

The background of the slide is a photograph of an industrial power plant. Several tall, red and white striped chimneys are visible against a clear blue sky. In the foreground, there is a dense line of green trees. The overall scene is brightly lit, suggesting a clear day.

Hands-on approach, Knowledge and Best Practices in addressing Environmental Norms

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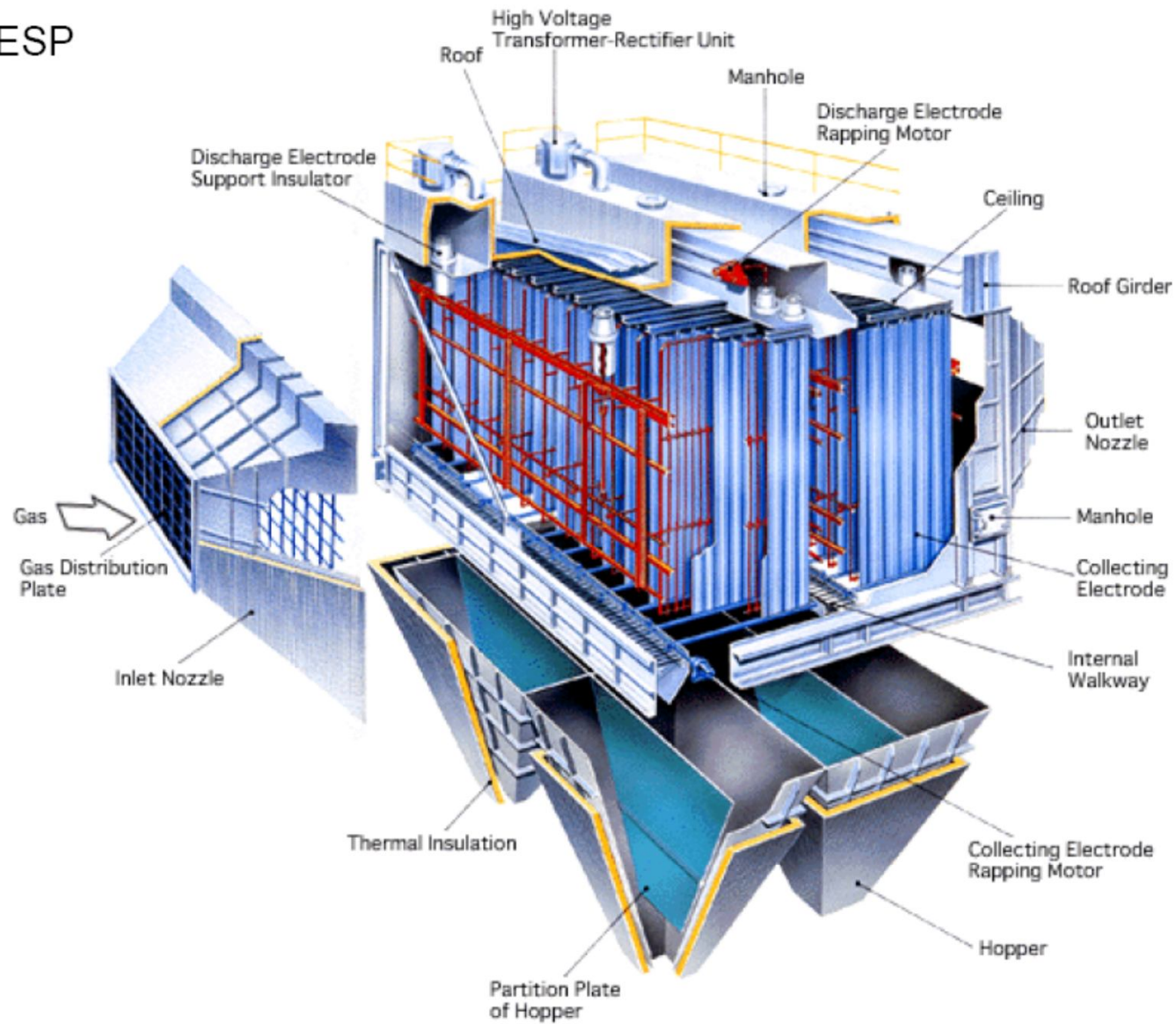
NTPC Installed Capacity

Sl.No.	NO. OF PLANTS	CAPACITY (MW)
NTPC Owned		
Coal	23	44,900
Gas/Liquid Fuel	7	4,017
Hydro	1	800
Small Hydro	1	8
Renewable energy projects (Solar PV)	11	870
Wind	1	50
Total	44	48,645
Owned By JVs/Subsidiaries		
Coal & Gas	10	8,461
Total	54	57,106

New Environmental Norms dt 07th Dec 2015

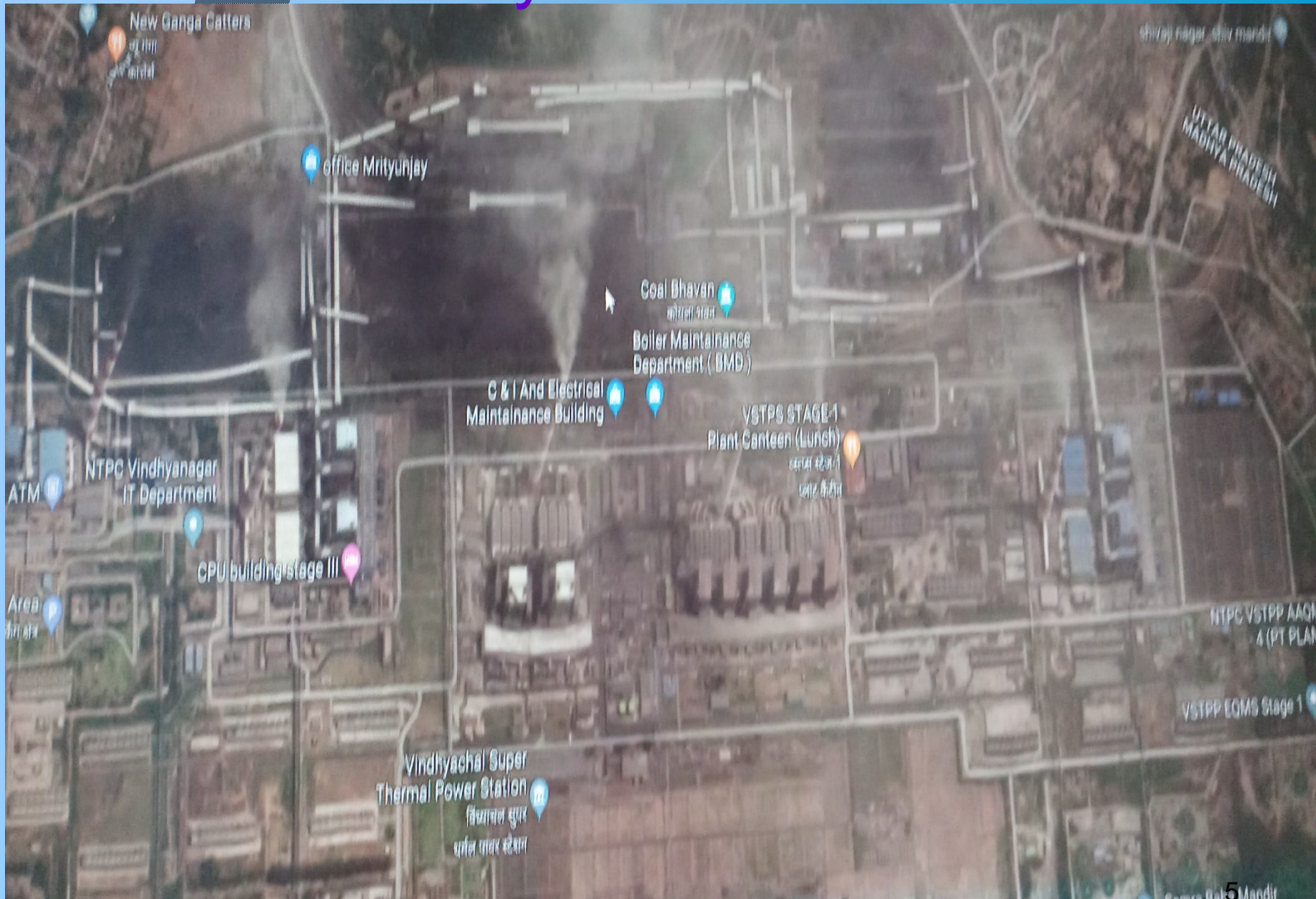
Sl.No	Emission of	Pre 31 Dec 2003	01 Jan 2004-31 Dec 2016	01 Jan 2017 onward
1	Particulate Matter mg/Nm ³	100	50	30
2	SO ₂ mg/Nm ³	600 for upto 500 MW	600 for upto 500 MW	100
		200 for above 500 MW	200 for above 500 MW	
3	Nox mg/Nm ³	600	300	100

Inside an ESP



(<https://www.indiamart.com/proddetail/retrofiring-of-electrostatic-precipitator-esp-6650529130.html>)

Vindhyachal ESP's



Vindhyachal Stg II ESP's



ESP R&M in NTPC stations



Committed to a clean environment, Renovation of ESP has been taken up at the following stations for reduction in particulate emission levels:

Sl.N o.	Station	Agency
1	Singrauli Stg I&II (5x200+2x500 MW)	BHEL
2	Korba Stg I&II (3x200+3x500 MW)	BHEL
3	Ramagundam Stg I (3x200 MW)	BHEL
4	Farakka Stg I (3x200 MW)	KC Cottrell
5	Farakka Stg II (2x500 MW)	Hamon Research Cottrell
6	Vindhyachal Stg I & II (6x210+2x500 MW)	BHEL
7	Unchahar Stg I (2x210 MW)	BHEL
8	Unchahar Stg II (2x210 MW)	NGSL
9	Kahalgaon Stg I (4x210 MW)	BHEL
10	Rihand Stg I (2x500 MW)	Hitachi (MEEP Technology)
10	Talcher Kaniha Stg I (2x500 MW)	BHEL
11	Talcher Kaniha Stg II (4x500 MW)	NGSL
12	Talcher TPS Stg II (2x110 MW)	BHEL

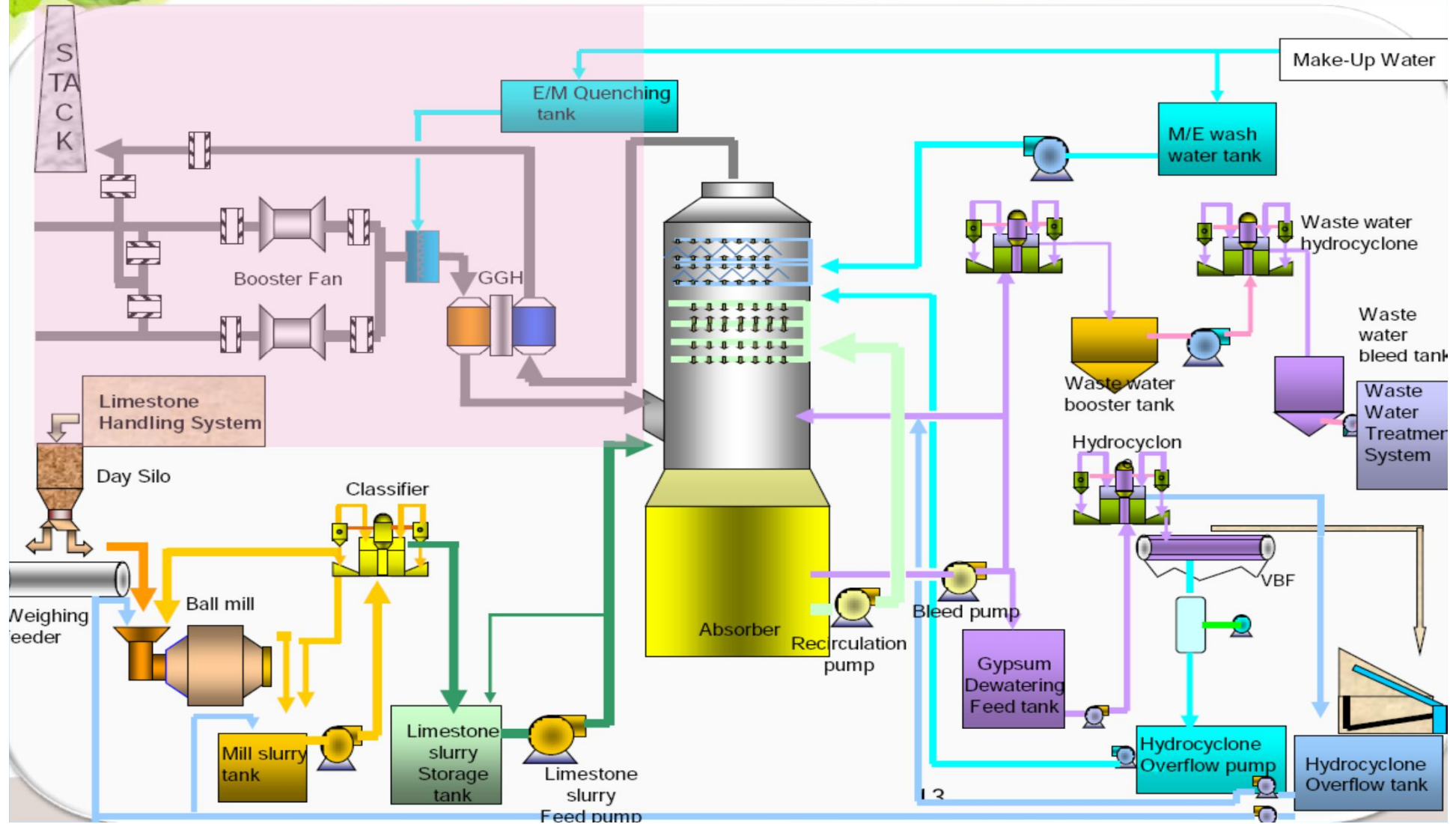
ESP R&M in NTPC stations

Total awarded MW	13460
To be awarded MW (Ramagundam Stg II-3x500 MW) (Under tendering)	1500
Total completed MW	8260



FGD in NTPC stations

Process Chart of FGD



FGD in NTPC stations

SL.No.	Station	Agency
1	VSTPS Stg V (1x500 MW)	GE Power India
2	VSTPS Stg III (2x500 MW)	L&T
3	Rihand Stg II (2x500 MW)	MHPS India
4	FGUTPP Stg IV (1x500 MW)	GE Power India
5	Simhadri Stg I&II (2x500+2x500 MW)	GE Power India
6	North Karanpura (3x660 MW)	BHEL
7	Dadri Stg II (2x490 MW)	BHEL
8	Sipat Stg I (3x660 MW)	GE Power India
9	Lara Stg I (2x800) MW	L&T
10	Darlipalli (2x800 MW)	L&T
11	Barh Stg I (3x660 MW)	BHEL
12	Barh Stg II (2x660 MW)	BHEL
13	Mauda Stg I (2x500 MW)	BHEL
14	Mauda Stg II (2x660 MW)	MHPS India
15	Tanda Stg II (2x660 MW)	GE Power India
16	Solapur Stg I (2x660 MW)	GE Power India
17	Gadarwara Stg I (2x800 MW)	ISGEC Heavy Engg. India

FGD in NTPC stations

Sl.No.	Station	Agency
18	Kudgi Stg I (3x800 MW)	ISGEC Heavy Engg. India
19	Khargone Stg I (2x660 MW)	ISGEC Heavy Engg. India
20	Telangana (2x800 MW)	GE Power India
21	Ramagundam Stg I (3x200+3x500 MW)	BHEL
22	Vindhyachal Stg I (6x210+2x500 MW)	L&T
23	Korba Stg I,II& III (3x200+3x500+1x500 MW)	BHEL
	Total Units	65
	Total MW	35280
200/210 MW	12 Units	2460 MW
500 MW	23 Units	11480 MW
660 MW	19 Units	12540 MW
800 MW	11 Units	8800 MW

DSI in NTPC stations

Sl.No.	Station	Agency
1	Dadri Stg I (4x210 MW)	MELCO India Pvt.Ltd.
2	Tanda Stg I (4x110 MW)	KC Cottrell, Seoul
	Total Units	8
	Total MW	1280
210 MW	4 Units	840 MW
110 MW	4 Units	440 MW

NO_x Control in NTPC stations

Sl.No.	Station	Agency
1	Rihand Stg II (2x500 MW)	BHEL
2	FGUTPP Stg III (1x210 MW)	L&T MHPS Boilers Pvt. Ltd.,
3	Korba Stg III (1x500 MW)	BHEL
4	VSTPS Stg III (2x500 MW)	GE Power India
5	Ramagundam Stg III (1x500 MW)	BHEL
6	Simhadri Stg II (2x500 MW)	GE Power India
7	Farakka Stg III (1x500 MW)	BHEL
8	Kahalgaon Stg II (3x500 MW)	BHEL
9	Talcher TPS Stg I&II (4x60+2x110 MW)	GE Power India
10	Bongaigaon (3x250 MW)	L&T MHPS Boilers Pvt. Ltd.,
11	Dadri Stg II (2x490 MW)	GE Power India
12	Sipat Stg I (3x660 MW)	GE Power India
13	Mouda Stg I (2x500 MW)	GE Power India
	Total Units	29
	Total MW	11380



THANK YOU