

# THE SUPREME INDUSTRIES LTD. KANPUR U.P.



## Company profile

- Incorporation on 17<sup>th</sup> Feb-1942
- Handling Volume of polymer processed 4,00,000 MT
- 25 Nos. of advanced manufacturing plants, 3 plants are under constructions.
- **Debt Free** company having cash surplus of 533 Cr at end of Jun-22.
- Financial Details:-
  - a) Market Capitalization 25,955 Cr
  - b) Group Turnover-7,840 Cr
  - c) Operating Profit-1,309 Cr
  - d) Profit After Tax-811 Cr



# Sustainability

10 Nos. Green Certified Products

17 Mwp Roof Top Solar Installation

10 Mwp Roof Top Solar in WIP FY 22-23

ISO 14001 Certifications

Low Carbon Emissions

Plantation Drive by units

33 Millions Re-Units in FY 21-22

Disclosure of GHG Emission



# Kanpur Plant

Pipe division products : UPVC : agriculture, swr, casing, astm and colum pipe

Machine : 14 extruder for pipe making

Mixer : 5 for raw material mixing and compounding

Grinder and Pulverizer : 5 nos

Cnc machine : 6 nos for Threading in Column Pipe

Lathe machine : 6 nos for 4" to 8" threading in Casing Pipe

Rotional moulding : 2 machines for PVC tank manufacturing

Transformer : 2 ,- 1500 kva and 1600 kva

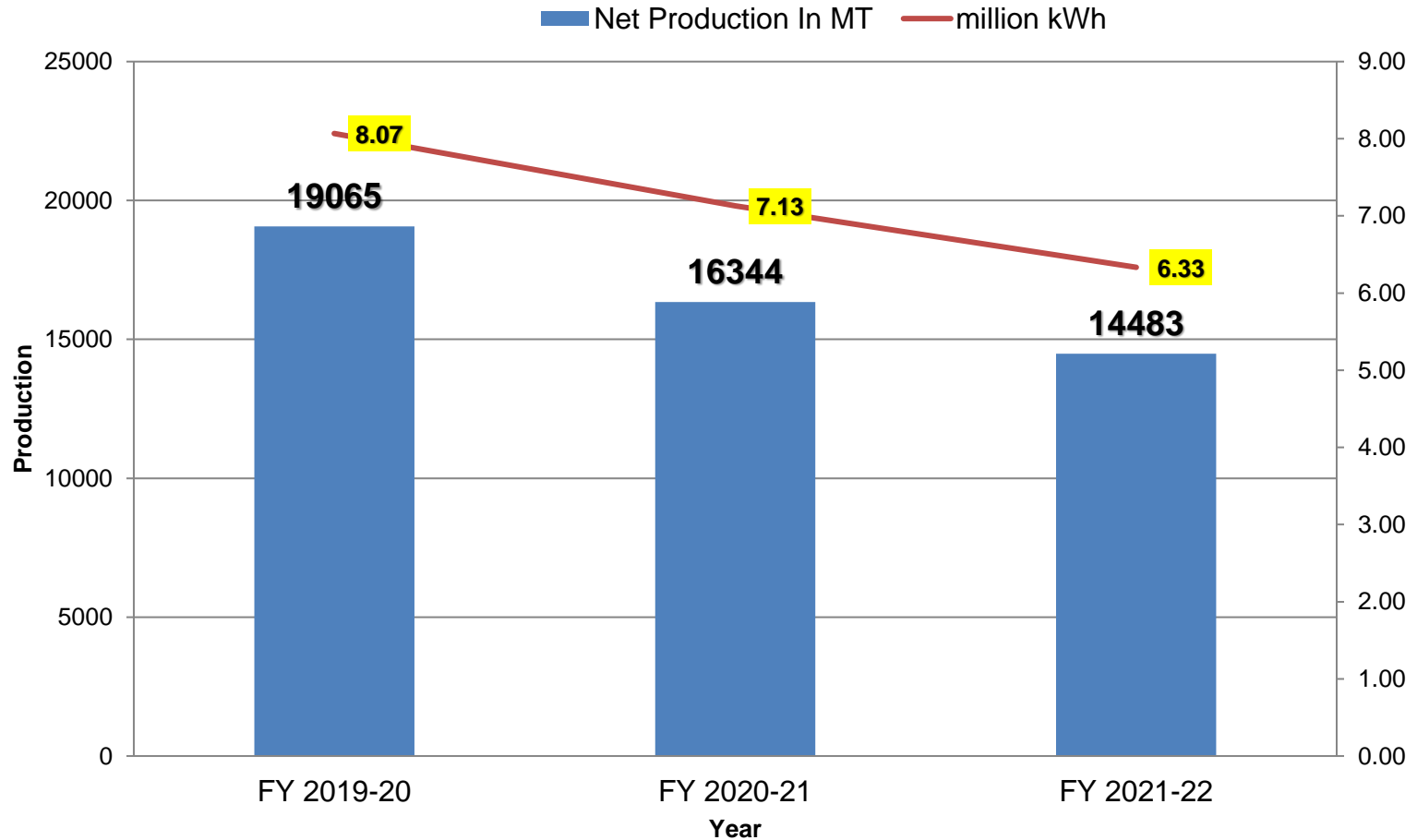
Dg set : 2, - 1010 kva each

Compressor : 3, total 500 cfm

Chiller : 3, total installed capacity 309 TR

Cooling tower : 2, 400 tr each

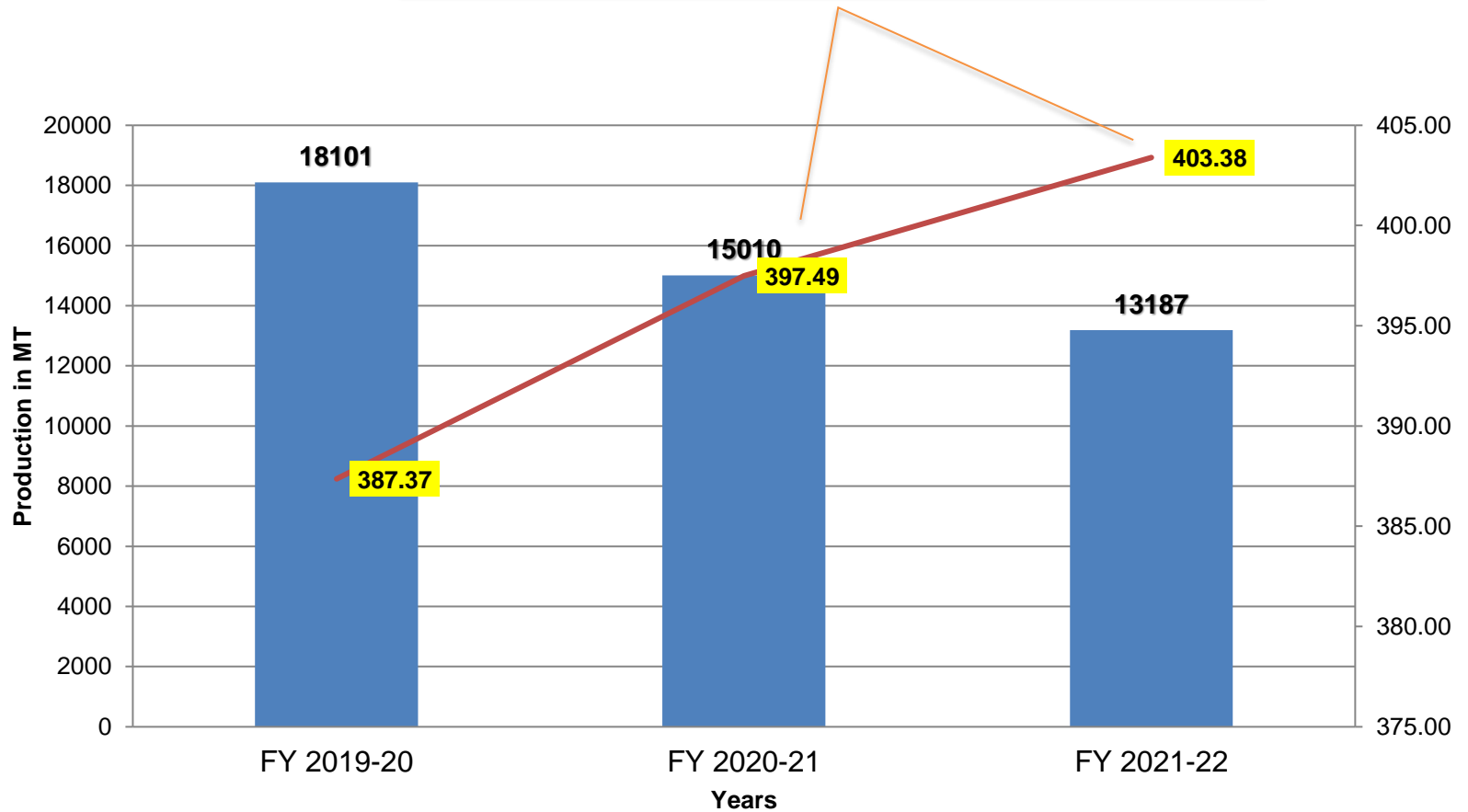
## Production Vs Energy Consumption



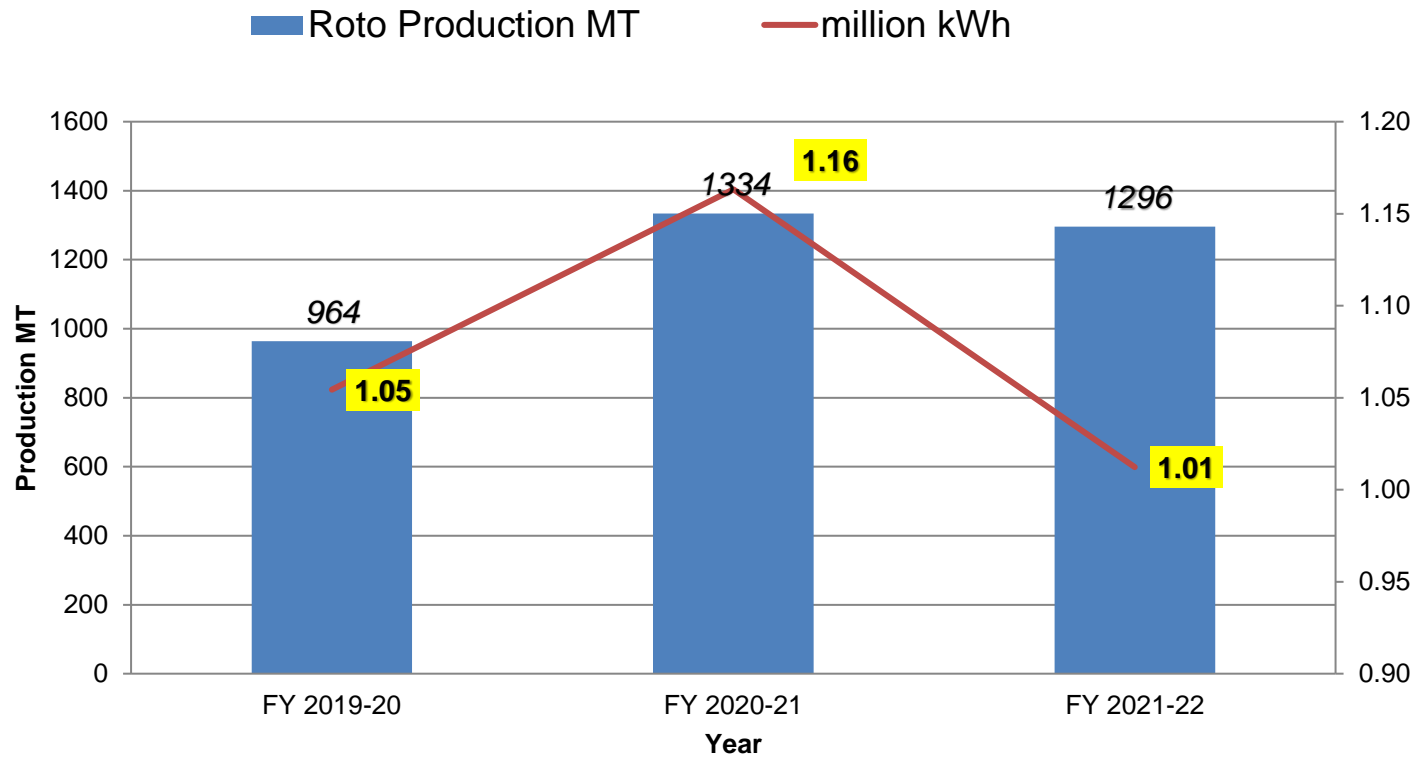
# Pipe Plant Production Vs Specific Energy Consumption

■ Pipe Production MT    — kWh/Ton of production

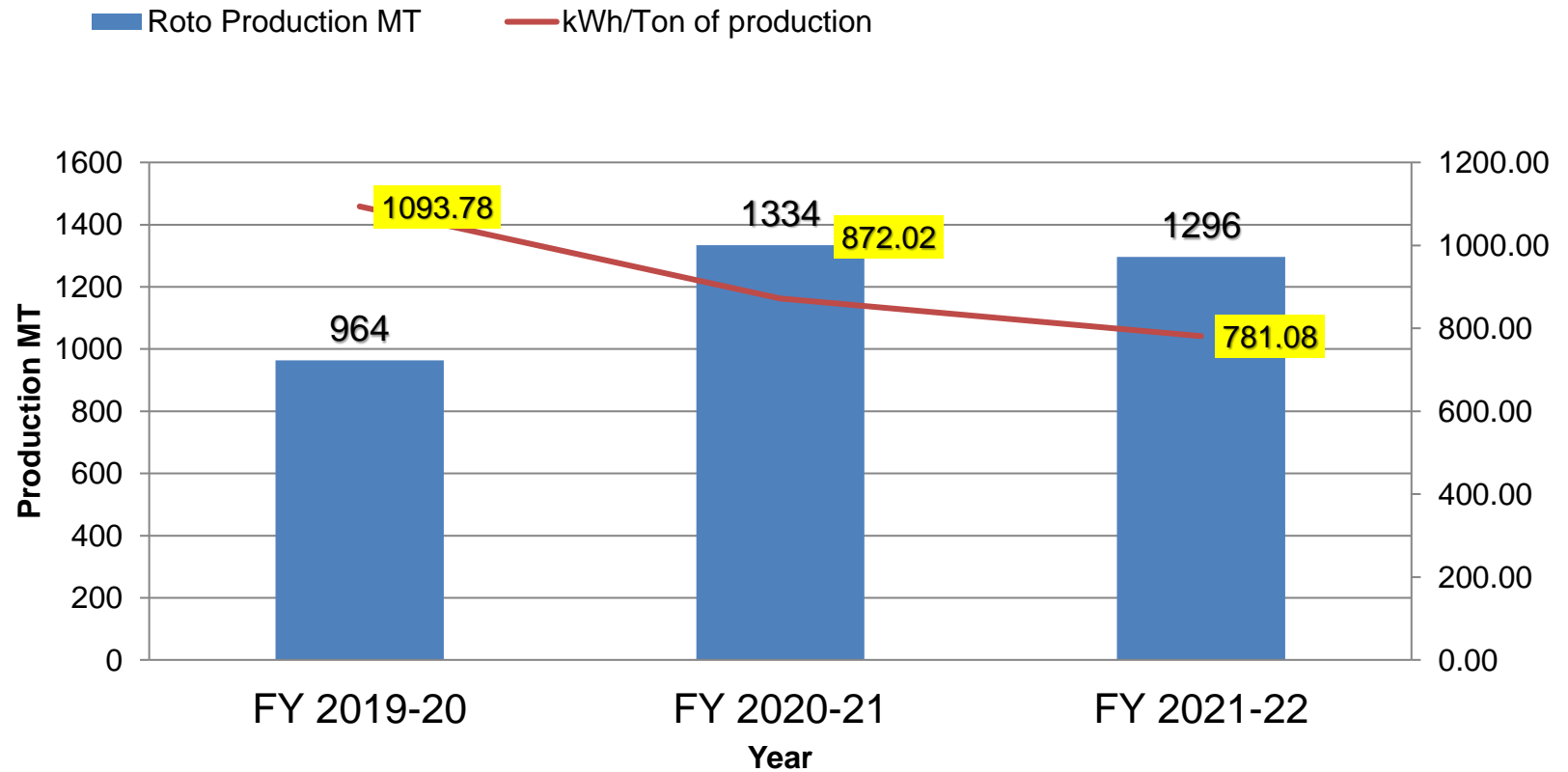
Due to Corona Period Our Production affected and cause low SEC Unit/Kg



## Roto Plant Production Vs Energy Consumption



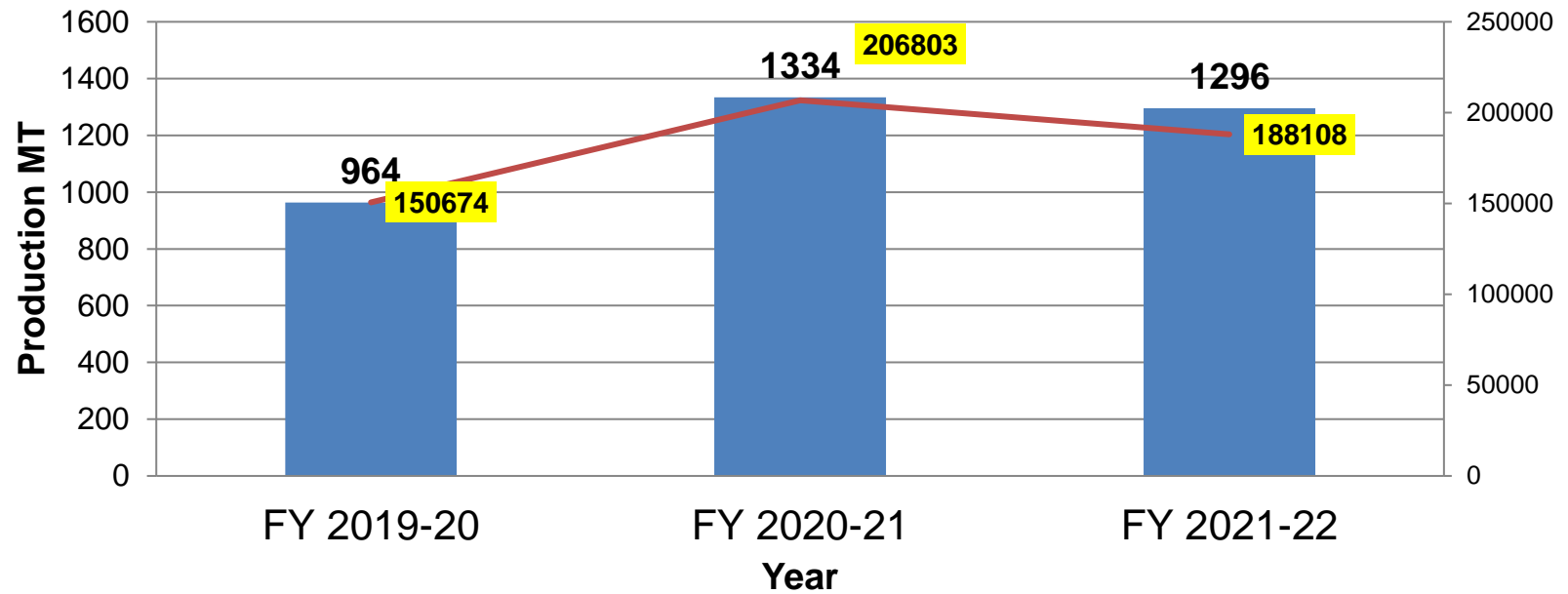
# Roto Plant Production Vs Elect SEC





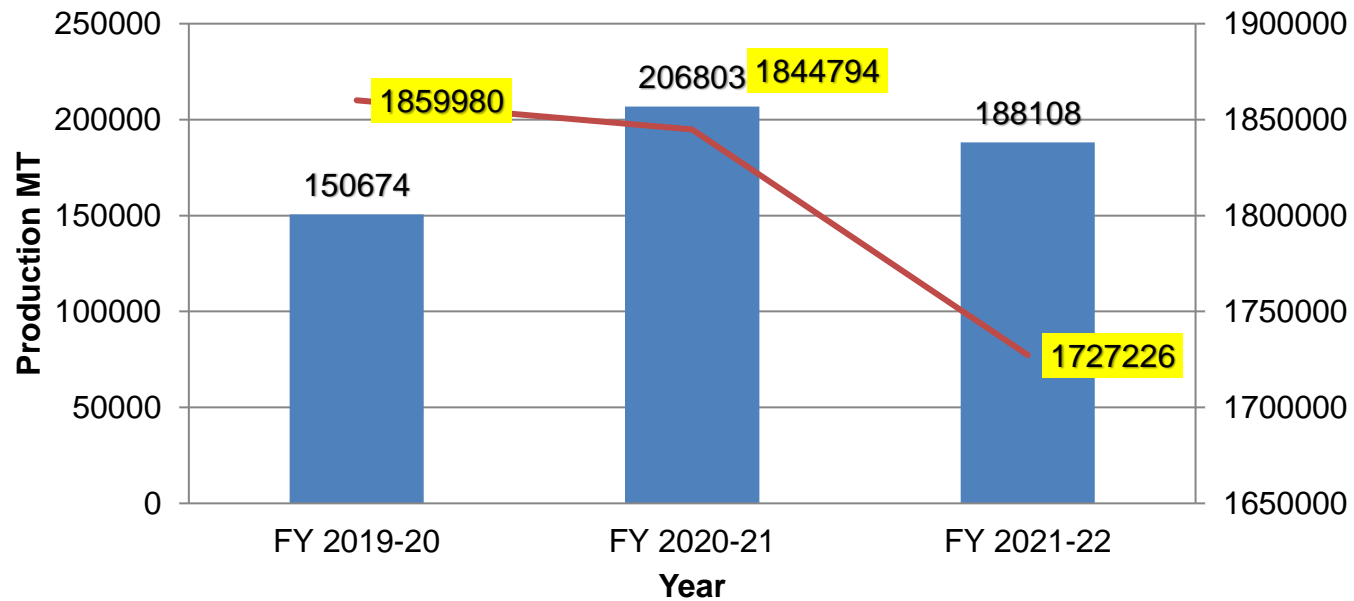
# Roto Plant Production Vs Thermal En. Cons.

■ Roto Production MT      — LPG GAS CON. KG

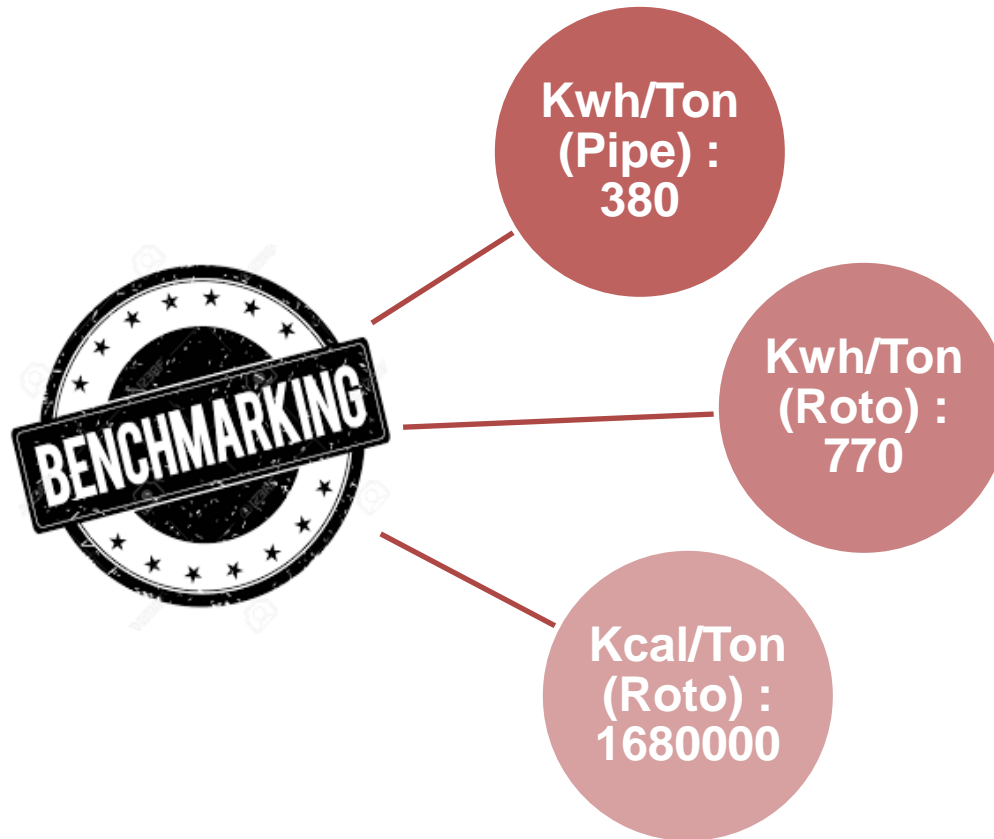


# Roto Plant Production Vs Thermal SEC

■ LPG GAS CON. KG    — Kcal/Ton of production



# Internal Bench Marking



## Long Term Energy Goals

| long Term Goal for Pipe |                       |                        |
|-------------------------|-----------------------|------------------------|
| Year                    | kWh/Ton of production |                        |
| FY 2022-23              | 380                   |                        |
| FY 2023-24              | 370                   |                        |
| FY 2024-25              | 360                   |                        |
| long Term Goal for Roto |                       |                        |
| Only Pipe               | kWh/Ton of production | kcal/Ton of Production |
| FY 2022-23              | 770.00                | 1720000                |
| FY 2023-24              | 760.00                | 1700000                |
| FY 2024-25              | 750.00                | 1680000                |

## Roadmap to Achieve Long term Energy Goal



### **FY 22-23**

10 Mwp Solar installation under pipeline.  
76.80 Millions kWh with 60,700 tCO<sub>2</sub>  
avoided emission



### **FY 23-24**

4 Mwp at PAN India locations.  
87.10 Million kWh with 68,809 tCO<sub>2</sub>  
avoided emission.



### **FY 24-25**

4 Mwp at PAN  
India locations.

## Energy Saving Projects

| Year       | No of Energy Saving Projects | Investments (INR Million) | Electrical Saving (Million KWH) | Thermal Saving Million Kcal/MTOE | Saving INR(Million) | Payback Period | Impact on SEC (Electrical, Thermal) |
|------------|------------------------------|---------------------------|---------------------------------|----------------------------------|---------------------|----------------|-------------------------------------|
| FY 2019-20 | 2                            | 0.11                      | 0.169                           |                                  | 1.499               | 1 month        | 1%                                  |
| FY 2020-21 | 1                            | 1.042                     | 0.450924                        |                                  | 3.95                | 3 month        | 1.50%                               |
| FY 2021-22 | 2                            | 34                        | 0.073362                        | 48.12                            | 4.68                | 10 Months      | 5%                                  |

## Innovative Projects Implemented

Energy Saving Through Processes control/Temperature Control

| Before                               |                    | After  |                   | Effects                   |          |                      |
|--------------------------------------|--------------------|--|-------------------|---------------------------|----------|----------------------|
| Technology Used                      | KWh for A Year     | Technology Used  | KWh for A Year    | Annual Energy Consumption | Saving % | Saving In Million Rs |
| Centralized Chiller for all Machines | 1261098            | Dedicated chiller for Product Specific and for Summer Only | 249600            |                           |          |                      |
| Cooling Tower for Ciller Condenser   | 264237.4006        | Cooling Tower for Chiller Condensor                        | 276820.134        |                           |          |                      |
| <b>Net Energy Consumption</b>        | <b>1525335.401</b> |  | <b>526420.134</b> | 998915.2666               | 65%      | 87.4051              |

Thermal Energy Saving Through Processes optimization in rotational Moulding

| Before                                      |                              | After                                  |                | Effects                   |          |                      |
|---|------------------------------|--|----------------|---------------------------|----------|----------------------|
| Technology Used                             | Specific LPG Gas Consumption | Technology Used                        | KWh for A Year | Annual Energy Consumption | Saving % | Saving In Million Rs |
| Only 4 Mould Can Load at a time on Web      | 0.13                         | Only 4 Mould Can Load at a time on Web | 0.1            |                           |          |                      |
| Average Production In Year (MT)             | 1400                         | Cooling Tower for Chiller Condensor    | 1400           |                           |          |                      |
| <b>Total Gas Consumption in a Year (MT)</b> | <b>182</b>                   |  | <b>140</b>     | 42                        | 23%      | <b>0.035</b>         |

# Pump Room Renovation



FY 2021 : Replaced Old Cooling Tower to 400x2 = 800 tr cooling Tower

FY 2021 : Replaced old Monoblock Pump to Energy Efficient  
(mechanical Seal Pump)

FY 2021 : Replaced underground MS pipe to PPR Line Fitting to  
improve flow and avoid corrosion.

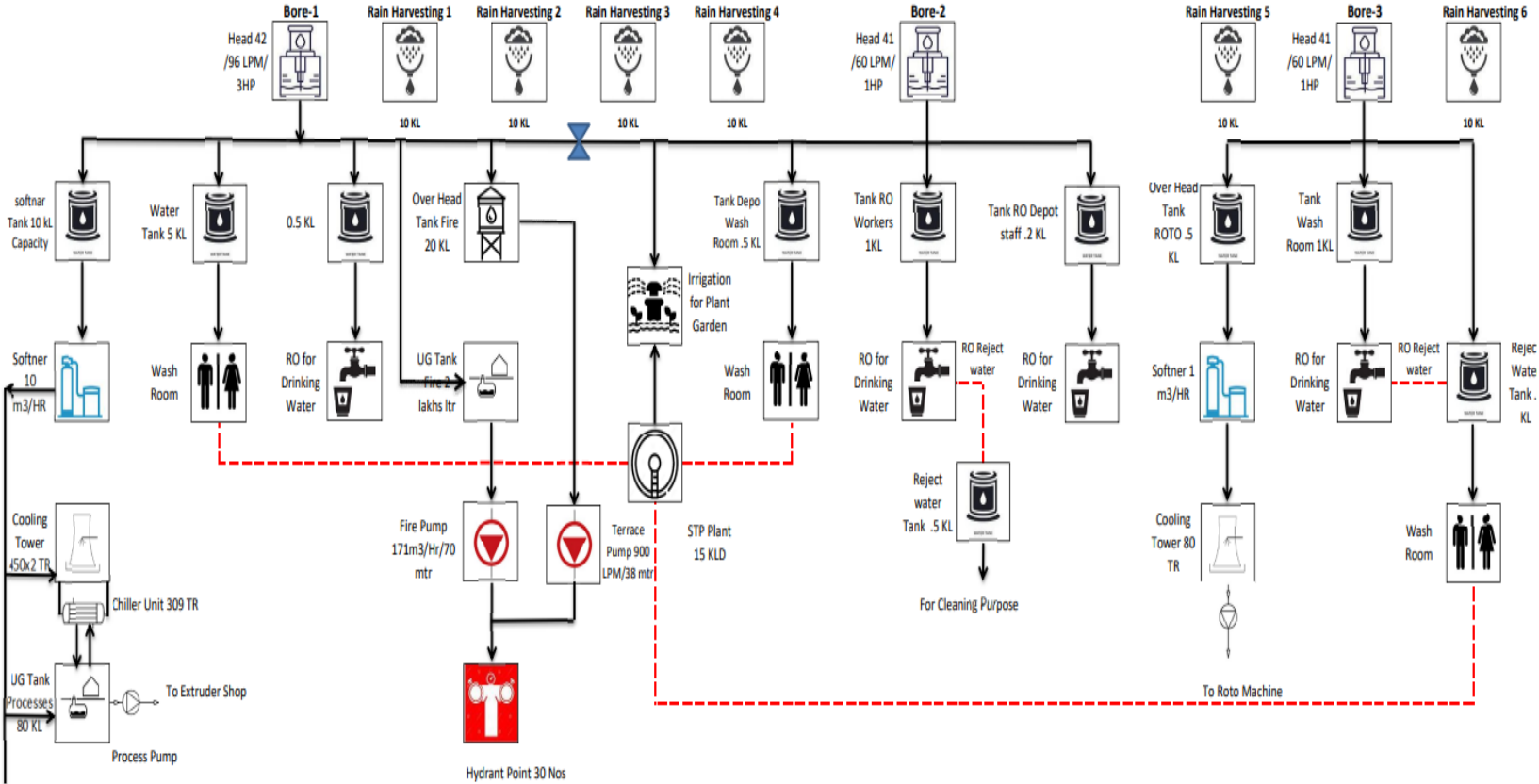


# Activity under Environmental Management System



- FY 2021 : Install STP of 15 KLD Capacity
- FY 2122 : Replace all Bore Flow meter to Digital Flow Meter  
(Cloud data based monitoring)
- FY 2122 : Insatall **Piezometer for ground level Monitoring**  
**(Cloud based Monitoring)**
- FY 2021 : Add 20 KL more Over Head Tank Capacity for Fire Hydrant System to use water flow as gravity in absence of Power.

# Water Management SLD



## Innovative Projects Implemented

Energy Saving Through Processes control/Temperature Control

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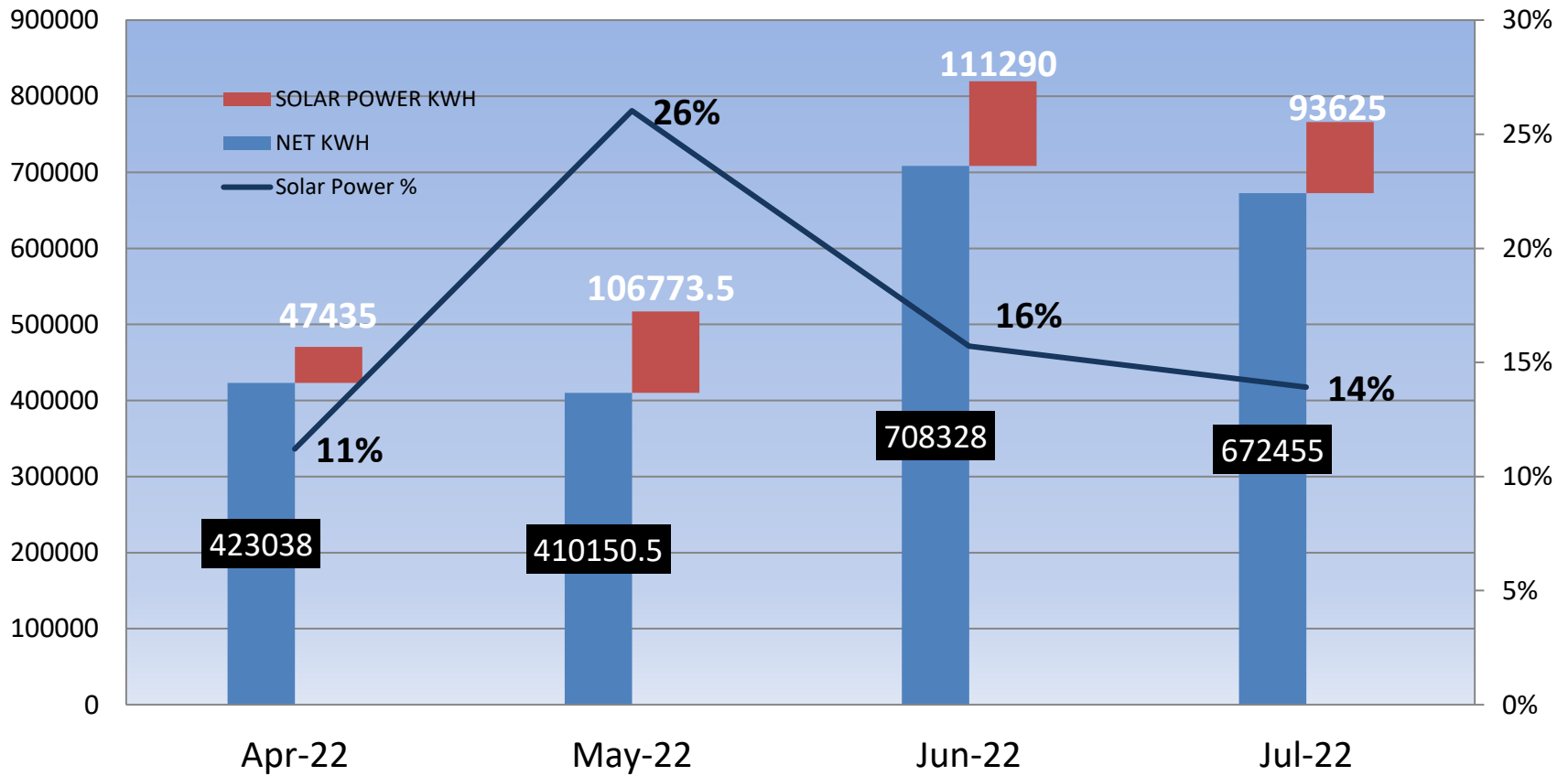
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### Solar Power Generation FY 2022-23

| MONTH       | ENERGY KWH | DG KWH | SOLAR POWER KWH | TOTAL KWH | Solar Power % | Solar Power % without DG |
|-------------|------------|--------|-----------------|-----------|---------------|--------------------------|
| Cummulative | 1738920    | 115928 | 359124          | 2213972   |               |                          |
| Avearge     | 434730     | 28982  | 89781           | 553493    | 16%           | 21%                      |
| Apr-22      | 320340     | 55263  | 47435           | 423038    | 11%           | 15%                      |
| May-22      | 295480     | 7897   | 106774          | 410151    | 26%           | 36%                      |
| Jun-22      | 574480     | 22558  | 111290          | 708328    | 16%           | 19%                      |
| Jul-22      | 548620     | 30210  | 93625           | 672455    | 14%           | 17%                      |

**Insatalled Capacity**      **1MW (978 Kw DC/836 Kw AC)**  
**Type**                        **Onsite generation**  
**Investment**                **33.93 Million Rs**

# Solar Generation Vs Conventional Power



## Utilization of Renewable Energy sources

| Year    | Technology | Type of energy | Onsite/Offsite | Installed Capacity Mwp | Generation In Millions | Utilisation of Renewable energy in Millions Units | % of overall electrical energy (Overall Green energy) |
|---------|------------|----------------|----------------|------------------------|------------------------|---|---|
| 2019-20 |            | Solar          | Onsite         | 6.12                   | 4.96                   | 16.98   | 6.27%   |
|         |            | Wind           |                |                        |                        | 7.89  | 2.91%   |
| 2020-21 |            | Solar          | Onsite         | 2.48                   | 4.22                   | 16.64   | 6.60%   |
|         |            | Wind           |                |                        |                        | 8.67  | 3.44%   |
| 2021-22 |            | Solar          | Onsite         | 8.48                   | 4.85                   | 22.73   | 8.52%   |
|         |            | Wind           |                |                        |                        | 10.28   | 3.85%   |

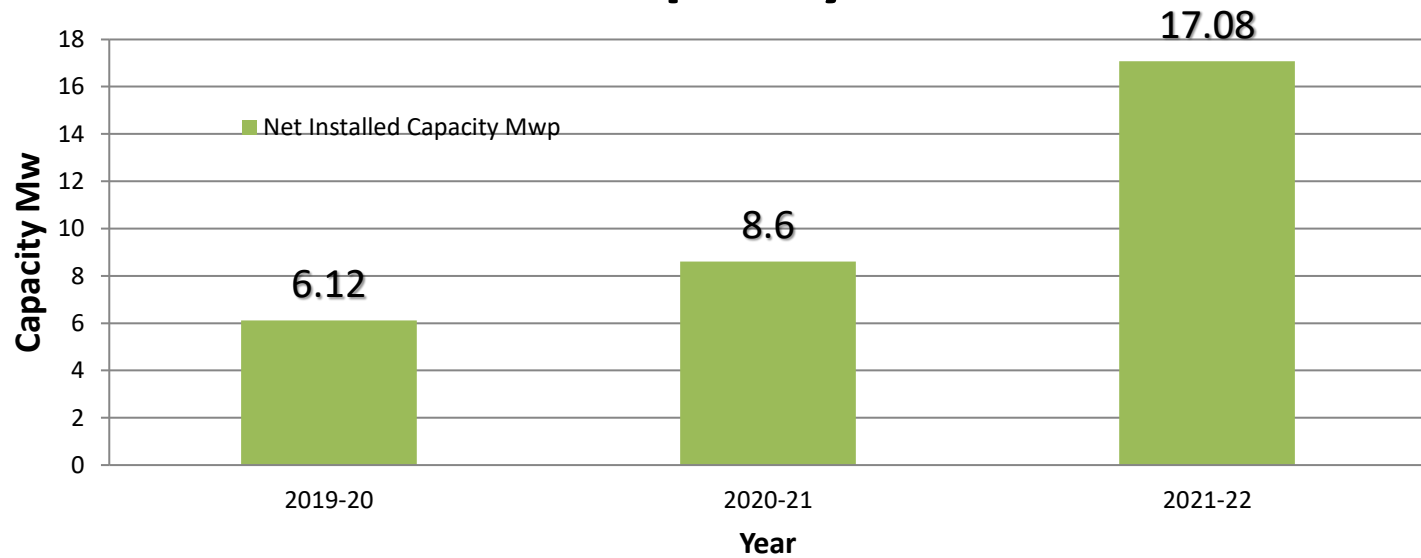
Investment made for roof top solar-

Up-to 2019-20- Rs.20.93 Crores

2020-21- Rs. Nil

2021-22- Rs. 14.82 Crores

## Year Wise Capacity Installed



# Energy Mix Consumption

| Particulars              | Wind Units | Solar Capex | Solar Third Party | Hybrid Units | Total Of Green Energy | DG Units   | Discom Unit |
|--------------------------|------------|-------------|-------------------|--------------|-----------------------|------------|-------------|
| FY 2019-20               | 2.91%      | 1.83%       | 4.44%             | -            | 9.18%                 | 1.61%      | 89.21%      |
| FY 2020-21               | 3.44%      | 1.67%       | 4.93%             | -            | 10.04%<br>↑           | 1.15%<br>↓ | 88.81%<br>↓ |
| FY 2021-22               | 3.85%      | 1.82%       | 6.70%             | -            | 12.37%<br>↑           | 1.02%<br>↓ | 86.61%<br>↓ |
| FY 2022-23<br>(Budgeted) | 4.84%      | 10.09%      | 9.18%             | 1.15%        | 25.26%<br>↑           | 0.89%<br>↓ | 73.85%<br>↓ |
| FY 2023-24<br>(Budgeted) | 4.60%      | 9.15%       | 9.08%             | 4.44%        | 27.27%<br>↑           | 0.84%<br>↓ | 71.89%<br>↓ |



## Waste Management System

| S.No                                | Financial Year | Type of Waste              | Quantity      | Disposal Method                      |
|-------------------------------------|----------------|----------------------------|---------------|--------------------------------------|
| 1                                   | 2019-20        | Plastic waste (Woven Sack) | 125           | Sold to Government Authorised Vendor |
| 2                                   | 2019-20        | Wodden ( Packing Material) | 1.13          |                                      |
| 3                                   | 2019-20        | Metal Scrap                | 15.05         |                                      |
| 4                                   | 2019-20        | Waste Oil                  | 0.68          |                                      |
| <b>Net Quantity of Year 2019-20</b> |                |                            | <b>141.86</b> |                                      |
| 5                                   | 2020-21        | Plastic waste (Woven Sack) | 113.3         | Sold to Government Authorised Vendor |
| 6                                   | 2020-21        | Wodden ( Packing Material) | 0.71          |                                      |
| 7                                   | 2020-21        | Metal Scrap                | 13.14         |                                      |
| 8                                   | 2020-21        | Waste Oil                  | 0.57          |                                      |
| <b>Net Quantity of Year 2020-21</b> |                |                            | <b>127.72</b> |                                      |
| 9                                   | 2021-22        | Plastic waste (Woven Sack) | 105.2         | Sold to Government Authorised Vendor |
| 10                                  | 2021-22        | Wodden ( Packing Material) | 5.98          |                                      |
| 11                                  | 2021-22        | Metal Scrap                | 12.09         |                                      |
|                                     | 2021-22        | Waste Oil                  | 0.23          |                                      |
| <b>Net Quantity of Year 2021-22</b> |                |                            | <b>123.5</b>  |                                      |

## GHG Invetorisation and public disclosure

Company listed at stock exchange and GHG data available in BRSR along with Annual report.

### **Scope of emission**

Scope-1- emission from owned resources i.e. Diesel consumed in DG sets, petrol/diesel in vehicle, LPG combustion, refrigerant.

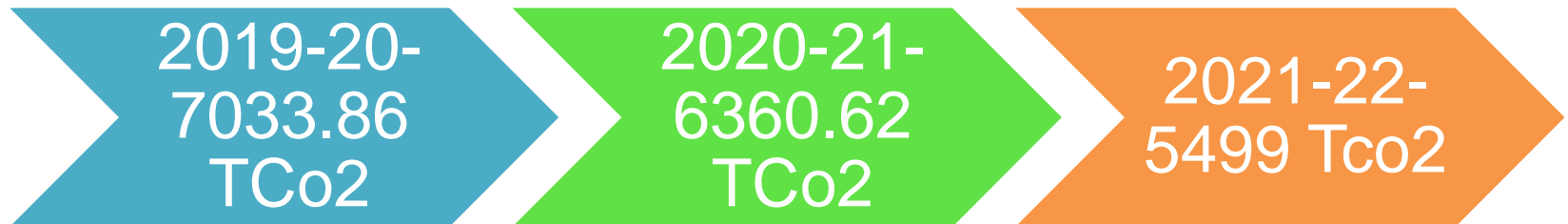
Scope-2- energy purchased from discom

Scope-3- T&D losses from discom, upstream fuel transport, employee commute, upstream transportation, downstream transportation.

## Emission Intensity - Kg Co2/Ton of Final Product



## Absolute Emission :



## Target for Co2 emission reductions

### Short Term Targets

Company is planning to replace 25% of Grid energy with renewable source of energy by year (2024-2025) which was 12.37% in FY 21-22.

Energy cost reduction by 8-9 % in 3 years by increasing Green energy quantum.

Company is targeting to reduce emission intensity kg CO<sub>2</sub>/MT of production by 2% to 3% every year up-to year 2024-2025.

FY 22-23 : 10 Mw Solar installation under pipeline.

FY 23-24 : 4 Mw at PAN India locations.

FY 24-25 : 4 Mw at PAN India locations.

FY 22-23 76.80 Millions kWh with 60,700 tCO<sub>2</sub> avoided emission.

FY 23-24 is 87.10 Million kWh with 68,809 tCO<sub>2</sub> avoided emission.

Exploring renewable hybrid power at Erode Plant, discussion going on.

All our major Energy consuming plants to be energy certified ISO 50001-2018 by year 2023-24.

Six plant ISO-50001 certification work going and stage-I audit by external agency is planned in Aug-22.

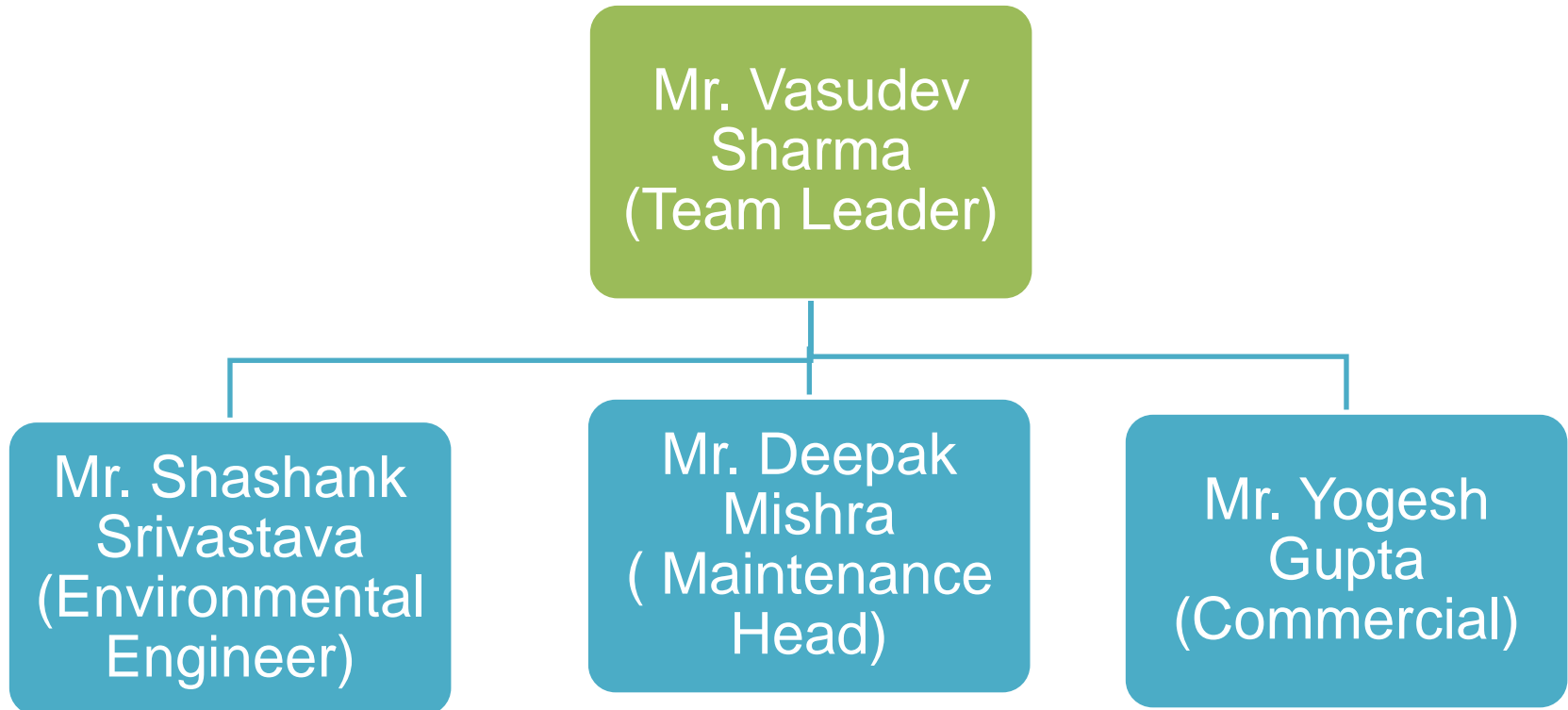
Hybrid Power to be supplied at GIDC/Muvala Plant from Sep-22 onwards.

Group Captive Power to be supplied at Noida/ Kanpur Unit from Nov-22 onwards.

## Long Term Target

- Reducing energy purchase cost of the organization by efficient tariff utilization 2-3% yoy basis.
- Fuel substitution from LPG to PNG/LNG for boiler operation in Kharagpur/Urse.
- Supreme Low Carbon Strategy to reduce the CO<sub>2</sub>% throughout its manufacturing process by introducing new technology and high energy efficient equipment.
- Kanpur unit installed 0.978 Mwp Roof Top Solar Plant from which we will avoid emission 1,081 T Co<sub>2</sub>. We have also signed 2 Mwp Solar Power PPA with developer Fourth Partner which will also increase our green energy ratio and reduce carbon emission.
- Kanpur Plant also Replacing LPG to PNG Gas Having following advantage
- PNG being a cleaner fuel with low carbon gas will reduce our GHG Emission(carbon foot print reduced )- 188 t LPG consumption in year (21-22) there is saving of 206 Tco<sub>2</sub> annually ( 562 Toc<sub>2</sub> will 356 Tco<sub>2</sub> (PNG)
- Fuel transport Carbon foot print of Gas transportation will reduced – 5000 km/ 4 litre/km =1250 litre\*2.69/1000= 3.63 Tco<sub>2</sub> annually.

# *Energy & Environment Team*



THANK YOU