



24th National Award for Excellence in Energy Management - 2023



Team Member:
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Presented By:
Indian Farmers Fertiliser Cooperative Ltd.
Phulpur- I Unit
13th – 15th September, 2023

IFFCO: At a Glance

IFFCO was established as the farmers' own initiative in Cooperative Sector on 3rd Nov. 1967

□ Largest producer of fertilisers in the country.

□ Nos. of Plant : Five (Kandla, Kalol, Phulpur, Aonla, Paradeep)

Installed/Revamped Annual Capacity (Lakh MT)

Urea	: 42.4
NP/NPK/DAP	: 43.3
Total 'N'	: 26.3
Total 'P ₂ O ₅ '	: 17.2
WSFs	: 0.15
Zinc Sulphate Monohydrate	: 0.30



IFFCO Phulpur Unit-I : Profile

Plant	Ammonia	Urea
Process Licenser	MW Kellogg, U.S.A	Snamprogetti, Italy
Commissioned	March, 1981	
Daily Capacity (MTPD)	1215	2115
Annual Capacity (Lakhs MT)	4.0	7.0
Till Date Production (Lakhs MT)	143	247

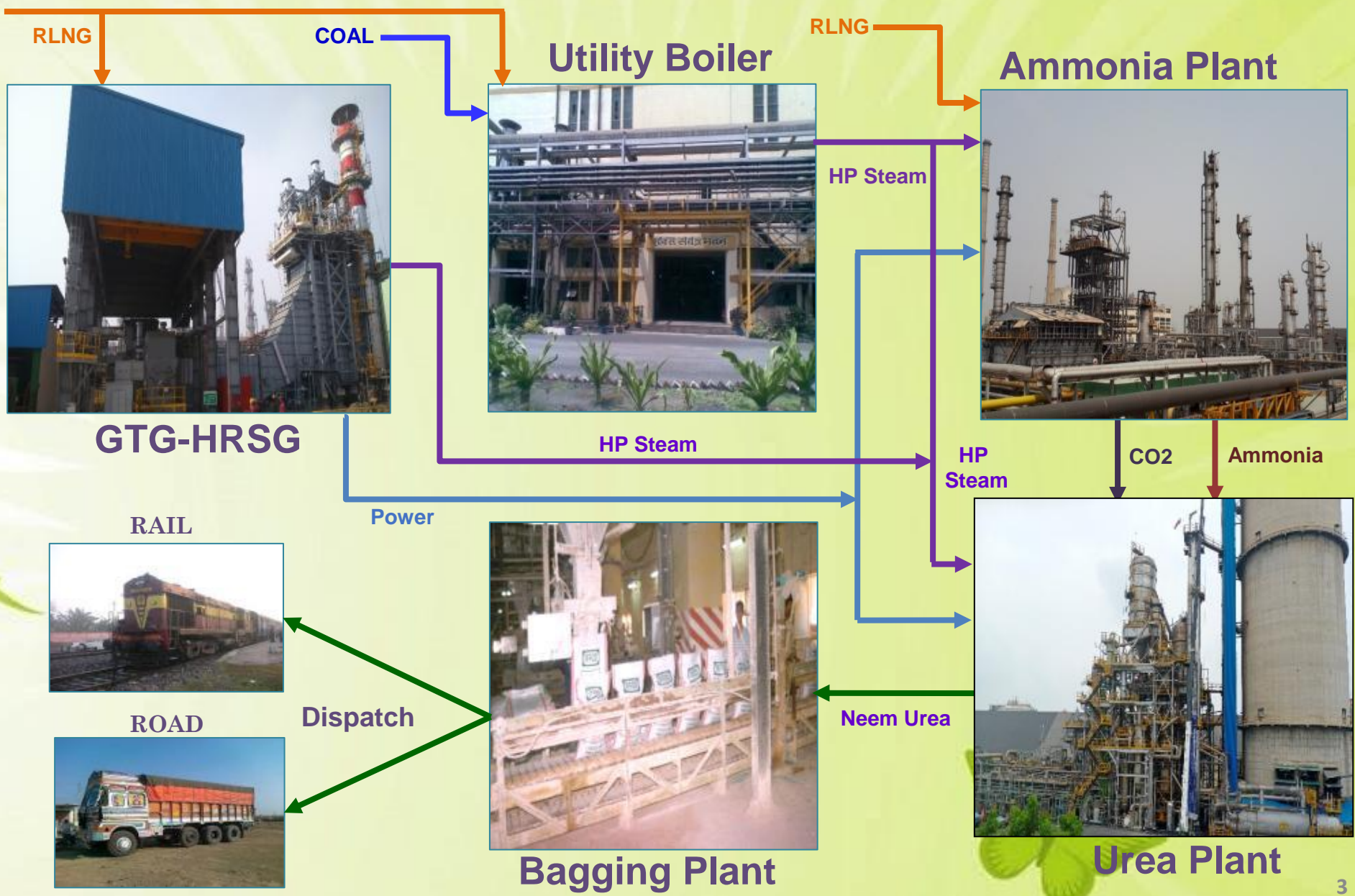
Ammonia-I Plant



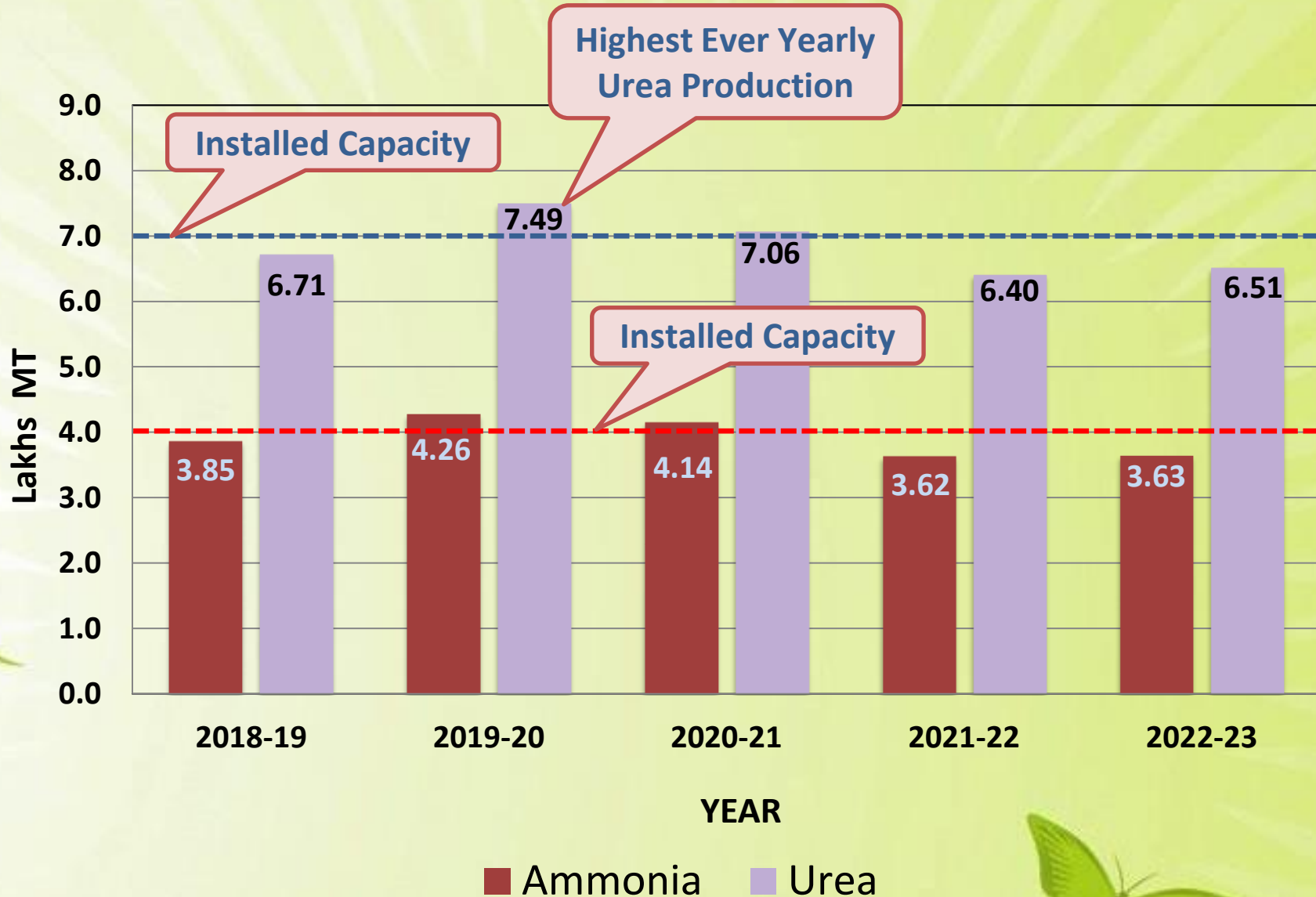
Urea-I Plant



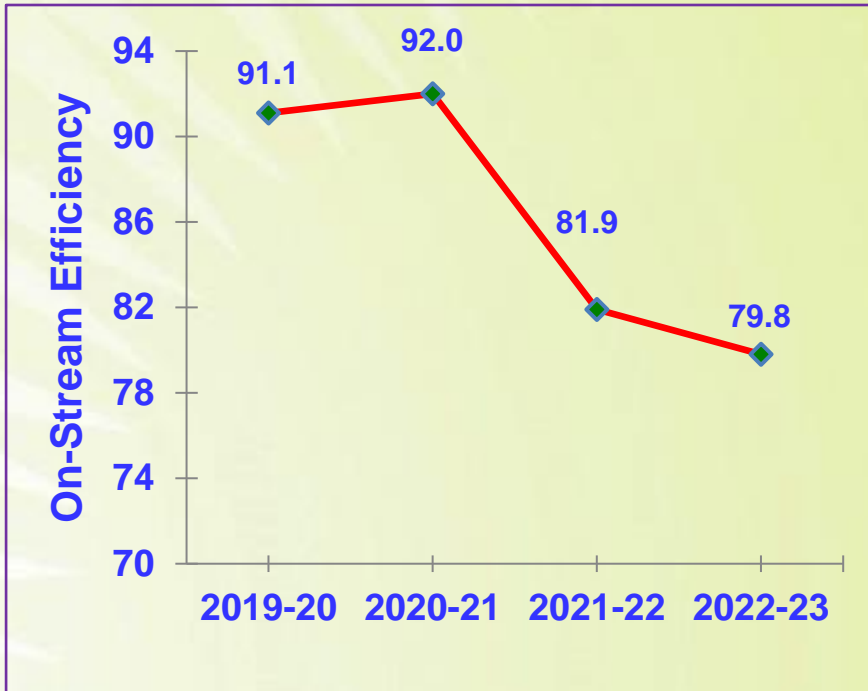
IFFCO Phulpur Unit-I : Production Outline



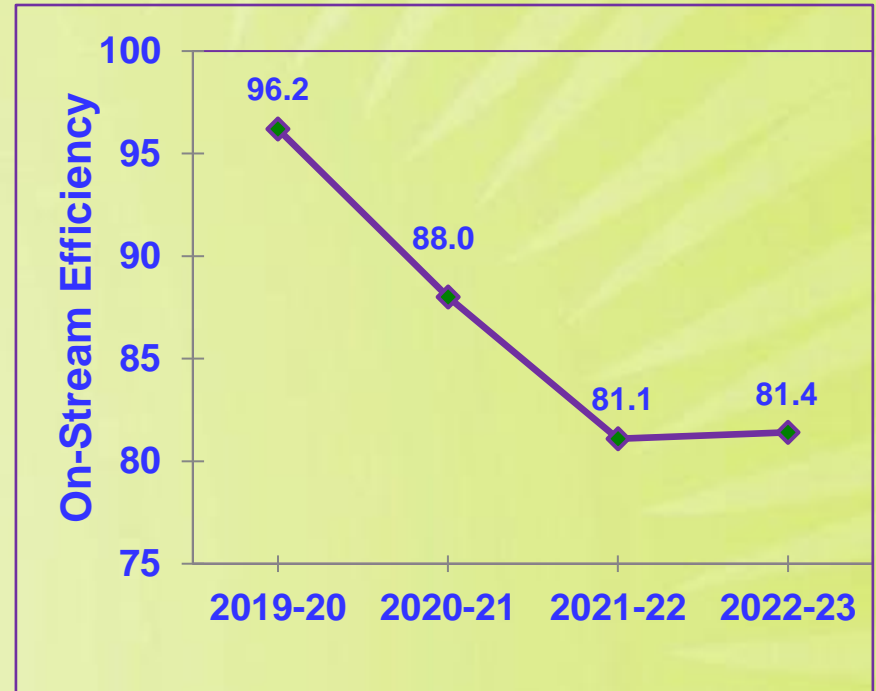
Phulpur-I: Production Performance



Ammonia Plant On-Stream Efficiency



Urea Plant On-Stream Efficiency



One of the important factor which effects the Productivity / Energy of the fertiliser plant is the Downtime of the plant. On-stream efficiency is less due to extended annual turnaround and increase the number of unplanned shutdown.

➤ Poor Reliability of Plant & Equipments leads to:

↑ *Duration of Downtime days*

↓ *Productivity*

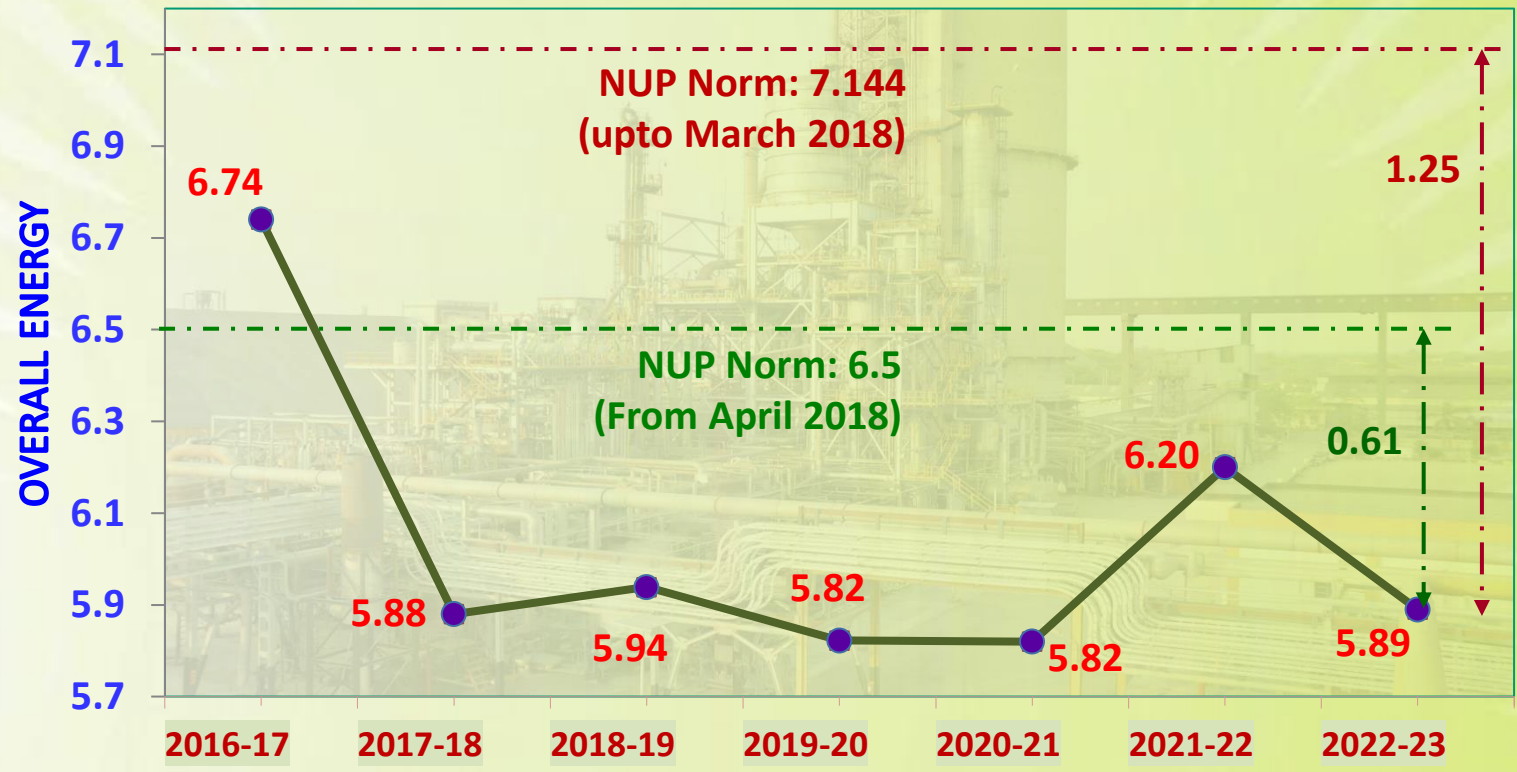
↑ *No. of Downtimes*

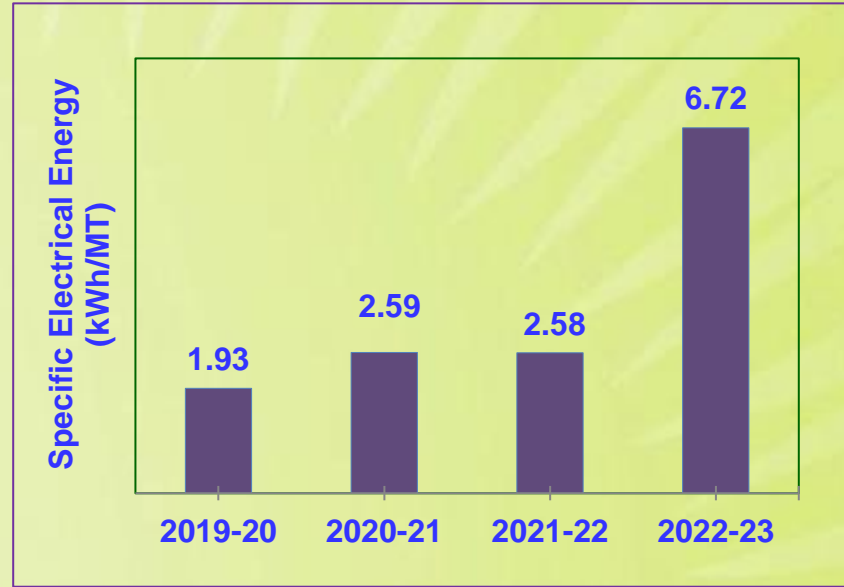
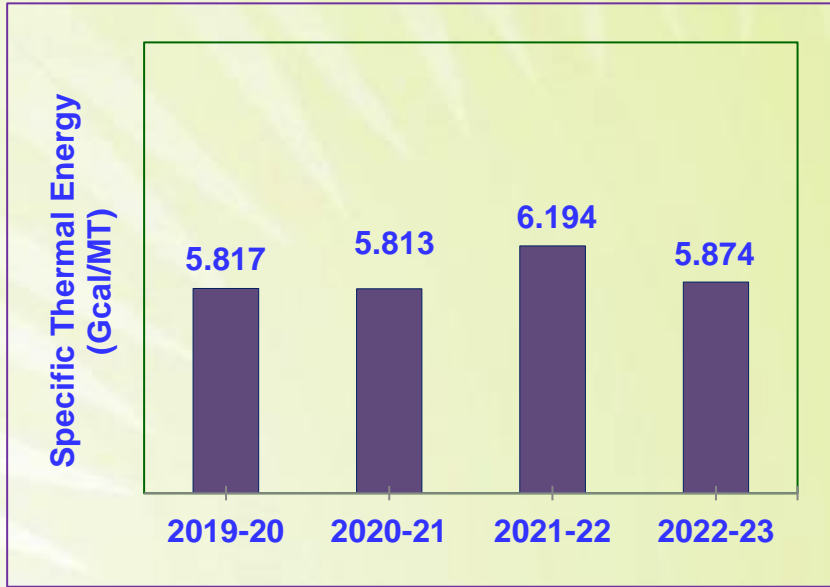
↓ *Productivity / Energy Efficiency*



Phulpur-I : Sp. Energy Consumption

Energy in Gcal/MT of Urea





List of Encon Projects Planned (2023-24)

SL. No.	Energy Saving Schemes Planned in 2023-24	Annual Thermal Saving (Gcal)	Annual Electrical Saving (Million KWh)	Investment (Rs. Lakhs)
1	Revamping of Power Plant Cooling Tower from wooden to Pultruded FRP Structure in PPCT-1	10080	-	300.0
2	Replacement of two nos. Cooling Tower Fan assemblies with hubs and Fans in Ammonia-I Plant	-	0.174	15.3
3	Replacement of old Boiler Feed water Pump with Higher efficiency Pump in Power Plant	-	1.8	152



Major Energy Conservation Measures in Phulpur-I Unit : 22- 23

Name of Energy saving Projects	Investment (INR Million)	Electrical Savings (kWh)	Thermal Savings (Million Kcal)	Saving (INR Millions)	Pay Back (Month)
Installation of Methanator Feed Heater in Ammonia-I Plant	12.30	0.0	28310.0	208.73	0.7
Higher Load Operation & optimization of Process Parameters in Phulpur-I Unit	0.00	0.0	1045.2	4.81	0.0
Replacement of 150 Nos 80 W Well Glass Luminaire with High Pressure Mercury Vapour Lamp with 45 W Well Glass Luminaire LED Lamp at Coal Conveyers 2, 4 and Crusher House	0.26	15966.0	0.0	0.21	14.9
Replacement of 100 Nos 80 W Double Open Channel Type Luminaire (Tube Rod) of Fluorescent Lamp with 45 W Well Glass Luminaire LED Lamp at Coal Conveyers 5 and 6	0.17	10644.0	0.0	0.14	14.6
Replacement of 130 Nos 250 W HPMV Flood light fixture with 105 W LED Flood light fixture at Electrical and Mechanical Workshop	0.25	57327.0	0.0	0.75	4.0
Replacement of 100 Nos 400 W HPMV Flood light fixture with 135 W LED Flood light fixture at TG Floor, AMF-2, Compressor House-2 and Pump House 1 & 2	0.28	80592.0	0.0	1.05	3.2
Replacement of 250 Nos 72 W Fluorescent fixture with 38 W LED 2x19 W Tube light fixture at Bagging-1 & 2 Slat area and Platform area	0.18	25850.0	0.0	0.34	6.4
Replacement of 178 Nos 70 W Well Glass fixture of Sodium Lamp with 45 W Well Glass fixture at Bagging-2 Silo and Conveyor gallery	0.24	13533.0	0.0	0.18	16.0
Replacement of 100 Nos 70 W Post top lantern HPSV type with 45 W Post top lantern fixture at Maitri Park, Guest House walkway, Bharadwaj Park in Township	0.19	3802.0	0.0	0.05	45.6

Major Energy Conservation Measures in Phulpur-I Unit: 21 - 22

Name of Energy saving Projects	Investment (INR Million)	Electrical Savings (kWh)	Thermal Savings (Million Kcal)	Saving (INR Millions)	Pay Back (Month)
Replacement of Methanator Effluent Cooler (115-C) with higher capacity cooler in Ammonia-I Plant	12.00	0.0	20794.4	55.92	2.6
Scheme for installation of additional Cold Ammonia Pump (118-JB) in Ammonia-I Plant	3.50	236867.0	0	2.10	20.0
Connecting Blow down Steam in GT-HRSG with LS Header	0.65	0.0	1425.3	6.23	1.3
Replacement of LT Steam Super-heater Coil in Ammonia-I Plant	120.00	0.0	20900.5	91.31	15.8
Change the orientation of Ammoniacal water pre-heater (1501-C) in Ammonia-I Plant	0.08	0.0	4709.8	12.67	0.1
Replacement of 1st Stage Inter-cooler of Process Air Compressor in Ammonia-I Plant	13.61	0.0	1986.1	5.34	30.6
Installation of M.P Steam Ejector Vacuum System for Common Steam Condenser in Ammonia-I Plant	3.50	0.0	4034	10.85	3.8
Replacement of 400 Nos of 2X36 W, 4 feet Tube light Fittings & 17 W per Choke with 2X2 feet, 20 W Surface Mounted LED Fixtures at Central School in Township	0.32	50068.0	0	1.00	3.8
Replacement of 400 Nos of 2X36 W, 4 feet Tube light Fittings & 17 W per Choke with 2X19 W LED Fixtures at Ammonia & Urea MCC Buildings	0.27	103170	0	2.06	1.6
Replacement of 200 Nos 250 W SON-T Fittings with 120 W Street Light at Bagging area & Plant Roads in Offsites	0.37	49309.0	0	0.99	4.5
Replacement of 2400 Nos 36 W, 4 Feet Tube Lights with 19 W, 4 feet Tube Lights at Bagging floor & Offsite area	0.42	77378.0	0	1.55	3.3
Replacement of 15 Nos 1000 W Tower Light Fixtures from Towers of Boundary wall with 300 W Flood Light	0.16	19913.0	0	0.40	4.8

Major Energy Conservation Measures in Phulpur-I Unit: 20 - 21

Name of Energy saving Projects	Investment (INR Million)	Electrical Savings (kWh)	Thermal Savings (Million Kcal)	Saving (INR Millions)	Pay Back (Month)
Online cleaning of aMDEA Solution Solution Plate Type Heat Exchanger (1107-C) in Ammonia-I Plant	0.19	0.0	1029.5	1.59	1.4
Replacement of 150 Nos of 400 W HPMV / Metal Halide Bay Light Fixtures from Township Street light with 200 Nos. 70 W Crompton make LED Street light fixtures	0.19	73642.0	0.0	1.26	1.8
Replacement of 30 Nos of 400 W HPMV / Metal Halide Bay Light Fixtures from Utsav Griha and A type quarters in Township with 250 W Crompton make LED Flood light fixtures	0.10	7204.0	0.0	0.12	10.0
Replacement of 100 Nos 150 W old High Pressure Sodium Fixture from Township with 70 W Crompton make LED Street light fixtures	0.12	12807.0	0.0	0.22	6.5
Replacement of 10 Nos 80 W Fluorescent tube Lamp from Administration Building with 40 W Recess / Suspended LED Fitting	0.01	699.0	0.0	0.01	12.0
Replacement of 47 Nos. 80 W Fluorescent tube Lamp from Central Canteen Building with 40 W Philips make Recess Mounting LED Luminaire	0.04	6567.0	0.0	0.11	4.4

- Methanator Feed heater (104-C) is used to heat Methanator feed gas and cool High Temperature Shift Converter gas before sending to Low temperature Shift Converter Section.
- The fluid circulated in Shell side of the Heater is Methanator feed gas and in the tube side is High Temperature Shift Effluent gas. The operating pressure on the Shell side and Tube side are 27.4 kg/cm² g and 29.9 kg/cm²g respectively.
- The exchanger was in service since inception. Due to leakages in tubes, CO and CO₂ slip occurred from tube side to shell side resulting process gas contain higher CO and CO₂ feed to Methanator.
- So, more hydrogen was consumed to convert CO & CO₂ to methane in Methanator resulting indirectly losing of Ammonia production as hydrogen was consumed.
- It was decided to replace the Methanator Feed Heater with a new one. The Heater was replaced during the Annual Turnaround in May 2022.





Before

- After replacement of New Methanator Feed Heater, the ammonia production is increased and annual thermal energy saving from the scheme was 28310 Gcal. The investment for the scheme was 123 Lakhs.



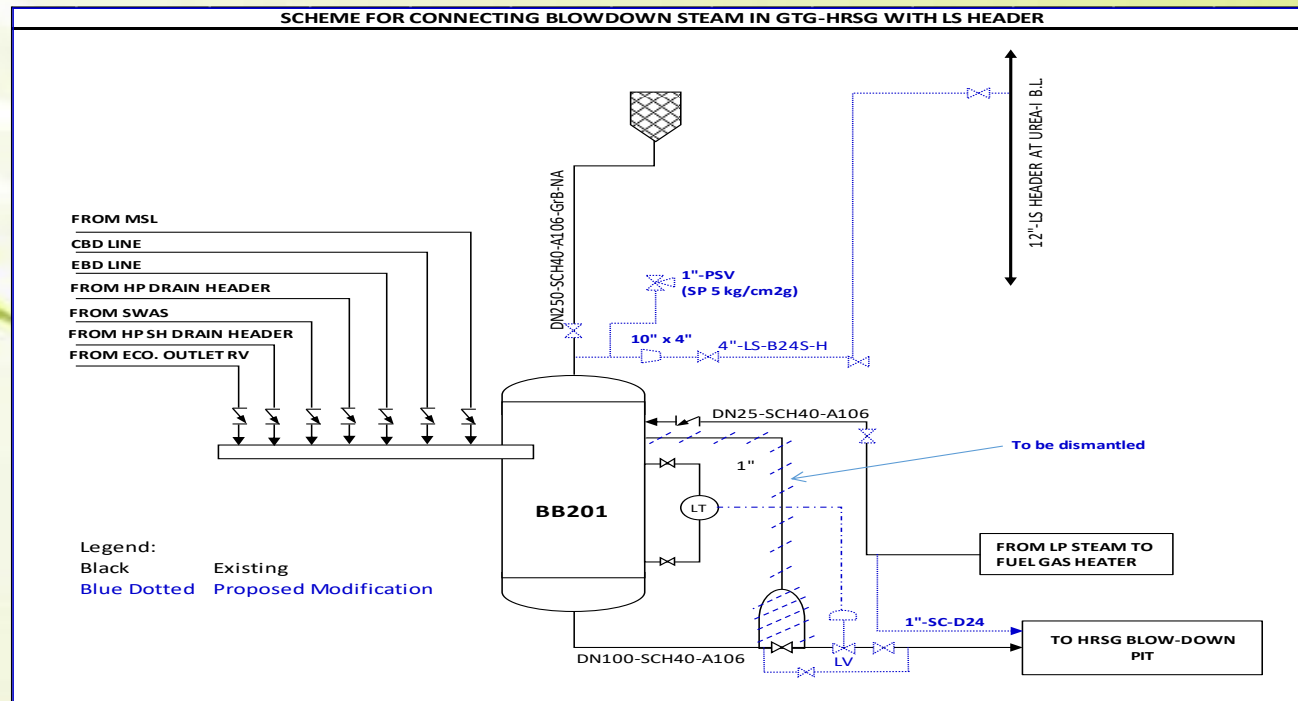
After

- Specific Feed, Fuel, Steam and Power Consumption of Plants is monitored on daily basis.
- Based on design data corrective measures are taken on daily basis to run the plant at optimum efficiency.
- Other important parameters like, Turbine, Compressor and Reactor's Efficiency, each Reactor's differential pressure, proper utilization of Turbine condensate, waste management, preventive maintenance of critical machinery, stack temperature of various furnaces and Turbine exhaust pressure are monitored to achieve the lowest overall plant energy.
- Due to these measures, overall energy per MT of Urea has been realized.
- Annual saving comes of 1045.2 Gcal and in terms of Rs. 48.1 Lakhs.



Innovative way for utilization of Blow down Steam of Gas Turbine Heat Recovery Steam Generation Unit (GT-HRSG) :

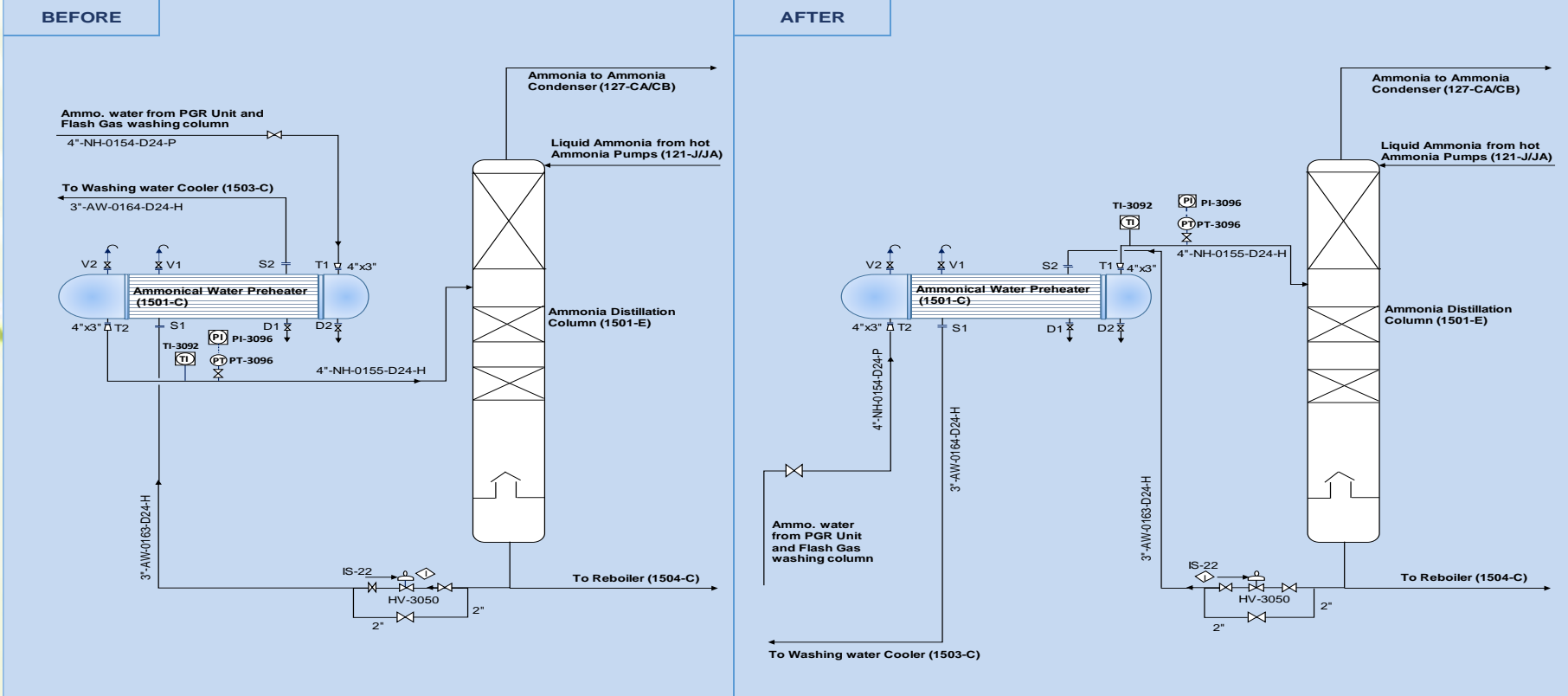
- Previously, the blow-down from HRSG of GTG was flashed in a Blowdown Tank at atmospheric pressure and the flash steam was being vented to atmosphere at the top of Steam Drum Floor of HRSG.
- For energy saving and utilization of low-grade heat loss in the complex, it was proposed to generate Saturated low-pressure Steam at 3.5 kg/cm²g & 148 °C by flashing the blow-downs from the HRSG in the same tank and connect the outlet line to 12" Low pressure Steam Header near Urea-I Plant B.L.
- The Scheme was implemented, and annual thermal energy saving is 1425.3 Gcal. The investment for the scheme was 6.5 Lakhs.



Innovative way to Change orientation of inlet/outlet nozzle of Ammoniacal water pre-heater (1501-C) in Ammonia-I Plant :

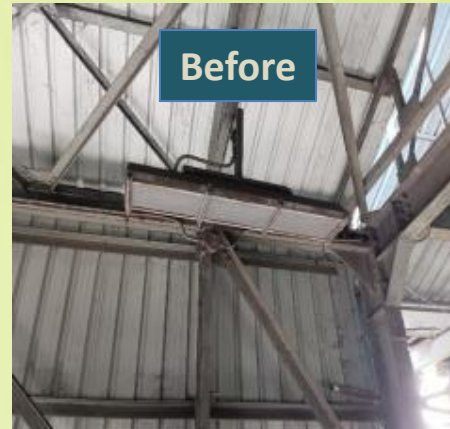
- In earlier orientation of both hot side (treated water) and cold side (ammoniacal water), there was a chance of vapor locking resulting the temperature of heated ammoniacal water to distillation column was much lower against PFD figure, which corresponds to higher MP Steam consumption in Ammonia Distillation Column (1501-E) to strip out ammonia from ammoniacal water.
- In present orientation, the heated ammoniacal water from pre-heater exit from the top of the tube side in preheater and treated water from 1501-E enter at the top of shell side of the Preheater.
- After implementation, saving of MP steam in Re-boiler realized. Due to this modification the energy saving is 4709.8 Gcal. The investment is less than one Lakh.

Scheme to change the orientation of Ammonical Water Preheater (1501-C) in Ammonia-I Plant



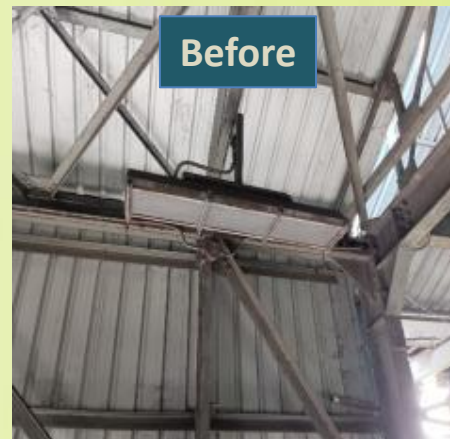
1. Replacement of 150 Nos 80 W Well Glass Luminaire with High Pressure Mercury Vapour Lamp with 45 W Well Glass Luminaire LED Lamp at Coal Conveyers 2, 4 and Crusher House:

To reduce the energy consumption, 150 Nos 80 W Well Glass Luminaire with High Pressure Mercury Vapour Lamp with 45 W Well Glass Luminaire LED Lamp at Coal Conveyers 2, 4 and Crusher House. Annual saving comes to 15966



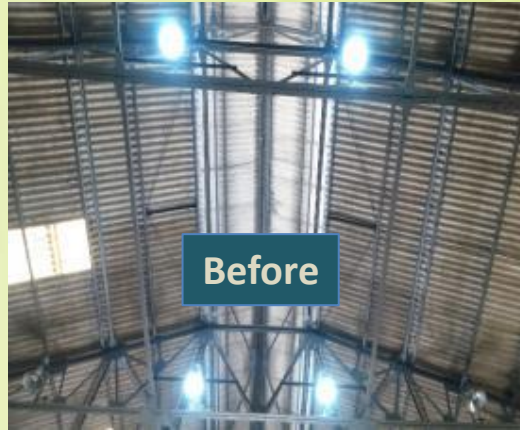
2. Replacement of 100 Nos 80 W Double Open Channel Type Luminaire (Tube Rod) of Fluorescent Lamp with 45 W Well Glass Luminaire LED Lamp at Coal Conveyers 5 and 6:

To reduce the energy consumption, 100 Nos 80 W Double Open Channel Type Luminaire (Tube Rod) of Fluorescent Lamp with 45 W Well Glass Luminaire LED Lamp at Coal Conveyers 5 and 6. Annual saving comes to 10644 kWh.



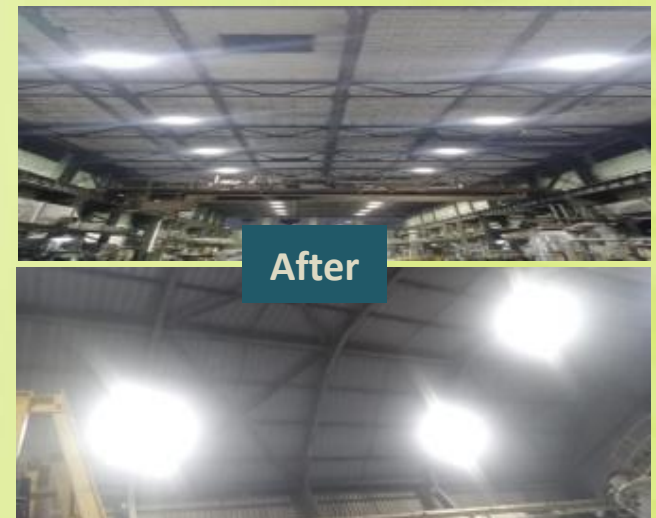
3. Replacement of 130 Nos 250 W HPMV Flood light fixture with 105 W LED Flood light fixture at Electrical and Mechanical Workshop:

To reduce energy consumption, 130 Nos 250 W HPMV Flood light fixture with 105 W LED Flood light fixture at Electrical and Mechanical Workshop. Annual saving comes to 57327 kWh.



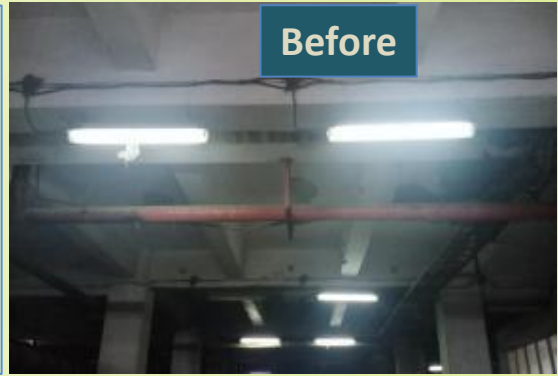
4. Replacement of 100 Nos 400 W HPMV Flood light fixture with 135 W LED Flood light fixture at TG Floor, AMF-2, Compressor House-2 and Pump House 1 & 2:

To reduce energy consumption, 100 Nos 400 W HPMV Flood light fixture with 135 W LED Flood light fixture at TG Floor, AMF-2, Compressor House-2 and Pump House 1 & 2. Annual saving comes to 80592 kWh.



5. Replacement of 250 Nos 72 W Fluorescent fixture with 38 W LED 2x19 W Tube light fixture at Bagging-1 & 2 Slat area and Platform area:

To reduce energy consumption, 250 Nos 72 W Fluorescent fixture with 38 W LED 2x19 W Tube light fixture at Bagging-1 & 2 Slat area and Platform area. Annual saving comes to 25850 kWh.



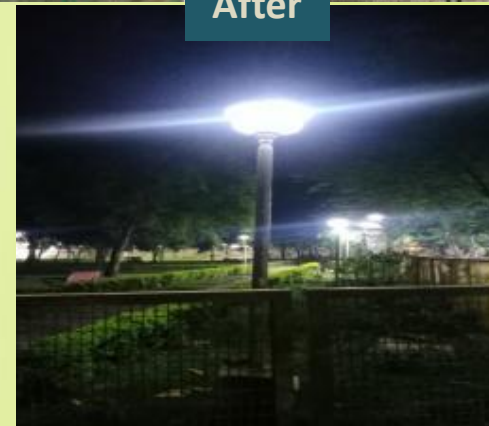
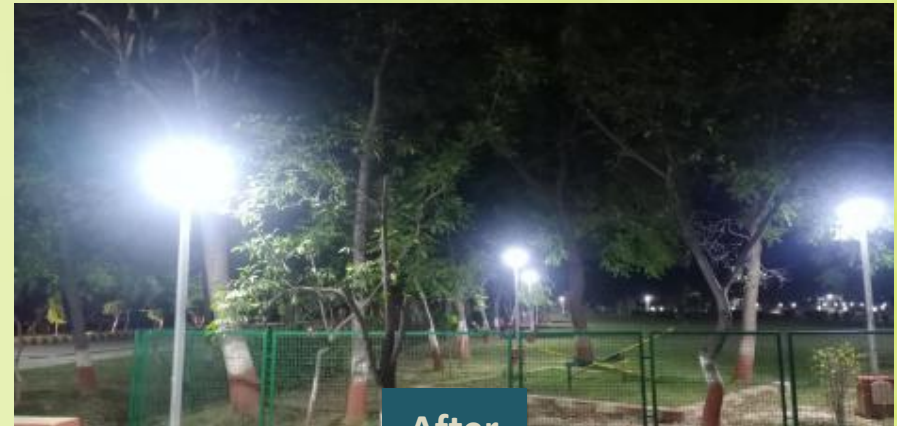
6. Replacement of 178 Nos 70 W Well Glass fixture of Sodium Lamp with 45 W Well Glass fixture at Bagging-2 Silo and Conveyor gallery:

To reduce energy consumption, 178 Nos 70 W Well Glass fixture of Sodium Lamp with 45 W Well Glass fixture at Bagging-2 Silo and Conveyor gallery. Annual saving comes to 13533 kWh.



7. Replacement of 100 Nos 70 W Post top lantern HPSV type with 45 W Post top lantern fixture at Maitri Park, Guest House walkway, Bharadwaj Park in Township:

To reduce energy consumption, 100 Nos 70 W Post top lantern HPSV type with 45 W Post top lantern fixture at Maitri Park, Guest House walkway, Bharadwaj Park in Township. Annual saving comes to 3802 kWh.



UTILISATIONS OF RENEWABLE ENERGY RESOURCES



Bagging Top Floor



Roof of Central Canteen



Raw water Pump House



Roof of Control Room



Solar Unit at Plant

Solar Power Pack:

- Total 585 KWp Solar power pack installed in Phulpur –I Unit and is connected to the LT Grid.
- The Solar Power Units are in continuous operation generating Electric Power there by reduction of CO2 emission.
- Solar light installed at different locations inside the plant and as well as township also.

Year	Technology (Electrical)	Type of Energy	Onsite / Offsite	Installed Capacity (MW)	Generation (Million kWh)
FY-2020-21	Solar PV System	Electrical	Onsite	0.585	0.742
FY-2021-22	Solar PV System	Electrical	Onsite	0.585	0.710
FY-2022-23	Solar PV System	Electrical	Onsite	0.585	0.639

Solar Water Heaters

6 Nos. of Solar Water Heater installed in Guest House.

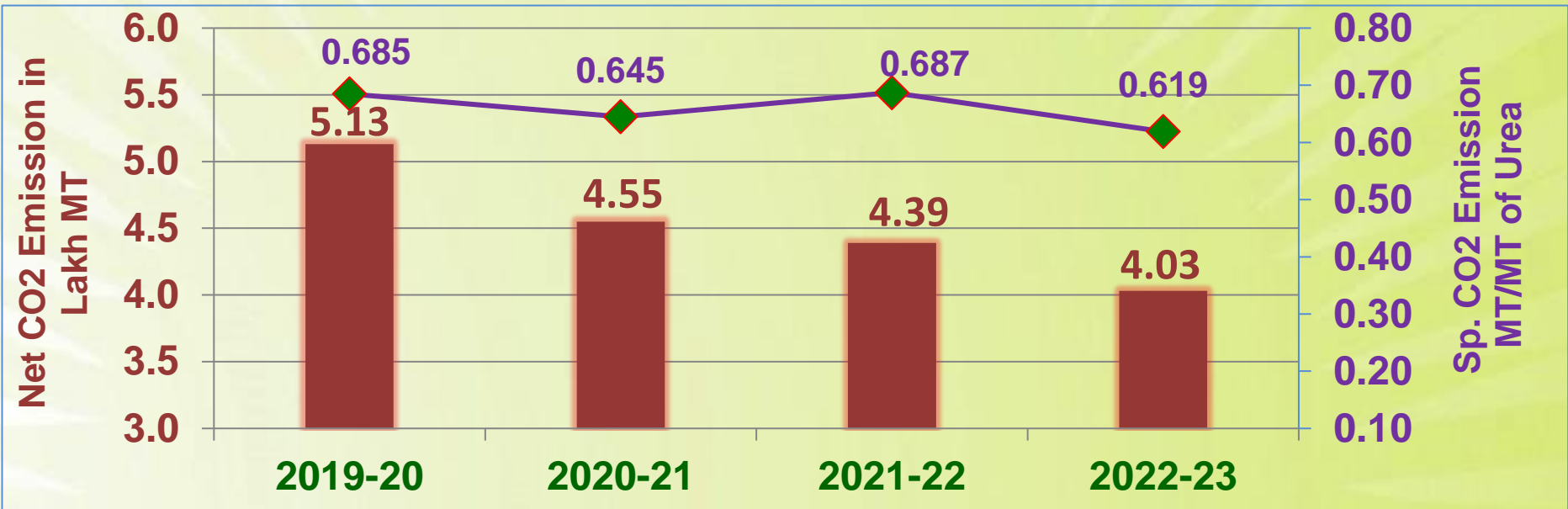


Bio-Methanation Plant



Carbon Foot Print

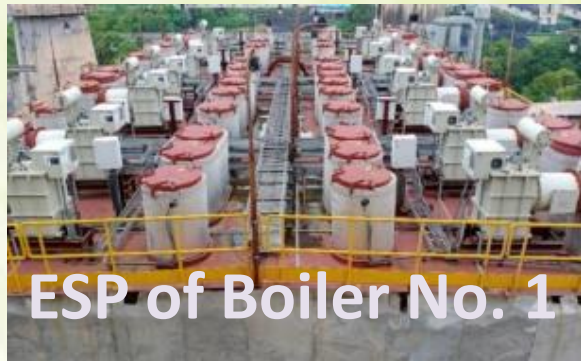
Our endeavours for every year is to reduce specific energy consumption, which will also result in lesser CO2 emissions. We have also installed solar power plants which also reduce CO2 emission.



- In Phulpur Unit, Carbon Di Oxide Recovery (CDR) Plant of 450 MTPD capacity installed in the year 2006-07, to recover CO2 from flue gases of Ammonia-II Plant primary reformer furnace. This CO2 is consumed in both Urea-I and Urea-II Plants.
- We have also installed solar power plants at different locations inside the Plants such as at the roof of Bagging Plant, Raw water storage tank, roof of central canteen and roof of plant control rooms to reduce CO2 emission.



New Electrostatic Precipitator (ESP) in Coal Fired Boilers



ESP of Coal fired boilers were very old and their performance was deteriorated in due course of time and needed improvement. So, new ESP installed in both Boiler 1 & 3. In next year, we have planned for installation of ESP of Boiler no. 2 also.

WASTE DISPOSAL IN POWER PLANT

Dry Fly Ash Disposal



- Fly Ash Generated in Power Plant being gainfully utilized by Cement industries.
- Fly Ash also used for Brick Making at in-house Fly Ash Brick Plant. Brick is used for Paving & Boundary walls and for Usar land reclamation. This bricks are also provided for renovation of schools in nearby villages with free of cost.

Fly Ash Brick Plant



Installation of Ammonia Sensor in Plants:



- To monitor ammonia leakage, ammonia sensor is installed at strategic locations of Ammonia-I, Urea-I and Ammonia Storage Tank area of IFFCO Phulpur-I Unit.
- In case of any leakages in the plants, the Panel operator shall identify the location of Ammonia Leakage and take action accordingly to arrest the leakage.
- Water curtain has been provided at the periphery of the control room as well as ammonia feed pumps for safety of the Plant personnel.

Rejection water of Reverse Osmosis Plant used in Coal yard in Phulpur Unit:



We are using cooling tower blowdown for RO Feed. The recovered RO product is being used in softening plant as make-up water and the reject water is being used in coal yard to suppress the coal dust. The Plant Capacity is 3000 M3 /day (Recovery 85 %).

Sewage Treatment cum Recycle Plant:



The sewage generated in Plant Township is treated in Sewage Treatment Plant and is being used for irrigation purpose at Farmland at CORDET. The Plant Capacity is 125 M3 / hr.

Waste Disposal from Horticulture and Kitchen:



Bio-degradable wastes from kitchen and horticulture are converted into very good manure by vermi composting System. The manure is used in horticulture, green belt area & 150 Acres farm land at CORDET area.

Rainwater Harvesting System:



Total 5 Nos. Rainwater Harvesting systems are installed in township. IFFCO is also planning to install more Rainwater harvesting systems at different locations.



PM (Particulate Matter) Monitoring System in Boiler ducts:

IFFCO Phulpur Unit is measured and monitored the Particulate Matters (PM) in Boiler ducts and maintained within permissible limit.



Installed Transmitter & Receiver on Boiler Duct and Local Display

Installation of Vent Silencer in Ammonia-I Plant to Reduce Noise Pollution:



- Phulpur-I Plant commissioned in the year 1981. For safety of the Plant there are several vent valves and PSVs are provided. The vent valves are connected to a vent header.
- During start up, shutdown and any other abnormal condition of the plant, the gas has to vent through the vent header and created noise, as there was no vent silencer.
- To reduce the noise pollution, the vent silencer provided in Ammonia-I Plant.
- It has planned to install more silencer for noise creating vent such as start-up heater vent in Ammonia plant.



IFFCO Phulpur has taken care of Energy optimization right from Procurement process among Vendors / Suppliers / Contractors

- ❖ The Evaluation of a Bid is done based on Operating Cost
- ❖ Loading is being done to take care of the Performance and Productivity of equipment offered.
- ❖ In case the consumption of utilities is different for different Bidders. Extra operating cost over the minimum one shall be calculated as below for loading.

Operating cost = Difference in utilities consumption x Unit cost of Utility x 8760 x 0.9 x 5.5860 x N

Where:

8760 is number of available hours in a year

0.9 is availability factor

5.5860 is discount factor at an interest rate of 10% per annum for one year erection/commissioning and ten years operational period.

N is the number of operating equipment items.



EMS System and other requirements:

Employee Engagement:

- ❖ IFFCO Phulpur Unit encourages its employees through Suggestion Scheme to give ideas of energy conservation.
- ❖ In our Unit, We have online suggestion scheme portal for all Employees. All Employees (Workman & Supervisor Level) participated the Suggestion Scheme Awards. The selected candidate awarded in in-house /National / International level.
- ❖ Energy Efficiency & Awareness Training programme is being conducted time to time for betterment & smooth running of the Plant with minimum specific energy consumption.
- ❖ Apart from this, our senior official frequently interact with plant operating personnel to discuss all sorts of problems and rectify the problem for reducing the specific energy consumption of the Plant.

WEEKLY PRODUCTION AND ENERGY

Weekly Data (08th - 13th May, 2022)

Date	Phase-1					Phase-2					Overall (Phase-1 & 2)		Remarks	
	Annexure Production, MT	Annexure Energy (B.L.), Gcal/MT	Annexure Energy (Overall), Gcal/MT	Line Production, MT	Line Energy (B.L.), Gcal/MT	Line Energy (Overall), Gcal/MT	Annexure Production, MT	Annexure Energy (B.L.), Gcal/MT	Annexure Energy (Overall), Gcal/MT	Line Production, MT	Line Energy (B.L.), Gcal/MT	Line Energy (Overall), Gcal/MT		Total Line production (MT)
Theoretical Minimum Energy		4.47			2.83			4.47			2.83			
ESP Average Case	1215	7.37	2138		5.70	1898		4.47	7.17	3356	5.17	3398.80	5.46	ShutDown Details: Reason for High Energy
08 May 2022	1202.1	7.692	7.733	2180.2	5.242	5754	1877.4	7.265	7.217	3362.9	4.942	5.200	3370.9	5.228
09 May 2022	1240.0	7.552	7.629	2194.2	5.242	5733	1821.3	7.262	7.183	3347.2	4.947	5.042	3371.2	5.223
10 May 2022	1202.2	7.671	7.727	2184.4	5.229	5764	1877.5	7.268	7.226	3414.2	4.942	5.226	3376.6	5.222
11 May 2022	1206.4	7.627	7.688	2183.3	5.227	5756	1824.3	7.242	7.176	3423.5	4.941	5.227	3382.1	5.220
12 May 2022	1202.6	7.620	7.672	2183.9	5.227	5733	1823.3	7.266	7.182	3412.4	4.947	5.042	3383.3	5.212
13 May 2022	1207.1	7.671	7.721	2183.3	5.224	5767	1822.7	7.262	7.165	3423.0	4.942	5.224	3374.3	5.220
14 May 2022	1207.6	7.658	7.697	2182.4	5.225	5756	1823.3	7.262	7.213	3422.0	4.944	5.042	3374.4	5.221
15 May 2022	1203.5	7.677	7.733	2182.2	5.224	5763	1877.9	7.278	7.224	3412.0	4.942	5.226	3382.2	5.224
Weekly Data (08th - 13th May, 2022)	10643.4	7.628	7.707	15488.1	5.224	5776	1875.0	7.267	7.197	37296.9	4.946	5.042	44025.6	5.222
Monthly Data (May, 2022)	10640.6	7.628	7.706	15275.0	5.225	5768	20093.1	7.188	7.227	51986.5	4.946	5.042	58762.1	5.220
Yearly Data (Apr, 2021 to March, 2022)	52091.7	7.627	7.720	64462.1	5.227	5762	79626.8	7.248	7.410	127140.8	4.945	5.228	128262.1	5.227

Sample Weekly Production and Energy Reports



Challenges and Upgradation:

- In the current market scenario, our endeavour for the future is to improve the all-around efficiency of Plants with increased production to bring down substantial savings in the energy consumption and cost of production by ensuring reliable and sustained run of all the plants.
- The most common issue for Ammonia pumps is seal failure. To avoid breakdown of machinery, IoT system is installed at Ammonia Pumps area. To detect and mitigate this early requires understanding the root cause.
- To identify the root cause for failure, IoT system is used to identify if any changes in pumps rpm and failure. It will give alarm well in advance before failure of pump's plungers.
- The challenge to ensuring a successful predictive maintenance monitoring solution the IoT System work successfully.

Learning from CII Energy Award 2022 or any other award program:

- The objective of the awards is to recognise and Award “Excellence” in Energy Management in Industries and to facilitate sharing of information by excellent energy efficient companies.
- It is a sense of competition to motivate other plants to achieve excellence and establish futurity by pinpointing Carbon Emission Reduction initiatives focused on energy conservation.
- The Awards evaluate all kinds of new processes, products, services, technologies, and other types of innovations in a common platform. They also assess new ideas and approaches along with tangible results.



INTERNATIONAL CERTIFICATIONS



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Certificate of Registration

ENERGY MANAGEMENT SYSTEM - ISO 50001:2018

This is to certify that:

Indian Farmers Fertilisers Co-Operative Ltd.,
 Phulpur Unit,
 Ghrya Nagar
 Allahabad 212 404
 Uttar Pradesh
 India

Holds Certificate No: **ENMS 567240**

and operates an Energy Management System which complies with the requirements of ISO 50001:2018 for the following scope:

The Manufacture of Urea and Ammonia, Generation of Compressed Air, Generation of Steam through Coal Fired, Natural Gas Boilers and HRSG, Generation of Power through Steam Turbine and Gas Turbine.

For and on behalf of BSI: 
 Chris Cheung, Head of Compliance & Risk - Asia Pacific

Original Registration Date: 2020-10-25
 Latest Revision Date: 2020-12-18

Effective Date: 2020-12-18
 Expiry Date: 2023-12-17

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Information and Contact: BSI, Innovation Centre, 222, Stephenson Way, London EC2A 4DU, UK. Tel: +44 (0) 300 990 990. BSI Assurance of Conformity, registered in England under number 3665321 at 289 Chiswick High Road, London W6 4AL, UK. A member of the BSI Group of Companies.

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Certificate of Registration

ENVIRONMENTAL MANAGEMENT SYSTEM - ISO 14001:2015

This is to certify that:

Indian Farmers Fertilisers Co-Operative Ltd.,
 Phulpur Unit,
 Ghrya Nagar
 Allahabad 212 404
 Uttar Pradesh
 India

Holds Certificate No: **EMS 534419**

and operates an Environmental Management System which complies with the requirements of ISO 14001:2015 for the following scope:

The Manufacture of Fertiliser Grade Urea (including activities at Muz Lal Bahadur Shastri Training Institute, Ghryanagar Residential Township and Township Hospital).

For and on behalf of BSI: 
 Chris Cheung, Head of Compliance & Risk - Asia Pacific

Original Registration Date: 2008-07-18
 Latest Revision Date: 2020-12-14

Effective Date: 2020-09-18
 Expiry Date: 2023-09-18

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Certificate IN200600428

This is to certify that:

Indian Farmers Fertiliser Cooperative Limited
 IFFCO Station, C-1, Dist. Centre, Saket Place, New Delhi - 110017, India

Holds the minimum requirements to attain level 2:

IFA Protect & Sustain Product Stewardship Programme

To achieve the level of IFA Product Stewardship Excellence

Production of Neem Coated Urea Fertiliser/ Production of DAP, NP, NPK, Water Soluble Fertilisers

Issued on behalf of SGS: 

This certificate is valid from 01 July 2022 until 01 July 2025
 Issue 1, Certificate Area 01 July 2022

This is a multi-site certification. Additional sites (ASDs) are listed on the subsequent page.

For and on behalf of IFA: 

IFA Station Phulpur Ltd., Dist. Centre and Saket Place, New Delhi - 110017, India
 +91 (0)11 26440000 / +91 (0)11 26440001 / www.iffco.com
 www.ifa.com/ifa-cert

Page 1 of 1

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Certificate of Registration

QUALITY MANAGEMENT SYSTEM - ISO 9001:2015

This is to certify that:

Indian Farmers Fertilisers Co-Operative Ltd.,
 Phulpur Unit,
 Ghrya Nagar
 Allahabad 212 404
 Uttar Pradesh
 India

Holds Certificate No: **FM 534418**

and operates a Quality Management System which complies with the requirements of ISO 9001:2015 for the following scope:

The Manufacture and Supply of Fertiliser Grade Urea.

For and on behalf of BSI: 
 Chris Cheung, Head of Compliance & Risk - Asia Pacific

Original Registration Date: 2008-07-18
 Latest Revision Date: 2020-12-14

Effective Date: 2020-09-18
 Expiry Date: 2023-09-18

Page: 1 of 1

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Certificate of Registration

OCCUPATIONAL HEALTH & SAFETY MANAGEMENT SYSTEM - ISO 45001:2018

This is to certify that:

Indian Farmers Fertilisers Co-Operative Ltd.,
 Phulpur Unit,
 Ghrya Nagar
 Allahabad 212 404
 Uttar Pradesh
 India

Holds Certificate No: **OH&S 582315**

and operates an Occupational Health and Safety Management System which complies with the requirements of ISO 45001:2018 for the following scope:

The Manufacture of Urea.

For and on behalf of BSI: 
 Chris Cheung, Head of Compliance & Risk - Asia Pacific

Original Registration Date: 2017-12-22
 Latest Revision Date: 2020-12-14

Effective Date: 2020-12-22
 Expiry Date: 2023-12-21

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Information and Contact: BSI, Innovation Centre, 222, Stephenson Way, London EC2A 4DU, UK. Tel: +44 (0) 300 990 990. BSI Assurance of Conformity, registered in England under number 3665321 at 289 Chiswick High Road, London W6 4AL, UK. A member of the BSI Group of Companies.

Certificate IN220000028, Issue 04/22

This is to certify that:

Indian Farmers Fertiliser Cooperative Limited
 IFFCO Station, C-1, Dist. Centre, Saket Place, New Delhi - 110017, India

Holds the minimum requirements to attain level 2:

IFA Protect & Sustain Product Stewardship Programme

To achieve the level of IFA Product Stewardship Excellence

Issue 1

Production of Neem Coated Urea Fertiliser

Production of Neem Coated Urea Fertiliser

Production of Neem Coated Urea Fertiliser

Production of Neem Coated Urea Fertiliser

Production of DAP, NP, NPK, Water Soluble Fertilisers

Production of DAP, NP, NPK Fertilisers

For and on behalf of SGS: 

Page 1 of 1

Awards & Recognition



23rd CII National Award for Phulpur Unit-I in 2022



23rd CII National Award for Phulpur Unit-II in 2022



Certificate of Appreciation Under PAT Cycle -II



“National Energy Conservation Awards-2020”



FAI Best Production Performance Award-2020



22nd CII National Award for Phulpur in 2021



Greentech Energy Conservation Award in 2021



Platinum Award-Grow Care Energy Conservation 2021



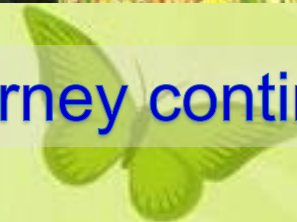
Indian National Suggestion Schemes' Association (INSSAN) Award



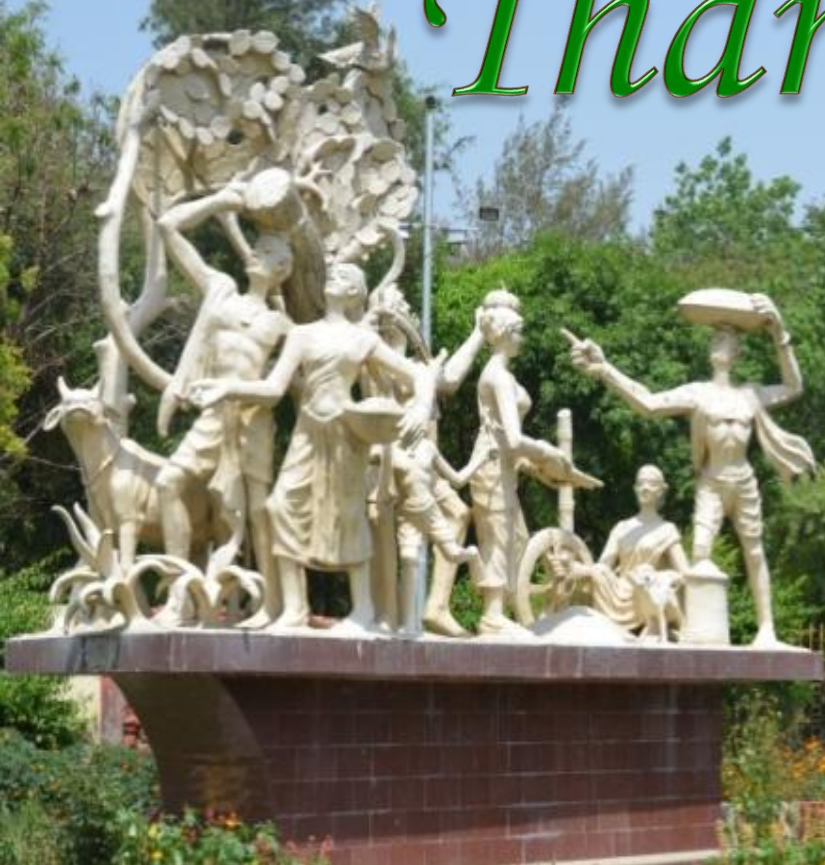
IFFCO. Bringing smile to millions



The Journey continues...



Thank You..



इफको फुलपुर
एउटा शिप विद्यालय
गण्डकी-१

Team Member:

S.K.Janghel (9410499505)

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