liability** is:

- (a) possible obligation that arises from past events and whose existence will be confirmed only by the occurrence or non occurrence of one or more uncertain future events not wholly within the control of the entity; or
- (b) a present obligation that arises from past events but is not recognised because:
  - (i) it is not probable that an outflow of resources embodying economic benefits will be required to settle the obligation; or
  - (ii) the amount of the obligation cannot be measured with sufficient reliability.

**Consolidated financial statements (CFS):** Consolidated financial statements - are the "Financial statements of a group in which the assets, liabilities, equity, income, expenses and cash flows of the parent company and its subsidiaries are presented as those of a single economic entity.

**Credit risk:** The risk that one party to a financial instrument will cause a financial loss for the other party by failing to discharge an obligation.

**Current ratio:** The current ratio is a liquidity ratio that measure ability to pay short term obligation or dues within one year. It is calculated by dividing current assets to current liabilities.

**Current asset:** An asset shall be classified as current when:

- a) it is expected to realise the asset, or intended to sell or consume it, in its normal operating cycle;
- b) it is held primarily for the purpose of trading;
- c) it is expected to realise the asset within twelve months after the reporting period; or
- d) the asset is cash or a cash equivalent unless the asset is restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period

**Current liability:** A liability shall be classified as current when:

- a) it is expected to settle the liability in its normal operating cycle;
- b) it is held primarily for the purpose of trading;
- c) the liability is due to be settled within twelve months after the reporting period; or
- d) it does not have an unconditional right to defer settlement of the liability for at least twelve months after the reporting period.





**Current tax expense:** Current tax is the amount of income taxes payable (recoverable) in respect of the taxable profit (tax loss) for a period.

**Deferred debts:** Deferred debts are those debts which will become payable on completion of identified milestone like trial operation, PG test, etc. in terms of the contract.

**Deferred tax:** Deferred tax is calculated using the rates and tax laws that have been enacted or substantively enacted by the balance sheet date.

**Deferred tax asset:** Deferred tax assets are the amounts of income taxes recoverable in future periods in respect of deductible temporary differences, the carry forward of unused tax losses and the carry forward of unused tax credits.

**Deferred tax liability:** Deferred tax liabilities are the amounts of income taxes payable in future periods in respect of taxable temporary differences.

**Defined benefits plans:** Defined benefit plans are post-employment benefit plans other than defined contribution plans. Defined contribution plans are post-employment benefit plans under which an entity pays fixed contributions into a separate entity (a fund) and will have no legal or constructive obligation to pay further contributions if the fund does not hold sufficient assets to pay all employee benefits relating to employee service in the current and prior periods.

**Dividend per share:** It is calculated by dividing the total dividend (excl. dividend distribution tax) for the year to total number of outstanding equity shares.

**Depreciation:** Depreciation is the systematic allocation of the depreciable amount of an asset over its useful life.

**Dividend distribution tax:** This is an additional income tax paid by the company on any amount declared, distributed or paid by the company by way of dividends.

**EBIDTA** means Earnings before interest, taxes, depreciation and amortization. Operational EBIDTA is determined after excluding other income from EBIDTA.

**Earnings per share (EPS):** It represent profit earned during the year to each share, calculated by dividing profit after tax to total number of outstanding equity shares.

**Equity method:** The equity method of accounting is used to determine the net income generated from the joint venture in proportion to the size of a company's investment in the venture. The equity method is a method of accounting whereby the investment is initially recognised at cost and adjusted thereafter for the post-acquisition change in the investor's share of the investee's net assets.

**Expected credit loss:** The difference between all contractual cash flows that are due to an entity in accordance with the contract and all the cash flows that the entity expects to receive, discounted at the original effective interest rate.

**Fair value:** Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

**Financial asset:** Any asset that is (a) cash, (b) equity instrument of another entity, (c) a contractual right to receive cash or another financial asset from another entity or to exchange financial assets or financial liability with another entity (d) a contract that will or may be settled in the entity's own equity instruments.

**Financial liability:** Any liability that is (a) contractual obligation to deliver cash or another financial asset to another entity or exchange financial assets or financial liabilities with another entity or (b) a contract that will or may be settled in the entity's own equity instruments.

**Financial instrument:** Any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

**Financing activities:** Activities that result in changes in the size and composition of the contributed equity and borrowings of the entity.

**General reserves:** General reserves are the retained earnings of a company which are kept aside out of company's profits to meet future (known or unknown) obligations.

**Going concern:** It means that entity has no intention for discontinuing the operation in foreseeable future.

**Holding company:** "holding company", in relation to one or more other companies, means a company of which such companies are subsidiary companies.

**Impairment loss:** An impairment loss is the amount by which the carrying amount of an asset or a cash-generating unit exceeds its recoverable amount. The recoverable amount of an asset or a cash-generating unit is the higher of its fair value less costs of disposal and its value in use.

**Indian Accounting Standard** (abbreviated as Ind-AS): Ind AS is the applicable accounting standard for preparation of financial statements as notified by Ministry of Corporate Affairs.

**Intangible assets:** An intangible asset is an identifiable non-monetary asset without physical substance.

**Inventory in number of days:** It is calculated by dividing inventory to revenue multiplying by number of days in a year.

**Investing activities:** Investing activities are the acquisition and disposal of long-term assets and other investments not included in cash equivalents.

**Joint venture:** A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the arrangement.

**Liquidity risk:** The risks that an entity may encounter in meeting obligation associated with financial liabilities as an when due.

**Market risk:** The risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk comprises three types of risk: currency risk, interest rate risk and other price risk.

**Net profit/(loss) margin (%):** It represents profit generated as a percentage to revenue from operations, calculated by dividing profit after tax (PAT) to revenue operations.

**Net realisable value:** Net realisable value is the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make the sale.

**Net worth:** The excess of the book value of total assets of an entity over its liabilities. This is also referred to as shareholders' funds.

**Net worth per share:** Net worth per share is calculated by dividing net worth with total number of outstanding equity shares.

**Non-controlling interest (NCI):** is the portion of equity ownership in a subsidiary not attributable to the parent company, who has a controlling interest (greater than 50% but less than 100%) and consolidates the subsidiary's financial results with its own.

**Non-current asset:** A non-current asset is an asset that is not likely to turn to unrestricted cash within one year of the balance sheet date.

**Non-current liability:** Non-current liabilities are those obligations not due for settlement within one year.

**Other comprehensive income (OCI):** Other comprehensive income comprises items of income and expense (including reclassification adjustments) that are not recognised in profit or loss as required or permitted by other Ind ASs.

**Operating activities:** Operating activities are the principal revenue-producing activities of the entity and other activities that are not investing or financing activities.

**Operating profit margin (%):** Profitability performance ratio used to calculate the percentage of profit generated by Company from its operations. It is calculated by dividing earnings before tax (PBT) excluding other income to revenue from operations.

**Property, plant and equipment (PPE):** Property, plant and equipment are tangible items that:

- (a) are held for use in the production or supply of goods or services, for rental to others, or for administrative purposes; and
- (b) are expected to be used during more than one period.

**Revenue from operations:** Gross inflow of economic benefits during the period arising in the course of ordinary activities of an entity when those inflows result in increases in equity, other than increases relating to contributions from equity participants.

**Return on net worth (%):** Return on net worth is a measure of profitability of a Company, calculated by dividing net profit to average net worth (excl. OCI).

**Right of Use Assets:** An asset that represents a lessee's right to use an underlying asset for the lease term.

**Subsidiary:** Subsidiary company is a company that is owned or controlled by another company, which is called the parent company or holding company.

**Trade receivables:** A receivable is an entity's right to consideration that is unconditional. A right to consideration is unconditional if only the passage of time is required before payment of that consideration is due.

## Cautionary Statement

Statement in the Annual Report, describing the Company objective, expectation or estimates are forward looking within the meaning of applicable laws and regulations. Actual results may differ materially from those expressed or implied, depending upon economic development, government policies and other incidental factors.