IFFCO

Wholly owned by Cooperatives

Paradeep Unit

WELCOMES HONOURABLE DISTINGUISHED JURY MEMBERS AND DELEGATES

22nd CII EnCON Awards 2021

DATE: 24th August, 2021

P K Mahapatra, DGM (Tech.)
Vinay Datir, Sr. Mgr. (Process)
Jyoti Prakash Dash, Mgr. (PE)

OVERVIEW OF IFFCO

IFFCO
Wholly owned by Cooperatives

Production Capacity

Urea : 42.42 Lakh MTPA

NPK/DAP: 43.35 Lakh MTPA

35,282 member Cooperatives

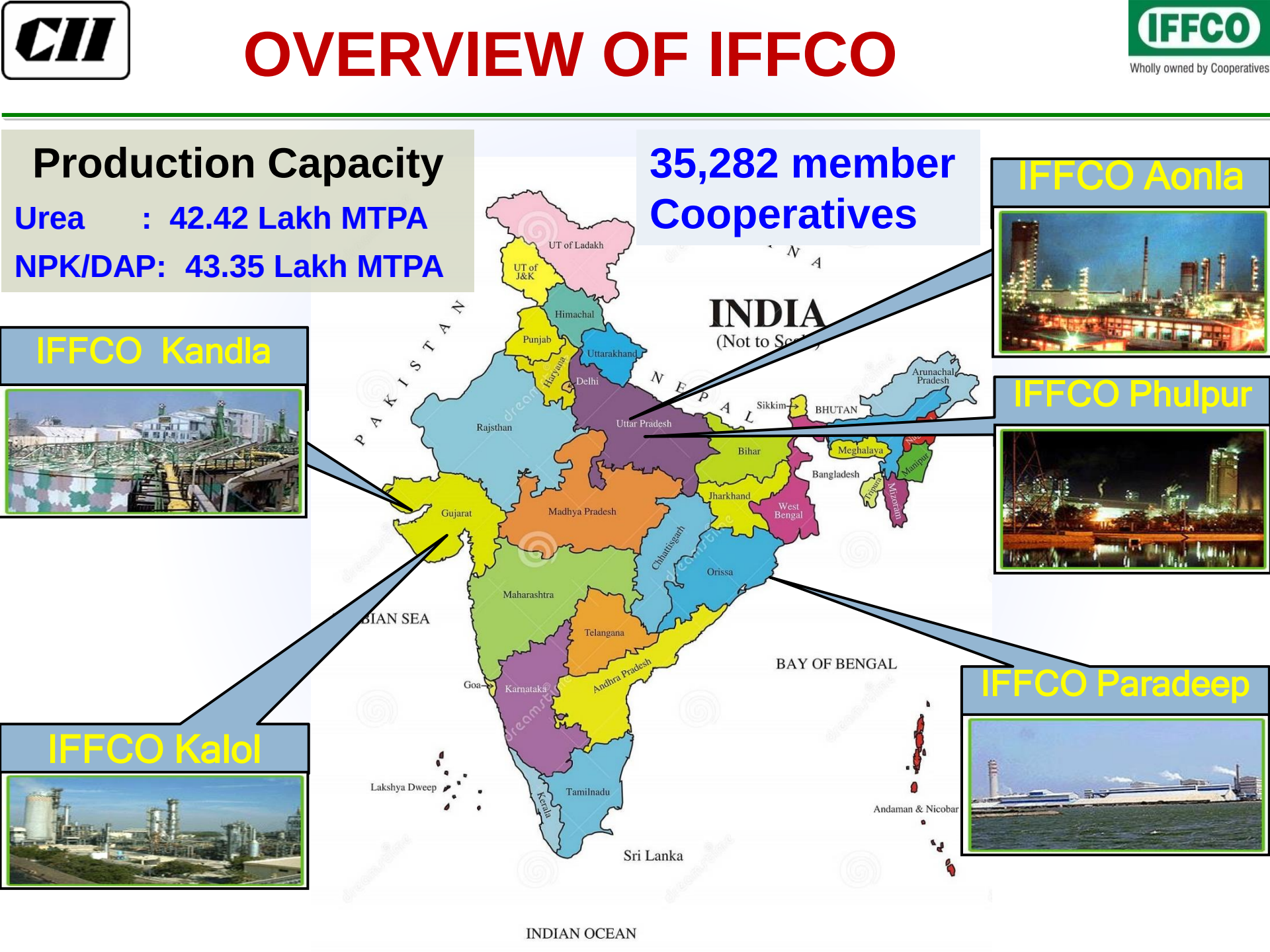
IFFCO Aonla

IFFCO Phulpur

IFFCO Kandla

IFFCO Kalol

IFFCO Paradeep



About IFFCO Paradeep

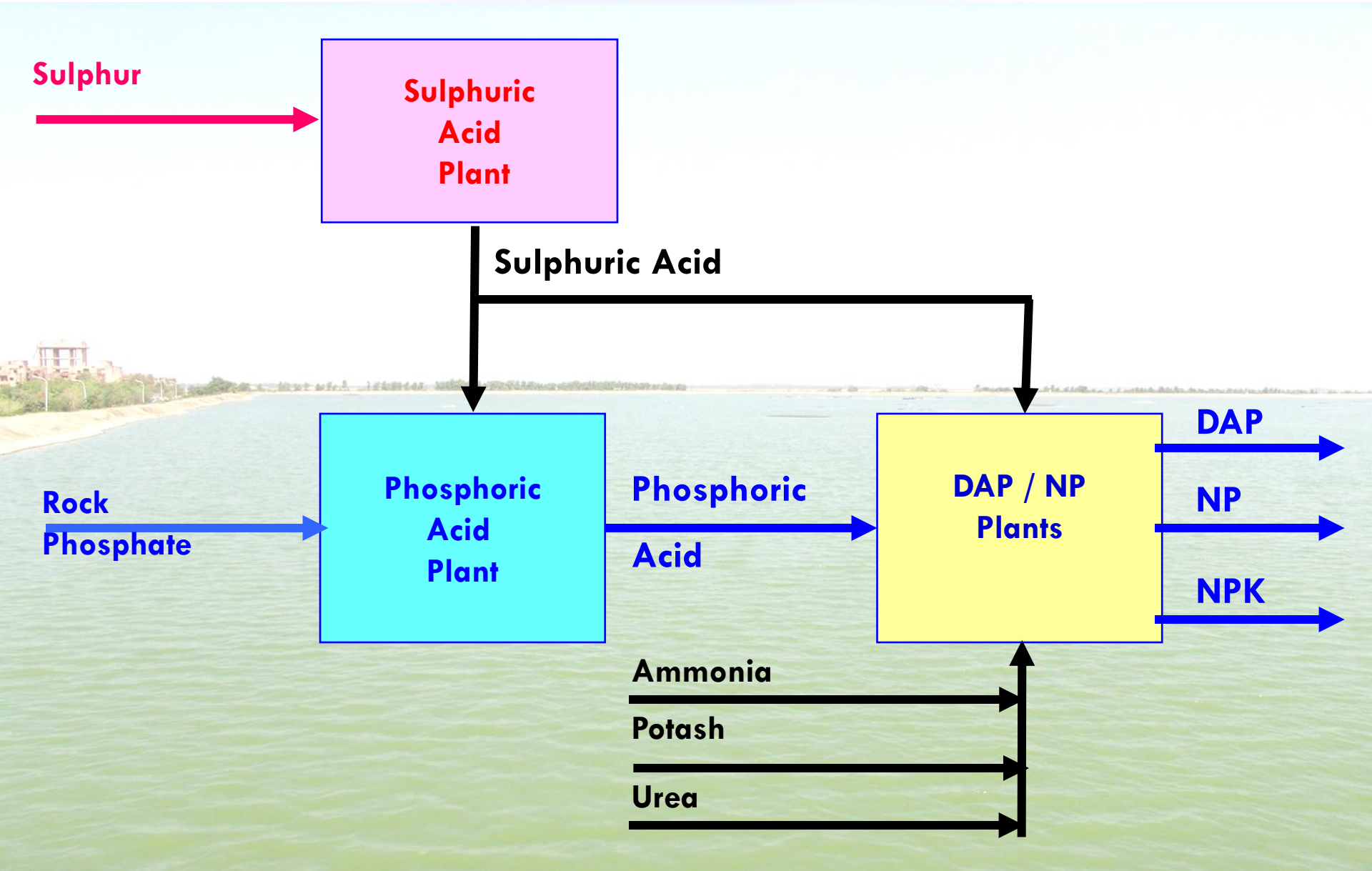
Year of Commissioning : 2000

Ownership of Plant upto 30-09-05 : OCFL

Take over by IFFCO : 01-10-2005

Product	Capacity MTPD	Technology
Sulphuric Acid	2 x 3500	Lurgi GMBH, Germany
Phosphoric Acid	1 x 2650	Jacobs Engg. USA
DAP/NP/NPK	3 x 2090	Jacobs Engg., USA
Captive Power Plant	2 x 55 MWH	LMZ Energy, Russia
Annual Production	1.92 Million tonnes	
Grades of Fertiliser	DAP (18:46:00), NP (20:20:00:13), NPK-I (10:26:26), NPK-II (12:32:16)	

Process Diagram



CERTIFIED for ISO 14001: 2015, ISO 45001:2018 & ISO 50001:2018, IFA Protect & Sustain Stewardship

IFFCO
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INDIAN FARMERS FERTILISER COOPERATIVE LIMITED

IFFCO
Wholly owned by Cooperatives

VILLAGE: MUSADIA, P.O.: PARADEEP, DIST: JAGATSINGHPUR – 754 142, ODISHA, INDIA.

Bureau Veritas Certification Holding SAS – UK Branch certifies that the Management System of the above organization has been audited and found to be in accordance with the requirements of the Management System standards detailed below.

Standards

ISO 14001:2015 & ISO 45001:2018

Scope of certification

MANUFACTURE OF PHOSPHATIC FERTILISERS LIKE DAP (DI-AMMONIUM PHOSPHATE), NP (AMMONIUM PHOSPHATE SULPHATE) & NPK (NITROGEN PHOSPHATE & POTASH) COMPLEX FERTILISER AND BYPRODUCTS LIKE PHOSPHOGYPSUM & HYDRO FLUROSILISIC ACID INCLUDING THE INTERMEDIATES LIKE SULPHURIC ACID & PHOSPHORIC ACID AND CAPTIVE POWER GENERATION OF 2x55 MW.

Original cycle start date For ISO 14001:	**15 July 2011**
Original cycle start date For ISO 45001:	**15 July 2020**
Expiry date of previous cycle For ISO 14001:	**14 July 2020**
Original cycle start date For ISO 45001:	**Not Applicable**
Recertification Audit date:	**15 May 2020**
Recertification cycle start date:	**15 July 2020**

Subject to the continued satisfactory operation of the organization's Management System, this certificate expires on: **14 July 2023**

Certificate No. **IND.20.10934U** Version : **2** Revision date: **04 October 2020**

Signed on behalf of BVCH SAS – UK Branch
Jagdheesh N. MANIAN
Head – CERTIFICATION, South Asia
Commodities, Industry & Facilities Division

UKAS MANAGEMENT SYSTEMS 0008

Certification body address: 5th Floor, 66 Prescot Street, London, E1 8HG, United Kingdom.

Local office: Bureau Veritas (India) Private Limited (Certification Business) 72 Business Park, Marol Industrial Area, MIDC Cross Road "C", Andheri (East), Mumbai – 400 093, India.

Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organization. To check this certificate validity please call **+91 22 6274 2000.**

EMS ISO 14001:2015 & OH&S MS ISO 45001: 2018

INDIAN FARMERS FERTILISER COOPERATIVE LTD.

IFFCO
PARADEEP UNIT

IFFCO TOWNSHIP, MUSADIA, PARADEEP, JAGATSINGHPUR, ODISHA – 754 142, ODISHA, INDIA

Bureau Veritas Certification Holding SAS – UK Branch certifies that the Management System of the above organization has been audited and found to be in accordance with the requirements of the Management System standard detailed below.

Standard

ISO 50001:2018

Scope of certification

MANUFACTURE OF PHOSPHATIC FERTILISERS (DAP, NP, NPK) INCLUDING INTERMEDIATES LIKE SULPHURIC ACID, PHOSPHORIC ACID AND CAPTIVE POWER GENERATION.

Original cycle start date:	**05 October 2020**
Expiry date of previous cycle:	**Not Applicable**
Certification Audit date:	**31 August 2020**
Certification cycle start date:	**05 October 2020**

Subject to the continued satisfactory operation of the organization's Management System, this certificate expires on: **04 October 2023**

Certificate No. **IND.20.5081/EN/U** Version : **1** Revision date: **05 October 2020**

Signed on behalf of BVCH SAS – UK Branch
Jagdheesh N. MANIAN
Head – CERTIFICATION, South Asia
Commodities, Industry & Facilities Division

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ISO EnMS 50001:2018

SGS

Certificate IN19/818843401

This is to certify that

Indian Farmers Fertiliser Cooperative Limited

IFFCO Sadan, C-1 District Centre, Saket, New Delhi, 110017, India

meets the minimum requirements as defined under the

IFA Protect & Sustain Product Stewardship Programme

To achieve the level of IFA Product Steward Excellence

Production of Urea, Neem Coated Urea Fertilizers/ Production of DAP, NPK Fertilizers

Detailed information is available on record at the offices of SGS United Kingdom Ltd

This certificate is valid from 11 December 2018 until 11 December 2021
Issue 1. Certified since 11 December 2018

This is a multi-site certification.
Additional site details are listed on the subsequent page

Authorised by

SGS United Kingdom Ltd. Certification and Business Enhancement Rossmore Business Park, Ellesmere Port, Cheshire, CH65 3EN, UK
t +44 (0)151 350 6666 f +44 (0)151 350 6600 www.sgs.com

SGS IFA 01 01/18 MD

Page 1 of 2

IFA Protect & Sustain Stewardship

Impact of COVID-19

- A huge number of external manpower was inside the plant premises for the shutdown jobs as IFFCO had planned its Annual Shutdown from 22nd March 2020 for a period of 21 days.
- Many equipments were already in half opened conditions.
- **Three major challenges for IFFCO:**
  - ✓ Carrying out planned annual shutdown jobs
  - ✓ Safe start-up of plants after completion of turnaround
  - ✓ Scaling up to 100% and safe operation of plant
- All of these were to be carried out under strictly regulated environment, pan India lockdown and a threat of CoViD-19.
- COVID 19 also hindered the implementation of certain energy efficiency projects due to delay in supply of items and the manpower of the suppliers were not available at site.

Last 3 year's energy performance

Major Products	2018-19		2019-20		2020-21	
	Production (MT)	Energy Cons. (Gcal/Year)	Production (MT)	Energy Cons. (Gcal/Year)	Production (MT)	Energy Cons. (Gcal/Year)
Sulphuric Acid	16,58,500	-12,97,074	17,82,780	-13,39,201	18,42,000	-12,49,853
	-0.7821 Gcal/MT		-0.7512 Gcal/MT		-0.6785 Gcal/MT	
Phosphoric Acid	6,56,500	513,956	7,22,300	525,280	7,70,500	5,59,313
	0.7829 Gcal/MT		0.7272 Gcal/MT		0.7259 Gcal/MT	
Complex fertilizer	16,53,600	7,59,995	19,30,750	8,45,554	19,88,300	8,80,773
	0.4596 Gcal/MT		**0.4379 Gcal/MT**		**0.4430 Gcal/MT**	

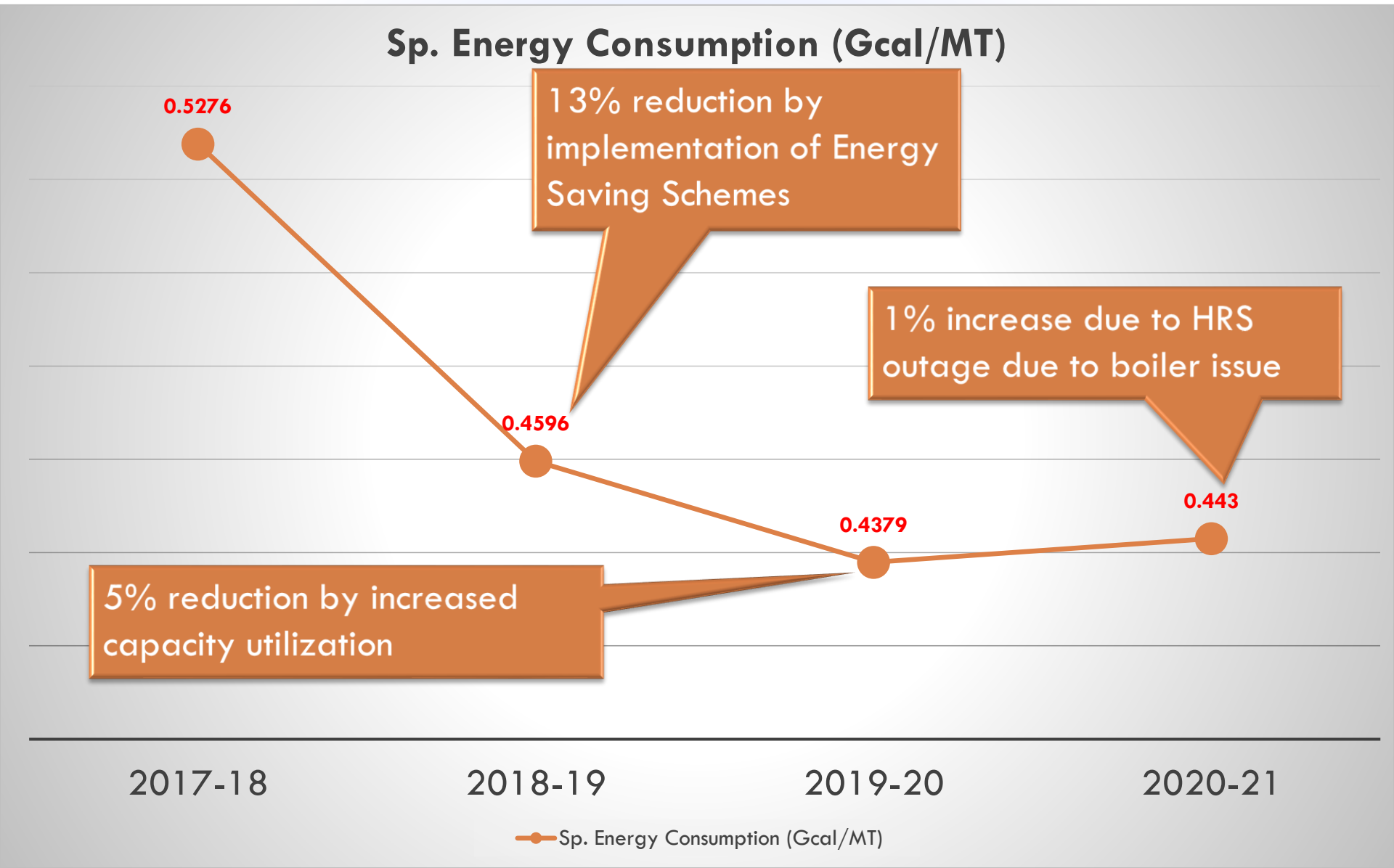
Last 3 year's energy performance

	2018-19		2019-20		2020-21	
Major Products	**Production (MT)**	**Specific Energy (Gcal/MT)**	**Production (MT)**	**Specific Energy (Gcal/MT)**	**Production (MT)**	**Specific Energy (Gcal/MT)**
DAP (18:46:00)	10,55,150	0.7258	12,78,300	0.6772	13,00,600	0.6683
NP (20:20:00:13)	5,98,450	-0.0231	6,52,450	-0.0309	6,87,700	0.0168
Total	**16,53,600**	**0.4596**	**19,30,750**	**0.4379**	**19,88,300**	**0.4430**

The overall sp. energy consumption of the plant for 2020-21 is almost same as that of 2019-20 as:

- No major energy conservation project was implemented in 2020-21 as COVID 19 resulted in delay in supply of items and manpower of the suppliers were not available at site.
- Outage of HRS due to Boiler issues.

Continual Improvement in Energy performance



Energy Conservation Schemes in last three years

Year	Energy saving projects	Investments (INR Million)	Electrical savings (Million kWh)	Thermal savings (Million Kcal)	Savings (INR Million)	Impact on SEC
2018-19	Steam saving in Ammonia Vaporization	20	0	1,30,761	96.84	19.13 %
	Smaller size impellers in SAP CW pump	5.45	2.67	0	14.43	0.31 %
	VFD for combustion air fan in DAP Plant	1.63	0.061	0	0.33	0.01 %
	AFBC Boiler FD & ID fan capacity optimization	7.81	2.01	0	10.82	0.23 %
	TOTAL	**34.89**	**4.74**	**1,30,761**	**122.42**	**19.68 %**

Energy Conservation Schemes in last three years

Year	Energy saving projects	Investments (INR Million)	Electrical savings (Million kWh)	Thermal savings (Million Kcal)	Savings (INR Million)	Impact on SEC
2019-20	Smaller size pumps in TG CW service	3.34	2.24	0	12.29	0.23 %
	High efficient LED light fixtures	9.2	0.15	0	0.89	0.02 %
	Total	**12.54**	**2.39**	**0**	**13.18**	**0.25 %**
2020-21	PAP Evap. Heat exr LMTD improvement	17.5	0	14248	24.39	**1.62 %**

STEAM SAVINGS IN AMMONIA VAPORIZATION

- Earlier LP steam consumption towards ammonia vaporization ~ 13 MT/hr in each train.
- Use of Tail Gas (TG) vaporizer in place of ammonia vaporizer. Earlier, frequent choking of TG vaporizer was observed due to use of gypsum pond water as make up in TG scrubber.
- Process water was used as makeup water in place of gypsum pond water in TG scrubber. This led to stoppage of LP steam in Ammonia Vaporizer.
- Significant reduction in LP steam consumption towards Ammonia Vaporization was achieved ~ 9.0 MT/hr in each Train.
- Yearly Savings – Rs. 9.68 crores/year (1,30,761 Gcal/year)
  (Saving in terms of coal consumption)

STEAM SAVINGS IN AMMONIA VAPORIZATION

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Ammonia Vaporizer

TG Vaporizer

Chocked tube bundle of TG vaporizer

Renewable Energy

1. Installed 3 x 10 kW = 30 kW Photovoltaic Solar pack to generate power for Administrative building.
2. Installed 100 kW Photovoltaic Solar pack on Community Centre to generate power & is connected to Grid.
3. Installed 3 Nos. Solar water heaters for hot water generation.
4. Installed solar LED Flashers for traffic lights.

Details of energy saved by substitution of Conventional Energy with Renewable Energy:

Sr. No.	Particulars	Unit	2017-18	2018-19	2019-20	2020-21
1.	Energy Generated	kWh/year	1,24,428	1,28,273	1,16,864	1,00,764
2.	Annual Savings	Rs. lakh	6.19	6.93	6.40	6.43

Renewable Energy

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Solar Panels on Administrative Building

Solar Panels on Community Centre

Solar LED Flasher lights

Utilization of Waste heat from process replacing conventional energy

- ✓ Waste Heat of Sulphur Combustion & Conversion reactions is recovered in form of High Pressure superheated steam (62 kg/cm2 g, 480 °C) & used for power generation.
- ✓ Part of Waste Heat of SO3 absorption is recovered in HRS section, in form of LP saturated steam (4.5 kg/cm2 g) and used for process heating.

Year	Type of waste heat	Quantity (MT/Year)	GCV (kcal/kg)	Waste heat as % of total energy
2018-19	Waste Heat Recovery Boiler & HRS	21,03,635	805.4	68.46 %
2019-20	Waste Heat Recovery Boiler & HRS	21,76,579	805.4	67.85 %
2020-21	Waste Heat Recovery Boiler & HRS	21,63,439	805.4	67.18 %

Waste Management System

Type of waste generated	Quantity of waste generated (MT/year)			Disposal method
	2018-19	2019-20	2020-21	
Catalyst waste	203.84	60	30.78	Storage in an impervious floor/containers under covered shed followed by disposal in secured landfill (SLF)/ (CHWTSDF) & sale to recyclers/re-processors.
Sulphur Sludge	1649	1874.5	2014	Utilized as filler in the granulation plant and any excess is disposed in secured engineering landfill site located within the plant
Fly Ash	81757	87075	97512	Utilized for land development within the plant premises for green belt development
Waste Oil	17.732	17.804	20.328	Disposed to authorized recycler

Green House Gas Emissions

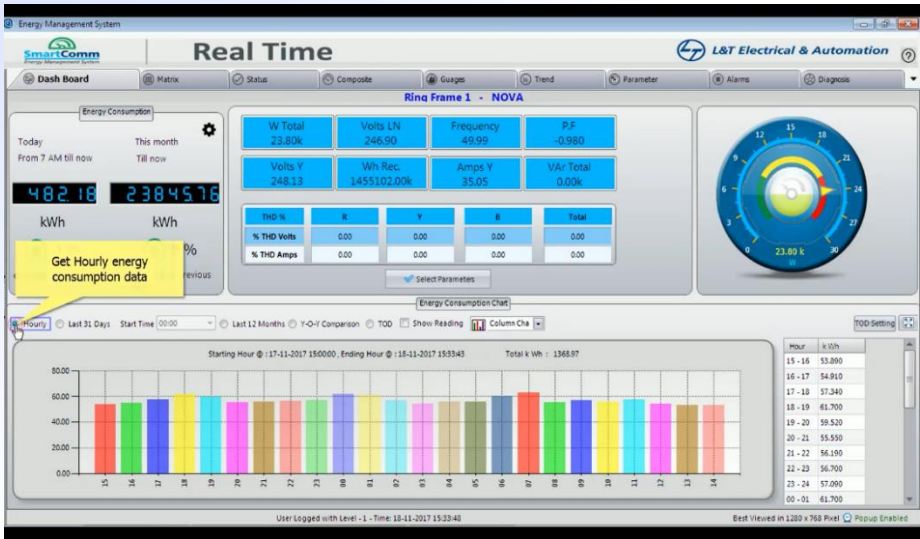
- CO_2 emission reduction is one of the Objectives in ISO 50001:2018 Energy management System
- Target for year 2022 is of 2% reduction in CO_2 emission.
- Year by year CO_2 emission:

Year	Total kg CO_2 / Ton of fertilizer
2017-18	184.8
2018-19	156.5
2019-20	137.6
2020-21	146.9

- With the implementation of projects like Steam Air Heater & Extraction Turbine, there will be further reduction in CO_2 emission by about 63.01 kg per MT of fertilizer.

Energy Monitoring

- There is a separate Budget under the head "Energy Saving Projects" dedicated for energy conservation projects.
- Energy Conservation Cell comprising of plant heads, maintenance section heads, energy manager and headed by HOD (Technical)
- Energy conservation cell overlooks energy performance monitoring, planning & implementation of energy saving measures.
- IFFCO has already installed energy meters in ALL the significant energy uses, which was an objective as per ISO 50001.
- Energy Monitoring software (Smart Comm) has been installed in DAP Plant to help in analyzing energy consumption patterns & optimization of energy consumption.



Daily Energy report

IFFCO
Wholly owned by Cooperatives

FILE | MESSAGE

Ignore | Junk | Delete | Reply | Reply All | Forward | Meeting | More | Move to: ? | Team Email | Reply & Delete | To Manager | Done | Create New

Delete | Respond | Quick Steps

Sat 14-08-2021 09:28

process_paradeep

Specific Energy Consumption for 13.08.2021

To KJ PATEL

Cc S D SHARMA; GMs-Paradeep; P K MAHAPATRA; VINAYKUMAR UPENDRABHAI DATIR; JYOTI PRAKASH DASH

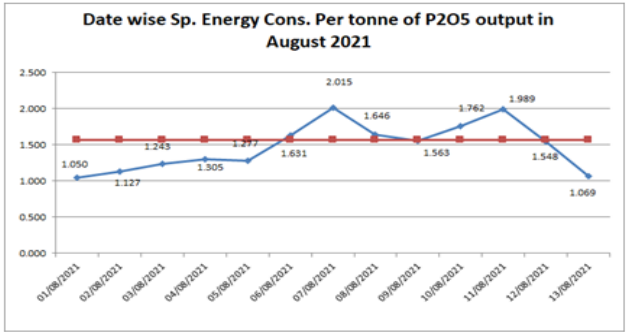
Message | Sp. Energy Cons 13.08.2021.pdf (9 KB)

Respected Sir,

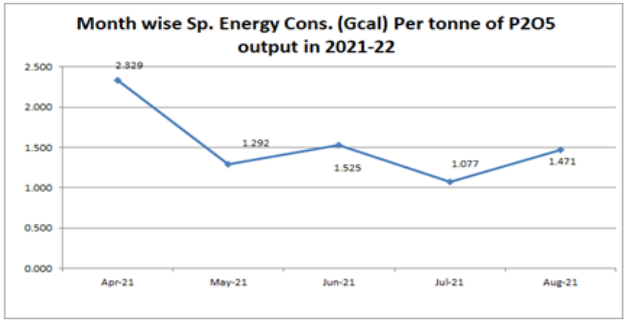
Please find enclosed herewith the specific energy consumption report for the day.

Target ORB: 1.569 Gcal / MT P2O5 output

1. Graph for Date wise Sp. Energy Cons



2. Graph for Month wise Sp. Energy Cons.



IFFCO - PARADEEP UNIT

CALCULATION OF SPECIFIC CONSUMPTION OF ENERGY

Run Date : 10/08/2020 09:40:24

For the Period 09/08/20 To 09/08/20

Some of the reference values :

Fuel	For the Period		Upto the Period	
	Density Kg/Litre	KCal/Kg or KWH	Density Kg/Litre	KCal/Kg or KWH
POWER		2860		2860
HSD	.845	11840	.845	11840
FO	.986	10050	.986	10050
COAL (Ind)		3650		3650
COAL (Imp)		5000		5000

	Particulars for Calculations of Specific Consumption of Energy	For the Period	Upto the Period
(A)	Production of DAP	5250	431250
(B)	Production of NP (20:20:00:13)	2800	207600
(C)	Production of NPK-1 (10:26:26)	0	0
(D)	Production of NPK-2 (12:32:16)	0	0
(E)	Production of NP (28:28:00)	0	0
(N)	Nitrogen output in the product	1505	119145
(P)	P2O5 output in the product	2975	239895
(K)	K2O output in the product	0	0
(O)	Total nutrient in the product	4480	359040
(Q)	Grid Power purchased	67	9427
(R1)	Coal (Ind) consumed	800	105696
(R2)	Coal (Imp) consumed	0	0
(R)	Total Coal consumed	800	105696
(S)	HSD consumed	0	326
(T)	F.O consumed (in KL)	0	0
(T1)	F.O consumed (in MT)	35	3228.575
(I)	Specific consumption of Coal per tonne of steam generated from AFBC Boiler	.266489	.266272
(II)	Specific consumption of Steam per MWH of steam generated from TG	3.700337	3.731233
(III)	Specific consumption of Coal per MWH of Power generated	.986099	.993523
(IV)	Export P2O5	0	0
(V)	Specific Consumption of Captive Power in PAP	.21419	.243485
(VI)	Captive power consumption for Export P2O5	0	0
(VII)	Coal consumed for power for Export P2O5	0	0
(VIII)	Specific consumption of LP Steam in PAP	1.631035	1.78843
(IX)	Consumption of LP Steam for Export P2O5	0	0
(X)	Equivalent HP Steam consumption	0	0
(XI)	Specific consumption of MP Steam in PAP	.22	.170676
(XII)	Consumption of MP Steam for Export P2O5	0	0
(XIII)	Equivalent HP Steam consumption	0	0
(XIV)	Total HP Steam consumption	0	0
(XV)	Coal consumed for HP Steam consumption	0	0
(XVI)	Specific consumption of Grid Power in PAP	.012707	.020618
(XVII)	Grid power consumption for Export P2O5	0	0
(XVIII)	Total Export Power	0	0
(XIX)	Coal consumed for Export power	0	0
(XX)	Total quantity of Coal deductable	0	0

	Different values for Specific Consumption of Energy	For the Period	Upto the Period
1.	Total energy consumed in the complex Gcal, E	3463.37	448460.36355
2.	Specific consumption of energy per tonne of complex fertiliser, E / (A+B+C+D+E)	.430232	.701981
3.	Specific consumption of energy per tonne of P2O5 output in fertiliser, E / (P)	1.164158	1.869403
4.	Specific consumption of energy per tonne of total nutrient output in fertiliser, E / (O)	.773074	1.249054
5.	Total energy consumed in the complex (without deduction) Gcal, E '	3463.37	448460.36355
6.	Specific consumption of energy per tonne of P2O5 output in fertiliser, E ' / (P)	1.164158	1.869403

Awareness regarding Energy conservation

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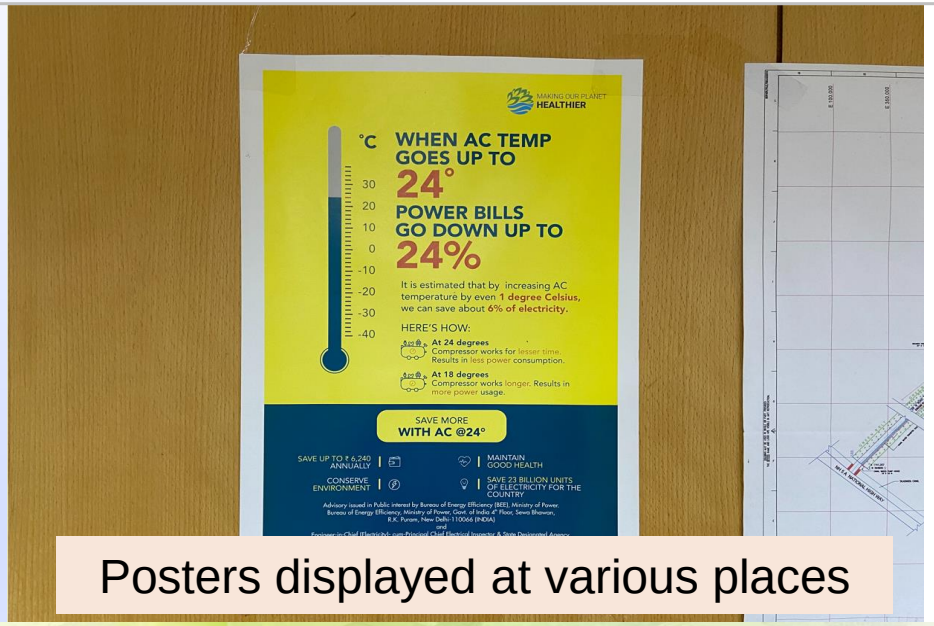
Awareness drive for school students



Posters displayed at various places

Program on Energy conservation for ladies

Energy & water conservation tips
Leaflet for township residents

Involvement of employees & Extent of team work in Encon.

- Plant refresher course is conducted for all engineers, operators and technicians twice in a year.
- Periodic Energy Audits, Continuous Monitoring, Review of Targets & Bench Marks for Energy Consumption done by Top Management.
- Identification of Potential Areas & Equipments For Energy Conservation.
- Looking For Latest Technologies, its Implementation & Up gradation.
- Employees are consistently motivated to give innovative ideas through online suggestion scheme in various fields like energy saving, safety, environment, quality, etc.
- During this pandemic time also, we had received more than 500 suggestions from the employees in 2020-21 with an equivalent savings of Rs. 3.7 crores.

ISO 50001 Energy Objectives & Targets

	INDIAN FARMERS FERTILISER COOPERATIVE LTD. PARADEEP		
IFFCO Wholly owned by Cooperatives PARADEEP UNIT	Energy Management System	Dept./ Function	MR
Document	**Energy Objectives and Targets**	Issue No & date	01 / 02.01.2017
Doc. No.	EnMS-P-03-F-03	Rev No & date	00 / 02.01.2017

Unit Level Energy Objectives & Targets

Performance Cycle: April 2019 – March 2022

Sr. No.	Objective	Unit	Base line*	Target	Completion date	Remarks
1	1% improvement in energy performance over baseline in next 3 year	Gcal/MT Fertilizer	0.499	0.494	March 2022	
2	3% improvement in energy efficiency of lighting over baseline in next 3 years	Lumens/ watt	59	60.77	March 2022	
3	Implementation of energy measurement of 100% of the significant uses in next 3 years	%	60	100	March 2022	
4	3% increase in waste heat recovery over baseline in next 3 years	%	67.82	69.85	March 2022	
5	2% reduction in emission of greenhouse gases by conservation of fossil fuels over base line in next 3 years	Ton CO_2/MT Fertilizer	0.181	0.178	March 2022	

* Base line is the average value for the years 2016-17, 2017-18 & 2018-19

		Prepared By:	Approved By:
Signature	:		
Designation	:	MR	Unit Head
Date	:	10.04.2019	10.04.2019

ISO 50001 Energy Management System

- The Unit is certified for ISO 50001:2018 Energy Management System (EnMS) since 2014.

ISO 50001 Certificate

Bureau Veritas Certification

INDIAN FARMERS FERTILISER COOPERATIVE LTD.

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Signed on behalf of BVCH SAS – UK Branch
Jagdheesh N. MANIAN
Head – CERTIFICATION, South Asia
Commodities, Industry & Facilities Division

UKAS 0008

ISO 50001 Energy Policy

IFFCO
Wholly owned by Cooperatives

Indian Farmers Fertiliser Cooperative Ltd., Paradeep Unit

ENERGY POLICY

IFFCO PARADEEP unit, having the world's largest phosphoric acid plant and manufacturing phosphatic fertilizers strives to reduce its energy consumption and Improve Energy performance

We are committed to:

- Maintain high standards of energy performance;
- Ensuring availability of information and all necessary resources to achieve objectives and energy targets;
- Complying with energy management related legal obligations and other requirements related to energy efficiency, use and consumption;
- Achieve Continual Improvement in Energy performance in our operations and the EnMS;
- Adopting proven, energy efficient and eco-friendly technologies and promoting renewable energy usage; and
- Gainful recovery of waste heat and low level of energy.

We shall achieve this by:

- Setting Objectives & Energy targets and review them periodically
- Monitor, control, report and carrying out all significant activities to endeavor higher performance;
- Conducting regular energy audit;
- Ensuring Purchase of energy efficient products, services, and design for energy performance improvement;
- Modification in existing process and machine to optimize energy consumption;
- Creating awareness for energy conservation among employees and their families;

This policy will be reviewed periodically during management reviews.

DATE: 1st October, 2019

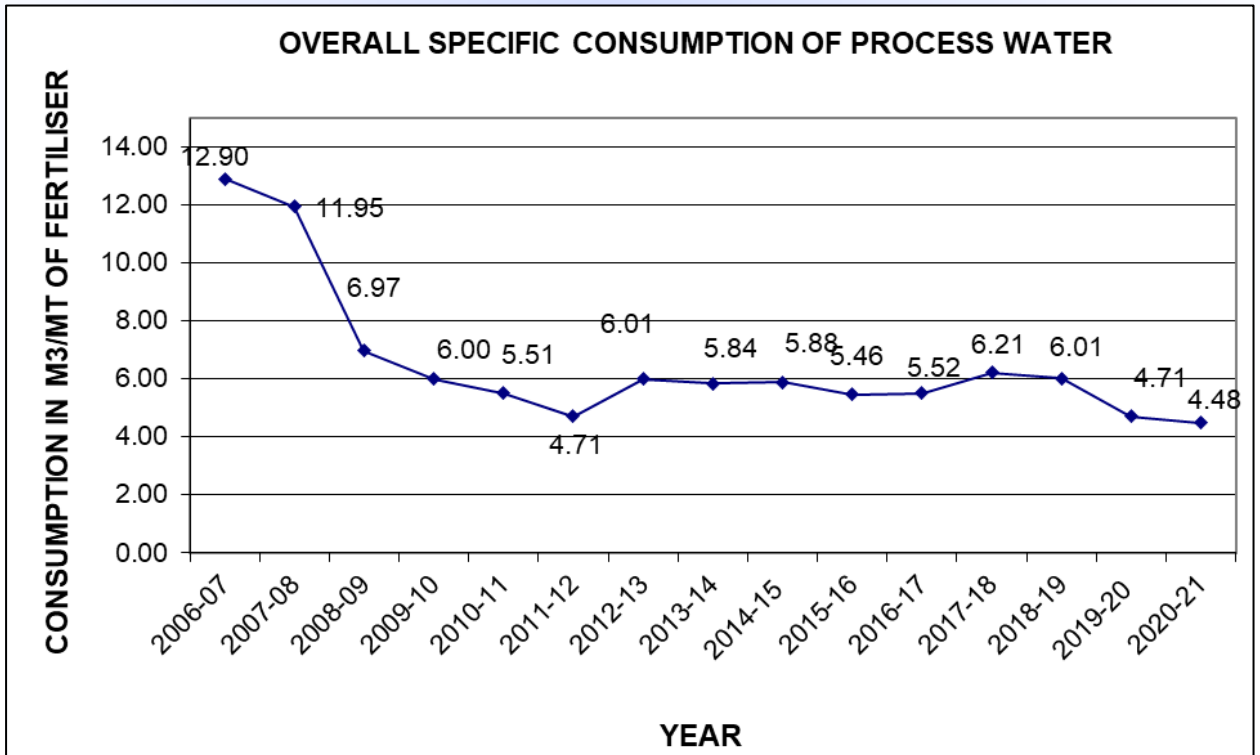
K. J. Patel
Sr. General Manager

Green Residential Township

- IFFCO Paradeep Township is a Green Residential Society **(Platinum)** certified by Indian Green Building Council (IGBC).
- Under this certification many initiatives for energy & water conservations were undertaken apart from other requirements.
- The Energy conservation initiatives were:
  - 5 star rated appliances in common facilities
  - Efficient lightning fixtures for street lights with astronomical timers.
  - Use of renewable energy.
  - Energy metering for common areas.

WATER CONSERVATION

- Water conservation is a direct form of energy conservation.
- With implementation of several water conservation measures and continuous on-going efforts the water consumption per MT of fertilizer has reduced and has a reducing trend further.
- For 2020-21 the specific consumption of water reduced to 4.48 m3/ MT of fertiliser equivalent to about 6.5 MGD.
- Water demand has been reduced from 10 MGD to 7 MGD.



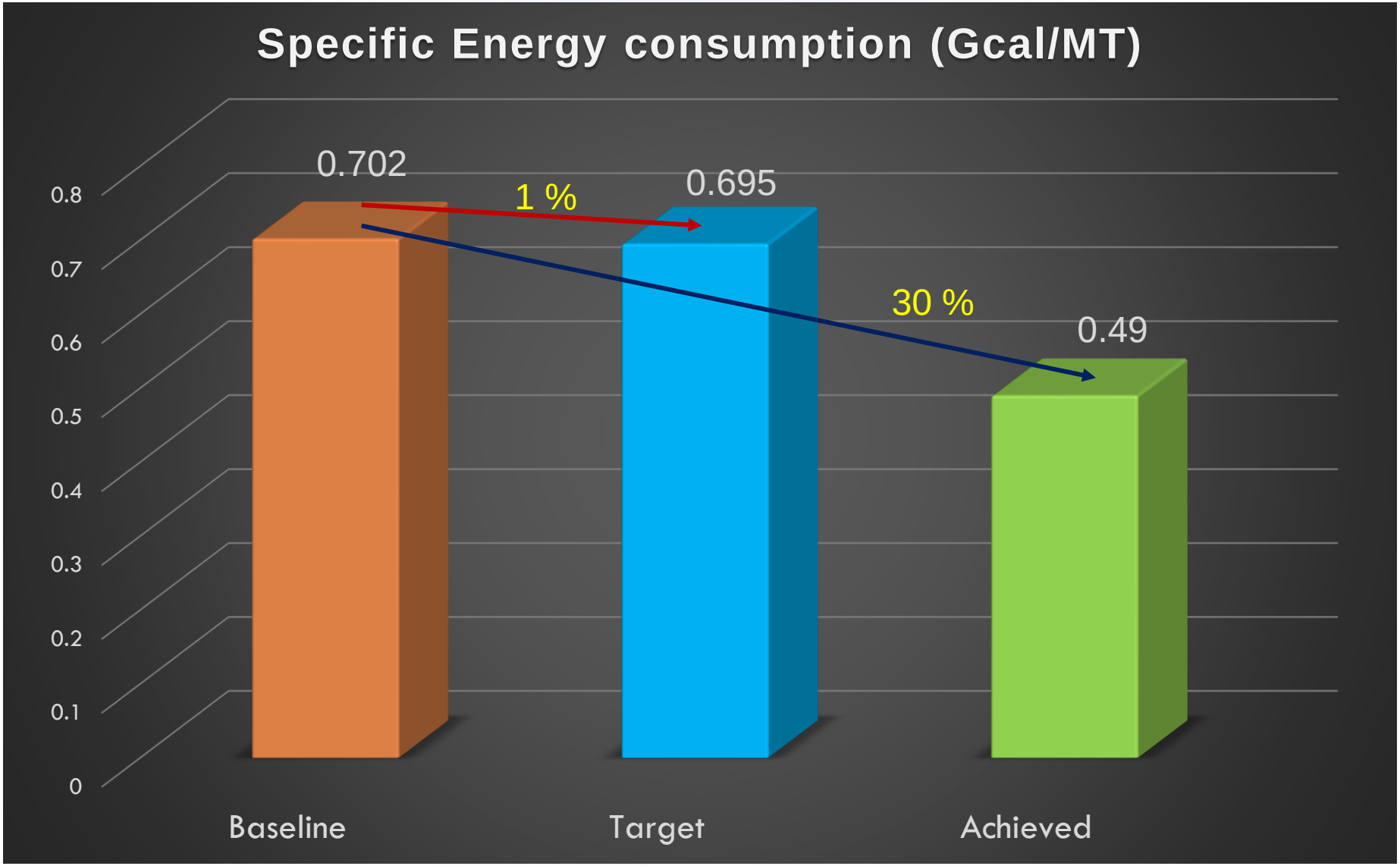
Energy saving & Renewable Energy projects for next three years

- Condensing type Steam Turbo Generator replacement with extraction cum condensing type STG. (Rs. 100 Crores)
- PAP slurry handling system modification - reduction in power consumption of ball mill. (Rs. 80 Crores)
- Installation of floating type 100 kWp solar photovoltaic panels on its Raw water reservoir. (Rs. 1 Crore)
- Steam Air Heater in DAP Train A & B to replace existing FO based combustion chamber with waste steam based heater. (Rs. 15 Cr.)
- Replacement of 144 nos. existing metal halide fittings (2X400 Watt) of high mast towers by 350 Watt LED fittings.
- Dry ice blasting for cleaning the boiler tubes to increase the heat transfer efficiency of waste heat recovery boiler.
- Replacement of old conventional motors with energy efficient motor.

PAT SCHEME

- IFFCO Paradeep Unit was included as a Designated Consumer (DC) under Perform, Achieve & Trade (PAT) scheme of Bureau of Energy Efficiency (BEE), Govt. of India, in 2nd cycle.
- The performance cycle was 3 years, i.e. 2016-17 to 2018-19 and the assessment year was 2018-19.
- Against base line Sp. Energy Cons. of 0.702 Gcal/MT target of 0.695 Gcal/MT (1% reduction) was given to IFFCO Paradeep.
- IFFCO Paradeep has achieved 30 % reduction in overall energy consumption from 0.702 Gcal/MT to 0.490 Gcal /MT (Normalized SEC).
- Total Energy Saving done by IFFCO Paradeep amounts to 3,25,320 Gcal (32,532 MT of Oil Equivalent)
- We have been issued 32,532 ESCerts from BEE.

PAT SCHEME


Specific Energy consumption (Gcal/MT)
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0.702
0.695
0.49
1 %
30 %
Baseline
Target
Achieved

AWARDS & ACCOLADES

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Winner - National Energy Conservation Award 2020

CII EnCon 5 Star Certificate

NSCI 2020 Shreshtha Suraksha Puraskar

FAI Environment Protection Award 2020

FAI Excellence in Safety 2020 - Runners up

Best Productivity Excellence Award 2020

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