

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL SOUTHERN ZONE BENCH
AT CHENNAI**

OA No.292 of 2024

IN THE MATTER OF:

**NEWS ITEM TITLED GREENPEACE RESEARCH SHOWS AIR POLLUTION LEVELS
SKYROCKETING IN BENGALURU OTHER SOUTH INDIAN CITIES REPORT
APPEARING IN THE HINDUSTAN TIMES DATED 07 09 2024**

..... Applicant

Vs

**MINISTRY OF ENVIRONMENT FOREST AND CLIMATE CHANGE THROUGH ITS
SECRETARY AND OTHERS**

.... Respondents

REPORT FILED BY THE APPCB 4th RESPONDENT

DATE- 11.12.2024



**M/s MADHURI DONTI REDDY
ADVOCATE**

STANDING COUNSEL FOR GOVERNMENT OF ANDHRA PRADESH

A.P. POLLUTION CONTROL BOARD

#26, S2, Royal Castle, 26, Gill Nagar Extension, Choolaimedu, Chennai – 600 094.

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Email: reddymadhuri09@gmail.com

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It is certified that all the documents contained in the above annexure are true copies.

Date: 11.12.2024

Status report on the SUO MOTU matter based on the news item published in The Hindustan Times, dated 07.09.2024 under the caption "*Greenpeace research shows Air Pollution levels skyrocketing in Bengaluru, other South Indian cities:Report*" and Union of India, through Secretary, MoEF& CC and others, submitted to Hon'ble National Green Tribunal, Southern Zone, Chennai in compliance to Hon'ble NGT order 292 of 2024 (SZ) dated 26.11.2024 and earlier orders in this matter.

1. Preamble:

The Hon'ble NGT in the order dated 11.11.2024 in the case of O.A. No. 292 of 2024 (SZ) mentioned "*The case has been Suo Motu registered by the Principal Bench of the National Green Tribunal, New Delhi as Original Application No.1185 of 2024 (PB) based on the news item reported in The Hindustan Times dated 07.09.2024 titled, "Greenpeace research shows air pollution levels skyrocketing in Bengaluru, other South Indian cities: Report" and thereafter, the same has been transferred to this Bench and renumbered as Original Application No.292 of 2024 (SZ)*"

The report highlights that the study covered ten major cities in South India: Hyderabad, Chennai, Kochi, Mangaluru, Amaravati, Vijayawada, Visakhapatnam, Bengaluru, Mysuru and Puducherry. The article states that annual average PM_{2.5} levels in cities like Mangaluru, Hyderabad, Vijayawada, Kochi, Amaravati and Chennai were six to seven times higher than WHO recommended limits and four to five times higher with respect to PM10 levels in cities of Bengaluru, Puducherry and Mysuru.

The air quality of Visakhapatnam, Vijayawada and Amaravati cities is correlated with NAAQS standards notified by CPCB as being adopted for other cities in the country by the respective SPCBs.

Status of Air Quality of Visakhapatnam, Vijayawada and Amaravati

A network of 72 ambient air quality monitoring stations is in operation in the State under National Air Quality Monitoring Programme (NAMP), to assess air quality in District Headquarters, Cities & towns of which the cities of Visakhapatnam and

Vijayawada are having nine stations each.

In addition to the above, Continuous Ambient Air Quality Monitoring(CAAQM) stations were established one in Visakhapatnam city, four in Vijayawada and one in the Capital City, Amaravati near AP Secretariat, Velagapudi, Guntur District for monitoring ambient air quality.

The average concentration of Particulate Matter (PM₁₀ and PM_{2.5}) in the 3 cities reported during the last 3 years and correlation of PM₁₀ and PM_{2.5} levels for the year 2024 in comparison with NAAQS standard is tabulated below:

S.No	City	Parameter	2022	2023	2024 (uptoOct)	NAAQS Standard	Correlation of 2024 data with Standard
1	Visakhapatnam	PM ₁₀	108	129	96	60	1.6 times higher
		PM _{2.5}	43	50	37	40	Below the standard
2	Vijayawada	PM ₁₀	71	71	71	60	1.2 times higher
		PM _{2.5}	36	38	36	40	Below the standard
3	Amaravati (New Capital City of AP)	PM ₁₀	54	71	49	60	Below the standard
		PM _{2.5}	30	34	22	40	Below the standard
Units: All values are expressed in µg/m ³ NAAQS: National Ambient Air Quality Standards, 2009 notified by CPCB							

CPCB identified Visakhapatnam & Vijayawada as non-attainment cities for not meeting the PM₁₀ standard of 60 µg/m³ in the matter of OA no 681 of 2018, along with 11 other cities/ towns in the state of Andhra Pradesh. Under the Hon'ble NGT directions in matter of O.A. no 159 of 2021, the state of Andhra Pradesh has prepared State Action Plan for improvement of air quality.

Action Plans are being implemented by the respective city ULBs of Visakhapatnam and Vijayawada cities in co-ordination with the concerned stakeholder departments under National Clean Air Programme (NCAP) for improvement of air quality.

APPCB entrusted Source Apportionment (SA), Carrying Capacity (CC) and Emission Inventory (EI) studies in the non- attainment cities identified under NCAP with an aim to tackle the challenges of air pollution. Studies are in progress for Visakhapatnam city, which is constantly recording higher levels of PM₁₀ concentration due to its

geographical location surrounded by hills on 3 sides and Bay of Bengal on the East, affecting the dispersion of pollutants. For Vijayawada city, the source apportionment studies are completed and the recommended action points are being implemented by the Vijayawada Municipal Corporation.

The government of Andhra Pradesh has declared Amaravati as the new Capital City, which is covering 29 habitations across 25 Gram Panchayats in Guntur district. APPCB has installed Continuous Ambient Air Quality Monitoring station (CAAQMS) near AP Secretariat, Velagapudi, Guntur District for continuous monitoring of ambient air quality. At present, developmental activities are being revived by Government of Andhra Pradesh in the city of Amaravati.

The ambient air quality in Amaravati shows relatively positive scenario in terms of air quality. However, the relatively higher value of 71 $\mu\text{g}/\text{m}^3$ in the year 2023, compared with the previous years, could probably be an indicative of a specific event or seasonal impact. APPCB is coordinating with all the concerned stakeholder departments for implementation of National Clean Air Programme (NCAP) in the state of Andhra Pradesh for improving the air quality in all the non-attainment cities.

Further, to submit that The Hon'ble NGT is reviewing the ambient air quality status in non-attainment cities of Andhra Pradesh in the matter of O.A No.159 of 2021 and APPCB furnished its latest individual status report in the matter on 30.07.2024. APPCB submitted its report with a request to allow 3 months time to submit the revised State Action Plan. On receipt of information from the respective Stakeholder Departments, on timelines and budgetary for implementation of National Clean Air Programme, the same will be incorporated in the revised State Action Plan.

APPCB communicated State Action Plan to CPCB on 16.10.2024 for the second time along with the status report furnished to Hon'ble NGT and the suggestions from CPCB are awaited.

APPCB may be allowed further three months' time for submission of revised State Action Plan to Hon'ble NGT.

S Sri Saravanan

Member Secretary

Digitally Signed by S Sri
Saravanan
Date: 10-12-2024 12:17:13
Reason: Approved


Joint Chief Environmental Scientist
A.P. Pollution Control Board,
Central Laboratory, Head Office,
Vijayawada-520 010,

	<p align="center">ANDHRA PRADESH POLLUTION CONTROL BOARD Near APIIC Housing Colony / APMARKFED, Autonagar, Vijayawada – 520007 Phone No. 0866-2463200, Website: pcb.ap.gov.in</p>	
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Lr. No. APPCB-12022/1/2024-SS-CL-APPCB**18/07/2024****To**

- | | |
|---|--|
| <p>1 The Commissioner & Director, Municipal Administration and Urban Development, Prime Hill Crest, 05/1A, Near DGP Office, Vaddeswaram, Mangalagiri – 522502.</p> <p>3 The Special Secretary, EFS&T Department, A P Secretariat, Velagapudi, Amaravathi.</p> <p>5 The Director, Department of Mines & Geology, Sri Anjaneya Towers, D. No:7-104;B-Block, 5th & 6th Floors, Ibrahimpatnam, Vijayawada.</p> <p>7 The Commissioner, Industries Department, First Floor Government Regional Printing Press Buildings, Mutyalampadu St, Vijayawada, 520011.</p> <p>9 The Director General of Police, Kolanukonda, Mangalagiri, Guntur District.</p> <p>11 The Managing Director, New & Renewable Energy Development Corporation of Andhra Pradesh Ltd., 12-464/5/1, River Oaks Apartments, CSR Kalyana Mandapam Road, Tadepalli, Guntur district.</p> <p>13 The Managing Director, Andhra Pradesh State Disaster Management Authority (APSDMA) Genius JR Towers, D.No.21/2B, Pathuru Cross Road Center, Kunchanapalli (P), Tadepalli (M).</p> | <p>2 The Commissioner, Transport Department, APSRTC Bus Stand, NTR Administrative Block, 3rd Floor, Vijayawada – 520002</p> <p>4 The Commissioner, Civil Supplies Department, Ashok Nagar, Bandar Road, Vijayawada.</p> <p>6 The Managing Director, AP Genco, Transmission Corporation of Vidyuth Southa, Gunadala, Eluru Road, Vijayawada.</p> <p>8 The Commissioner and Director, Agriculture Department, Old Mirchi Yard, Nallapadu Road, Chuttagunta, Guntur – 522004.</p> <p>10 The Regional Director, National Highway Authority of India, Gurunanak Nagar Colony Road, Teachers Colony, Vijayawada.</p> <p>12 The Dy. Chief Controller of Explosives, M/s. Petroleum Explosive Safety Organization, D. No. 7-20-13, Kirlampudi Layout, Visakhapatnam – 530 017.</p> <p>14 The Chief Managing Director, A.P. Transco Transmission Corporation of Vidyuth Southa, Gunadala, Eluru Road, Vijayawada.</p> |
|---|--|

Guntur District – 522501.

Sir,

Sub: APPCB – Central Laboratory – National Clean Air Program (NCAP) – Hon'ble NGT Order dated 09.05.2024 in OA No. 159 of 2021 (SZ) - “– Request for updation / revising the State Action Plan (SAP) for clean air with timeline required and budgetary for implementation– Information sought - Reg.

Ref: 1. Lr. No. APPCB-12022/1/2019-SS-CL-APPCB dated, 01/08/2023.
2. CPCB Lr. CM-13013/56/2021-LAW-HO-CPCB_HO-1795 dated 13.06.2024
3. Hon'ble NGT OA No. 159 of 2021, dated 09.05.2024.

**** ** ***

Kind attention is invited to the reference 1st cited, wherein, APPCB circulated the CPCB approved revised SAP for clean air to all the stakeholder departments for implementation as per the CPCB guidelines.

Further, CPCB vide reference 2nd cited, requested SPCBs to update / revise the State Action Plan for clean air with a timeline and budgetary information as per guidelines prepared by CPCB, in the matter of Hon'ble NGT OA No. 159 of 2021 (SZ) (Copy enclosed for ready reference). The Hon'ble NGT is reviewing the implementation of SAP for clean air and the case is listed on 30.07.2024.

In view of the above, all the concerned stakeholder departments are requested to update/revise the SAP with timeline and budgetary information for implementation as per CPCB guidelines and submit to APPCB on or before 19.07.2024 so as to communicate the same to the Hon'ble NGT and CPCB.

Encls: As above.

Sincerely

B Sreedhar las

#ApprovedByDesignation

Copy submitted to

1. The Special Chief Secretary, EFS&T Department, A.P. Secretariat, Velagapudi, Amaravathi, for information.
2. The Special Chief Secretary, MA&UD Department, A.P. Secretariat, Velagapudi, Amaravathi, for information.
3. The Special Chief Secretary, Transport, Roads & Buildings Department, A.P. Secretariat, Velagapudi, Amaravathi, for information.

Status report on implementation of National Clean Air Program in Andhra Pradesh in the matter of O. A. No. 159/2021 titled: Kankana Das, Kolkata Vs Union of India, through Secretary, MoEF & CC and others, submitted to Hon'ble National Green Tribunal, Southern Zone, Chennai in compliance to Hon'ble NGT order dated 9th May, 2024.

1. Preamble:

The Hon'ble NGT in the order dated 09.05.2024 in the case of O.A. No. 159 of 2021 (SZ) directed the State Pollution Control Boards as below:4. ***“Regarding the timeline and budgetary also, the CPCB’s guideline for preparation of the State Action plan has given a provision in Para 2.3. As already mentioned that it depends upon the budget allotment for implementation, we direct the individual State PCBs and the PPCC to file their respective reports regarding the timeline required to implement the guidelines.”***.... The copy of the NGT order dated 09.05.2024 is enclosed as Annexure - 1.

2. Status Report on the implementation of NCAP activities in Andhra Pradesh

2.1 Introduction:

National Clean Air Program (NCAP) is a National level strategy launched by Ministry of Environment Forests & Climate Change (MoEF & CC), Government of India, New Delhi in January, 2019 with the goal to improve the air quality in both regional & urban scale in India with the target of reduction in PM 10 concentrations 25-30% in the next five years, 2020-21 to 2024-25.

2.2 Identification of Non-attainment cities in Andhra Pradesh:

Central Pollution Control Board (CPCB) initially has identified five (5) cities viz., Visakhapatnam, Vijayawada, Guntur, Nellore and Kurnool in Andhra Pradesh as nonattainment cities for not meeting the National Ambient Air Quality Standards (NAAQS, 2009), particularly annual average of Particulate Matter (PM₁₀) by taking the ambient air quality data for the period of five years from 2011 to 2015 into consideration and directed APPCB to formulate action plans.

Later, CPCB has further identified eight (8) cities in the State as non-attainment cities namely, Srikakulam, Vizianagaram, Rajamahendravaram, Eluru, Ongole, Chittoor, Anantapur and Kadapa for not meeting the PM₁₀ annual average standard based on the ambient air quality data for the period of five years from 2014 to 2018 and directed APPCB to formulate action plans to improve the air quality in the said cities.

2.3 Status and NCAP related initiatives taken in Andhra Pradesh

Andhra Pradesh has taken initiatives to improve the air quality in the non-attainment cities under NCAP.

2.3.1 Action Plans for non-attainment cities to control air pollution

Micro level Action plans have been formulated for the thirteen (13) non-attainment cities and are under implementation by the concerned stakeholder departments by conducting District Level Monitoring Committee (DLMC) meetings. The micro level action plans for the FY 2023-24 have been uploaded on PRANA for all the cities and approved by CPCB.

2.3.2 Improvement of air quality

Five cities viz., Ongole, Nellore, Chittoor, Kurnool & Kadapa out of 13 NACs have shown improved air quality in 2023-24 for PM₁₀ concentration and meeting the National Ambient Air Quality Standard of 60 µg/m³.

Ambient air quality w.r.t Particulate Matter (PM₁₀ in µg/m³)

S.No	Cities	2019-20	2020-21	2021-22	2022-23	2023-24
1	Srikakulam	62	64	76	72	68
2	Vizianagaram	65	61	69	74	72
3	Visakhapatnam	80	80	80	84	89
4	Rajamahendravaram	58	64	65	69	76
5	Eluru	63	58	64	66	68
6	Vijayawada	70	56	67	73	61
7	Guntur	57	55	58	60	61
8	Ongole	60	48	53	50	56
9	Nellore	66	57	56	56	52
10	Kurnool	55	51	60	65	56
11	Chittoor	52	37	48	48	59
12	Anantapur	61	60	59	57	61
13	Kadapa	47	47	56	59	42

2.3.3 Source Apportionment Studies:

APPCB is carrying out Source Apportionment (SA)/ Carrying Capacity (CC) studies in 13 non-attainment cities by entrusting the work to Institute of Repute (IoRs) within and outside the State for executing the studies adhering to the scope of work specified by CPCB which includes city specific air quality monitoring, characterization of ambient dust, emission inventory, source apportionment using dispersion and chemical mass balance models.

SNo	City	Institute	Timeline	Remarks
1	Srikakulam	Andhra	September	Air quality monitoring in two

2	Vizianagaram	University, Visakhapatnam	2024	critical seasons (summer & winter) completed. Final reports are under preparation for submission to APPCB
3	Visakhapatnam			
4	Rajamahendravaram			
5	Eluru			
6	Vijayawada			
7	Guntur	CSIR-NEERI	September 2024	Air quality monitoring during winter season completed. Final reports are under preparation for submission to APPCB.
8	Ongole		August 2024	Report will be placed in Peer Committee meeting for approval.
9	Nellore	IIT Madras	September 2024	Final reports are under preparation for submission to APPCB. Air quality monitoring in two critical seasons (summer & winter) completed. Final reports are under preparation for submission to APPCB.
10	Kurnool	NARL, Gadanki		
11	Chittoor			
12	Anantapur			
13	Kadapa			

2.3.4 Status of Utilization of grants:

CPCB has sanctioned fund for the state of Andhra Pradesh for 11 non-attainment cities and two cities Visakhapatnam and Vijayawada

S.No	Source of Fund	Funds Sanctioned/ Utilised (in Crores)			Remarks
		Sanctioned	Utilized	% Utilisation	
1	NCAP Funds	107.75	72.31	67	Sanctioned for 13 NACs since 2019
2	15 th Finance Commission	253.60	60.14	23	Sanctioned for million-plus cities, i.e. Visakhapatnam and Vijayawada since 2021

The details of city-wise fund released and utilized for improvement of air quality in cities is mentioned below:

A. Utilization of NCAP fund by ULBs in 13 non-attainment cities during 2019-2023

S. No.	Cities	Total Grant Received Rs (Cr)	Total Funds Utilized Rs (Cr)	Total Utilization (%)
1	Vijayawada*	6.0	6.0	100

2	Visakhapatnam*	0.12	0.12	100
3	Srikakulam	3.96	3.36	85
4	Vizianagaram	5.31	5.02	95
5	Rajahmundry	7.87	6.92	88
6	Eluru	5.21	3.6	69
7	Guntur	17.59	6.16	35
8	Ongole	7.87	7.13	91
9	Nellore	21.41	17.34	81
10	Kurnool	6.33	4.48	71
11	Chittoor	6.14	4.04	66
12	Anantapur	11.46	2.32	20
13	Kadapa	8.48	5.82	69
Total Rs (Cr)		107.75	72.31	67

*Funds for the 2 cities under NCAP were sanctioned for the FY 2019-20 and 2020-21 only and later included as million-plus cities under 15th FC grants.

B. Utilization of 15th FC fund by ULBs in 2 non-attainment cities during 2021-2023 from grant received for million-plus cities.

S. No.	Cities	Total Grant Received Rs (Cr)	Total Funds Utilized Rs (Cr)	Total Utilization (%)
1	Vijayawada	129.25	19.26	12.80
2	Visakhapatnam	124.35	40.88	28.00
Total Rs (Cr)		253.60	60.14	23

2.3.5 Ranking of cities under Swachh Vayu Survekshan

Under Swachh Vayu Survekshan 2023, the city of Guntur (AP) has won third prize of Rs.25 lakhs (category-ii) under “National Clean Air City” Award at National level workshop for celebrating “International Day of Clean Air for Blue Skies” at Bhopal on 7th September 2022.

2.3.6 Implementation of State Action Plan

MoEF & CC / CPCB has formulated and circulated the “Indicative Template for State Action Plan” to all the States covered under NCAP to formulate and furnish the State Action Plan.

APPCB has submitted the State Action Plan for Clean Air for Andhra Pradesh to CPCB through mail dated on 03.01.2023. CPCB, after scrutiny has made

certain observations against the State Action Plan of Andhra Pradesh and requested to revise the same accordingly.



APPCB revised the State Action Plan of Andhra Pradesh (Annexure-2) and uploaded on PRANA as suggested by CPCB and the same was communicated to CPCB, vide APPCB letter dated 24.04.2023. The revised State Action Plan of Andhra Pradesh has been circulated to all the concerned stakeholders for implementation.

CPCB vide letter dated 13.06.2024 has communicated SPCBs/PCC to prepare / revise respective State Action Plan for clean air with budgetary and timeline for completion of action points.

Accordingly, APPCB requested all the concerned Stakeholders to furnish information on timeline and budgetary for incorporation in the revised State Action Plan and is awaiting information from the Stakeholders.

APPCB requires further three months' time for submission of revised State Action Plan to Hon'ble NGT.

B Sreedhar Ias
MEMBER SECRETARY

	<p>ANDHRA PRADESH POLLUTION CONTROL BOARD Near APIIC Housing Colony / APMARKFED, Autonagar, Vijayawada – 520007 Phone No. 0866-2463200, Website: pcb.ap.gov.in</p>	
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Lr. No. APPCB-12022/1/2019-SS-CL-APPCB

01/08/2023.

To

1. The Commissioner & Director,
Municipal Administration and
Urban Development,
Prime Hill Crest, 05/1A,
Near DGP Office,
Vaddeswaram, Mangalagiri –
522502.
2. The Commissioner,
Industries Department,
First Floor Government Regional Printing
Press Buildings,
Mutyalampadu St,
Vijayawada, 520011.
3. The Commissioner,
Transport Department,
APSRTC Bus Stand,
NTR Administrative Block,
3rd Floor, Vijayawada –
520002.
4. The Commissioner and Director,
Agriculture Department,
Old Mirchi Yard, Nallapadu Road,
Chuttagunta, Guntur – 522004.
5. The Special Secretary,
EFS&T Department,
A P Secretariat, Velagapudi
Amaravathi.
6. The Director General of Police,
Kolanukonda,
Mangalagiri,
Guntur District.
7. The Commissioner,
Civil Supplies Department,
Ashok Nagar, Bandar Road,
Vijayawada.
8. The Regional Director,
National Highway Authority of India,
Gurunanak Nagar Colony Road,
Teachers Colony,
Vijayawada.
9. The Director,
Department of Mines &
Geology,
Sri Anjaneya Towers,
D.No:7-104;B-Block,
5th & 6th Floors,
Ibrahimpattam, Vijayawada.
10. The Managing Director,
New & Renewable Energy Development
Corporation of Andhra Pradesh Ltd.,
12-464/5/1, River Oaks Apartments,
CSR Kalyana Mandapam Road,
Tadepalli, Guntur district.
11. The Managing Director,
AP Genco,
Transmission Corporation of
12. The Chief Managing Director
AP Transco,
Transmission Corporation of

Andhra Pradesh Ltd.,
Vidyuth Soudha,
Gunadala, Eluru Road,
Vijayawada.

13. The Dy. Chief Controller of Explosives,
M/s. Petroleum Explosive Safety Organization,
D. No. 7-20-13, Kirlampudi Layout,
Visakhapatnam – 530 017.

Andhra Pradesh Ltd.,
Vidyuth Soudha,
Gunadala, Eluru Road,
Vijayawada.

14. The Managing Director,
Andhra Pradesh State Disaster Management Authority (APSDMA)
Genious JR Towers, D.No.21/2B, Pathuru Cross Road Center, Kunchanapalli (P),
Tadepalli (M).
Guntur District – 522501.

Sir,

Sub :	APPCB – LAB – National Clean Air Program (NCAP) – “State Action Plan” for clean air - Communicated – Implementation requested for control of air pollution in the State – Reg.
Ref:	1. NCAP document, dated 19.03.2018. 2. Hon’ble NGT, Chennai order, dated 12.11.2021 in O.A. No. 159 of 2021.

With reference to the above, please find enclosed herewith the attachment pertaining to the State Action Plan for clean air for the State of Andhra Pradesh, for information.

Requested for implementation of the action points of the State Action Plan to control air pollution in the State.

Sincerely

Encls: As above.

B Sreedhar Ias
MEMBER SECRETARY

Copy submitted to

1. The Special Chief Secretary, EFS&T Department, AP Secretariat, Velagapudi, Amaravathi, for information.
2. The Special Chief Secretary, MA&UD Department, AP Secretariat, Velagapudi, Amaravathi, for information.
3. The Special Chief Secretary, Transport, Roads & Buildings Department, AP Secretariat, Velagapudi, Amaravathi, for information.

	ANDHRA PRADESH POLLUTION CONTROL BOARD Near APIIC Housing Colony / APMARKFED, Autonagar, Vijayawada – 520007 Phone No. 0866-2463200, Website: pcb.ap.gov.in	
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Lr. No. APPCB-12022/1/2019-SS-CL-APPCB**10/08/2023.****To**

1) The Commissioner,
Panchayat Raj & Rural
Development Department,
Tadepalli, Guntur District.

2) The Managing Director,
Andhra Pradesh State Road Transport
Corporation (APSRTC),
RTC House,
Pandit Nehru Bus Station (PNBS),
Vijayawada -520 013.

Sir,

Sub :	APPCB – LAB – National Clean Air Program (NCAP) – “State Action Plan” for clean air - Communicated – Implementation requested for control of air pollution in the State – Reg.
Ref:	1. NCAP document, dated 19.03.2018. 2. Hon’ble NGT, Chennai order, dated 12.11.2021 in O.A. No. 159 of 2021.

With reference to the above, please find enclosed herewith the attachment pertaining to the “State Action Plan” for clean air for the State of Andhra Pradesh, for information.

Requested for implementation of the action points of the “State Action Plan” to control air pollution in the State.

Sincerely

Encls: As above.

B Sreedhar Ias
MEMBER SECRETARY

Copy submitted to the Special Chief Secretary, PR & RD Department, Govt. of

Andhra Pradesh, 5th Block, AP Secretariat, Velagapudi, Amaravathi, for kind information.

**“State Action Plan”
of
Andhra Pradesh to Control
Air Pollution**

Submitted to
**Central Pollution Control Board,
Delhi.**



**Andhra Pradesh Pollution Control
Board, Vijayawada.**

April, 2023

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1. Introduction:

The Ministry of Environment, Forests & Climate Change (MoEF & CC), Government of India has launched the National Clean Air Program (NCAP) on 10th January, 2019 as a time bound National level strategy for pan India implementation to tackle the air pollution problem across the country in a comprehensive manner.

Government of Andhra Pradesh constituted the following committees to monitor the activities to control air pollution in the State:

- i) Three committees viz., Steering Committee under the Chairmanship of the Chief Secretary, Monitoring Committee under the Chairmanship of Special Chief Secretary, EFS & T Department and District Level Implementation Committees headed by the District Collector under NCAP, vide EFS & T Department G. O. Rt. No. 46, dated 11.06.2020 for the effective implementation of NCAP in the State (**Annexure – 1**).
- ii) Air Quality Monitoring Committee (AQMC) under the Chairmanship of Principal Secretary, EFS & T Department, Government of Andhra Pradesh, vide EFS & T Department G. O. Rt. No. 167, dated 14.11.2018 for the formulation of action plans, particularly for the non-attainment cities and to monitor their implementation in the cities (**Annexure – 2**).
- iii) State Level Monitoring and Implementation Committee (SLMIC) constituted under the Chairmanship of Principal Secretary, Environment for performance assessment of each 15th FC recommended city / UA, vide G. O. Rt. No. 14, dated 21.02.2022 (**Annexure – 3**) for the purpose of:
 - a) To make performance assessment of each 15th FC recommended city / UA (within the State) and recommend release of grant to the MoEF & CC as per the indicators specified in the guidelines after ensuring compliance.
 - b) The State Urban Development Department (UDD) shall function as the Secretariat and in co-ordination with the State Environment department will

convene meetings of the SLMIC as frequently as required or atleast every 6 months.

- c) The State UDD shall place the proposals received from million-plus cities / UAs in the MoEF & CC prescribed format before the SLMIC meetings for recommendations & approvals. The State UDD shall forward the recommendations of the SLMIC to MoEF & CC for further action.

A total of 131 cities in the Country have been identified by the Central Pollution Control Board (CPCB) as non-attainment cities (NACs) for not meeting the National Ambient Air Quality Standards, particularly in respect of PM10 concentrations. Thirteen (13) of them are from Andhra Pradesh viz., Srikakulam, Vizianagaram, Visakhapatnam, Rajamahendravaram, Eluru, Vijayawada, Guntur, Ongole, Nellore, Chittoor, Kadapa, Kurnool and Anantapuramu. AQMC and CPCB approved city action plans are under implementation in all these 13 NACs.

State Action Plan (SAP) to control of air pollution has to be formulated by all the 23 States with non-attainment cities as per the NCAP guidance document.

As per the NCAP document at Appendix-VI: NCAP agencies and timelines at S. No. 1.13 mentions about the State Action Plan for Air Pollution as detailed below:

S. No.	Component / Activities	Level for funding	Level for implementation	Agencies	Time lines
1.13.1	A preliminary state action plan for air pollution to be formulated for all the 23 states, which harbor 102 non-attainment cities	Centre	State	SPCB, CPCB and MoEF & CC	2020
1.13.2	SAP for air pollution to be taken up for implementation by the state government and city administration	State	State	State Government	2020
1.13.3	The guidelines for the preparation of the SAP to be formulated	Centre	Centre	CPCB and MoEF & CC	2020

Andhra Pradesh is predominantly hot and dry climate. In the coastal plain, the summer temperatures are generally higher than the rest of the state, with temperature ranging between 20 and 44°C. July to September is the season for tropical rains. About one-third of the total rainfall is brought by the northeast monsoon. October and November see low-pressure systems and tropical cyclones form in the Bay of Bengal which, along with the northeast monsoon, bring rains to the southern and coastal regions of the state. Since the State has a 974 kms long coastal belt, the winters are not very cold. The range of winter temperature is generally 12 to 30 °C. The areas covered by the Deccan plateau are characterised by hot summers with relatively mild winters. The mean maximum temperature varies between 40°C and 43°C and the mean minimum temperature is 13 to 17°C in December and January.

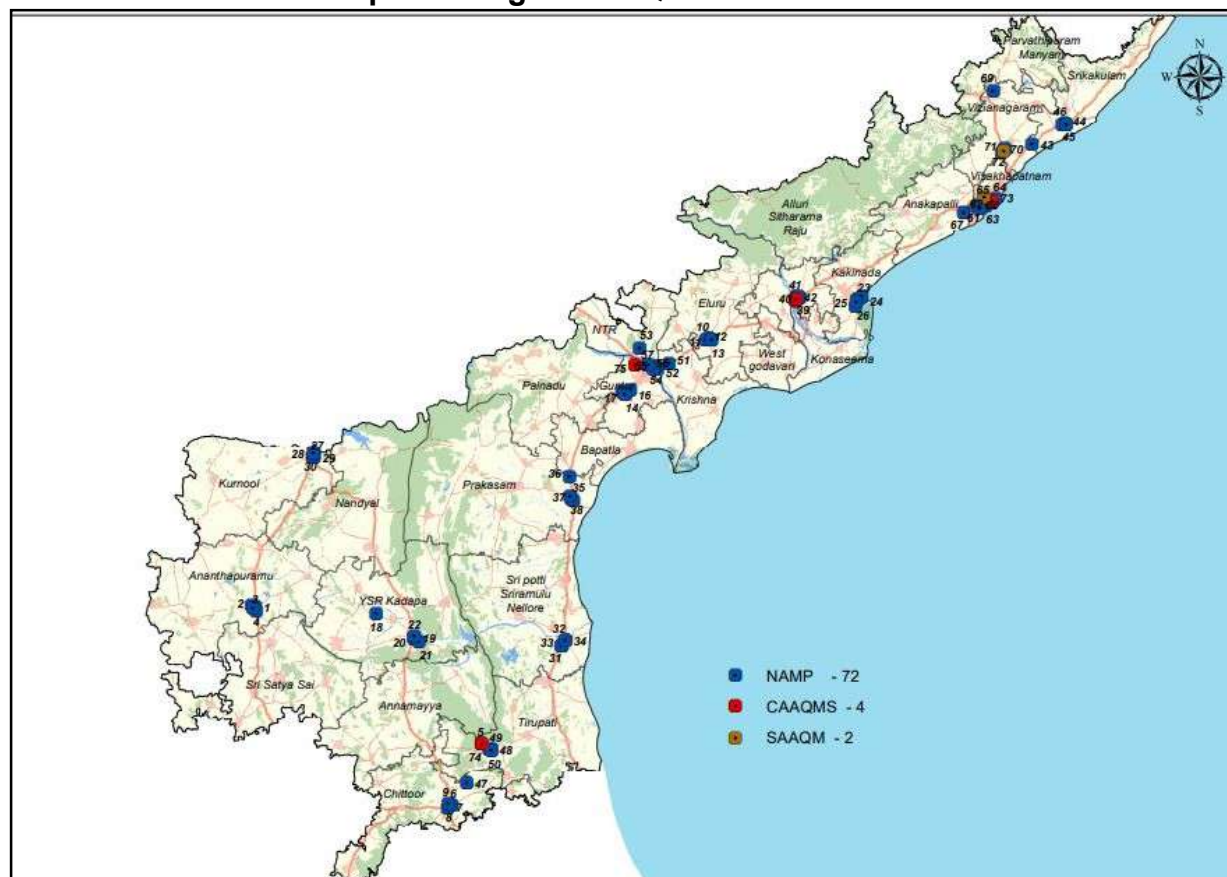
3. Ambient Air Quality Monitoring Program:

Andhra Pradesh Pollution Control Board is monitoring ambient air quality (AAQ) at 80 locations covering 20 cities and towns in the State. Of them, 71 are manual stations under National Air Quality Monitoring Program (NAMP), 2 are State Air Quality Monitoring Program (SAMP) and 7 are Continuous Ambient Air Quality Monitoring Stations (CAAQMS).

S. No.	City / town	AAQM Stations			
		NAMP	SAMP	CAAQMS	Total
1	Srikakulam	3	---	---	3
2	Pydibheemavaram	1	---	---	1
3	Vizianagaram	3	1	---	4
4	Bobbili	1	---	---	1
5	Visakhapatnam	9	1	1	11
6	Kakinada	4	---	---	4
7	Rajahmahendravaram	4	---	1	5
8	Eluru	4	---	---	4
9	Vijayawada	9	---	---	9
10	Guntur	4	---	---	4
11	Ongole	4	---	---	4
12	Nellore	4	---	---	4
13	Chittoor	4	---	1	5
14	Tirupathi	4	---	1	5
15	Tirumala	---	---	1	1
16	Kadapa	4	---	---	4
17	Yerraguntla	1	---	---	1

18	Kurnool	4	---	---	4
19	Anantapuramu	4	---	1	5
20	Amaraavathi	---	---	1	1
Total:		71	2	7	80

Map showing the AAQ stations in State



The details of AAQ monitoring stations in the State:

S. No.	Location	Type	Latitude	Longitude
I Anantapur District				
1	Jeevan Jyothi Hospital, Kamala Nagar, Anantapuramu.	NAMP	14.680522	77.602875
2	APIIC, Zonal Office, Industrial Estate, Anantapuramu.	NAMP	14.690618	77.572858
3	Cancer Unit. G.G.H. Sharada Nagar, JNTU Road, Anantapuramu.	NAMP	14.654627	77.609478
4	D.No.6/5/545, Ram Nagar Colony, Anantapuramu.	NAMP	14.668355	77.583737
5	Gulzarpet, Public Health Office, Court Road, Anantapuramu.	CAAQMS	14.67588	77.593027
II Tirupati District				

6	Near GNC Toll Gate, Tirumula.	NAMP / CAAQMS	13.6749737 4	79.35087129
7	Regional Science Centre, Chittoor Bypass, Tirupati.	NAMP	13.3835206 8	79.2355392
8	Municipal Office, Tilak Road, Tirupati.	NAMP	13.636466	79.422916
9	APPCB-Regional Office, 1st Floor, APSFC Building, NT Road, Tirupati.	NAMP	13.633352	79.4086
10	Sri Venkateswara Guest House (TTD SV Rest House), Near APSRTC Bus Stand, Tirupati.	NAMP	13.628675	79.423863
11	Municipal Park, Vaikuntapuram, Tirupati	CAAQM	13.615387	79.409230
III Chittoor District				
12	Municipal flower Market (Shifted from Nutrine Confectionery, Palamaner Road), Chittoor.	NAMP	13.216038	79.113297
13	O/O Mines and Geology, Old Collector Office, Greampet, Chittoor.	NAMP	13.201042	79.093335
14	Sankar Foundry, Industrial Estate, Adjacent of DIC Office, Chittoor.	NAMP	13.222405	79.125702
15	Rangachari street, Shanthapeta, Chittoor.	NAMP	13.222794	79.097233
16	Gangineni Cheruvu park, Vellore Road, Chittoor	CAAQM	13.204880	79.097889
IV Eluru District				
17	Ashram Diagnostic Centre, Eluru.	NAMP	16.710507	81.094562
18	District Head quarters hospital, Eluru.	NAMP	16.714365	81.094062
19	Zilla Samakhya, Near ITI College, ITDC Building, Satrampadu, Eluru.	NAMP	16.702480	81.06716
20	Somalingeswara nilayam D.N.7B-18-5, Thooru Veedhi, Eastern street, Paidichintaadu, Eluru.	NAMP	16.705150	81.113450
V Guntur District				
21	Near Hindu College, Market Road/Municipal Travellers Bungalow, Guntur.	NAMP	16.292575	80.443586
22	A.P. Pollution Control Board, D.No.4-5-4/5C,4/3, Navabharath nagar, Ring Road, Guntur.	NAMP	16.321293	80.420008
23	Distirct Industries Center office Buiding Autonagar, Guntur.	NAMP	16.322096	80.481345
24	Government General hospital, Guntur.	NAMP	16.298417	80.441498

25	Security building terrace, Gate No-2, Secretariat, Velagapudi, Amaravathi.	CAAQMS	16.515083	80.518167
VI YSR Kadapa District				
26	APPCB Regional Office, APHB Colony, Rajeev Park Road, Kadapa.	NAMP	14.4616167	78.828383
27	DIC Office, Kadapa.	NAMP	14.464729	78.822726
28	Rajiv Gandhi Institute of Medical Sciences, Kadapa.	NAMP	14.43433	78.863039
29	Municipal Primary School, Kadapa.	NAMP	14.473437	78.828637
30	Near ICL Industries, Yerraguntla	NAMP	14.639874	78.530666
VII Kakinada District				
31	APPCB Regional Office Building Ramanayyapeta, Kakinada.	NAMP	17.002372	82.246375
32	Suryaraopeta, Near Light House, Kakinada Rural.	NAMP	17.017778	82.284411
33	MEE Seva / MEPMA Office, Salipeta, Kakinada.	NAMP	16.955686	82.2327
34	Petro Chemical Engineering Block, JNTU , Pithapuram Road, Kakinada.	NAMP	16.979653	82.242361
VIII Kurnool District				
35	Mourya Inn, Krishna Nagar, Kurnool.	NAMP	15.805614	78.037107
36	APIIC Building Industrial estate, Kallur at IDA Bobbili Growth Center, Kurnool.	NAMP	15.80767	78.02406
37	Rajvihar Circle, Kurnool.	NAMP	15.82877	78.03816
38	Pump House, Venkataramana Colony, Kurnool.	NAMP	15.83369	78.03074
IX Sri Potti Sriramulu Nellore District				
39	Terrace of the Regional Office Nellore .Andhra Kesarinagar, Nellore.	NAMP	14.418256	79.959967
40	D. No.15-471, James Garden, Venkata Ramapuram, Nellore.	NAMP	14.454083	79.988911
41	Chandramouli nagar, Nellore.	NAMP	14.414683	79.958583
42	Dr.P.V. Rama chandra Reddy Hospital, Brindavanam, Nellore.	NAMP	14.453417	79.986997
X Prakasam District				
43	Near Court Center/D.No. 7-324, Sri Nilayam, Sambasiva Nagar, South bypass Road, Ongole, near Mamgamri road.	NAMP	15.506845	80.032977
44	APIIC, Administrative Office, Growth	NAMP	15.6805555	80.01461111







	Centre, Gundlapalli, Ongole.		6	
45	Ongole Municipal Corporation, Ongole.	NAMP	15.500352	80.046032
46	Prakasam Milk Product Company, Ongole.	NAMP	15.5252777 8	80.01705833
XI East Godavari District				
47	Staff Club Building, A.P. Paper Mill, Sri Ramnagar, Rajamahendravaram.	NAMP	17.022694	81.774714
48	GAIL Administrative Office, A.V. Apparao Road, Rajamahendravaram.	NAMP	17.015017	81.800644
49	MCH Block ,District Hospital, Near Central Prison, Lalacheruvu Road, Rajamahendravaram.	NAMP	17.02105	81.792247
50	APEPDCL, Circle Office Godavari Gattu, Rajamahendravaram.	NAMP	16.998069	81.769472
51	Top of Sri Venkateshwara Anam Kala Kendram building, Lakshmivarapu pet, Seshayyametla, Rajamahendravaram.	CAAQMS	17.00837	81.77142
XII Srikakulam District				
52	District Co-Operative Office at SKLM Old Bridge, Srikakulam.	NAMP	18.296167	83.885389
53	APIIC Building, Kushalapuram, Srikakulam.	NAMP	18.294444	83.862917
54	Municipal corporation Office Building, Old Bus Stand, Srikakulam.	NAMP	18.292444	83.896889
55	SAMKRG Pistons Quarters Building, Near IDA, Pydibheemavaram.	NAMP	18.146611	83.626917
XIII NTR District				
56	NTR Veterinary college of Sciences, Gannavaram, Vijayawada.	NAMP	16.52642	80.78328
57	VR Siddhartha Engineering college , Kanuru, Vijayawada.	NAMP	16.48538	80.69258
58	APIIC, IALA, IDA, Kondaplli, Vijayawada.	NAMP	16.642401	80.557574
59	Benz Circle, Vijayawada.	NAMP	16.49880	80.65553
60	Autonagar, Vijayawada.	NAMP	16.50887	80.67799
61	Police Control Room, Vijayawada.	NAMP	16.51110	80.61795
62	A.P. Pollution Control Board, plot no. 41, Sri Kanakadurga Officers colony, Gurunanak Road, Vijayawada.	NAMP	16.50424	80.66431
63	Gram Panchayat Office,	NAMP	16.48226	80.66577

	Yenamalakuduru, Vijayawada.			
64	Indian Medical Association Hall, Eluru Road, Governorpet, Vijayawada.	NAMP	16.51338	80.62342
XIV Visakhapatnam District				
65	Industrial Estate, Autonagar, Visakhapatnam.	NAMP	17.69871	83.19136
66	Panchayat Raj office, Mindi, Visakhapatnam.	NAMP	17.69799	83.21434
67	Police Barracks, Visakhapatnam.	NAMP	17.7108	83.29895
68	ESI-Hospital, Gandhi Gram, Malkapuram, Naval Area, Visakhapatnam.	NAMP	17.68912	83.25948
69	Seethammadhara, Visakhapatnam.	NAMP	17.73807	83.31448
70	Ganapuram Area, Visakhapatnam.	NAMP	17.72169	83.28532
71	Pedagantyada, Gajuwaka, Visakhapatnam.	NAMP	17.66818	83.20826
72	MVP Raitu Bajar, Visakhapatnam.	NAMP	17.74129	83.33573
73	GVMC Building, Ramnagar, Visakhapatnam.	CAAQMS	17.722411	83.308183
74	APPCB Office, Madhavadhara, Visakhapatnam.	SAMP	17.750212	83.248016
XV Anakapalli District				
75	CWMP, RAMKY, Parawada	NAMP	17.64726	83.08253
XVI Vizianagaram District				
76	APIIC Building, VT Agraharam, Industrial area, Vizianagaram.	NAMP	18.08859	83.38936
77	Municipal Kaspa High School, Near 3 Lamps Junction, Vizianagaram.	NAMP	18.11340	83.41435
78	Municipal Office, New Poorna Junction, Vizianagaram.	NAMP	18.11720	83.41022
79	APPCB RO building, Sainagar, Thotapalem, Vizianagaram.	SAMP	18.10373	83.40144
80	APIIC Building Growth Centre, Phase - I, at IDA Bobbili	NAMP	18.55264	83.33016

Air Quality Index:

The ambient air quality in Andhra Pradesh ranges from good to Satisfactory. The details of which are as follows:

S. No.	City / town	2017	2018	2019	2020	2021	2022
1	Pydibeemavaram	69	74	73	65	75	72
2	Srikakulam	66	70	63	58	78	73
3	Bobbili	67	66	73	64	76	74
4	Vizianagaram	64	66	64	59	69	70
5	Visakhapatnam	72	78	76	73	84	79
6	Rajahmundry	69	90	63	58	70	69
7	Eluru	65	69	63	61	62	67
8	Vijayawada	90	82	71	56	67	72
9	Guntur	63	53	52	54	59	61
10	Ongole	65	65	60	50	54	50
11	Nellore	64	64	66	56	56	56
12	Kurnool	72	65	60	49	58	66
13	Anantapur	65	71	67	60	57	63
14	Chittoor	69	61	54	42	49	51
15	Yerraguntla	74	69	60	48	51	49
16	Kadapa	69	89	52	43	54	59
17	Kakinada	68	75	63	48	62	69
18	Tirupathi	68	60	54	41	46	47
19	Thirumala	66	77	58	44	52	67
20	Amaravati	56	83	75	54	56	54
State Average		68	71	63	54	62	63

AQI	Remark	Color Code	Possible Health Impacts
0-50	Good		Minimal impact
51-100	Satisfactory		Minor breathing discomfort to sensitive people
101-200	Moderate		Breathing discomfort to the people with lungs, asthma and heart diseases
201-300	Poor		Breathing discomfort to most people on prolonged exposure
301-400	Very Poor		Respiratory illness on prolonged exposure
401-500	Severe		Affects healthy people and seriously impacts those with existing diseases

4. Strengthening of ambient air quality monitoring network in the State:

Andhra Pradesh Pollution Control Board (APPCB) continued its efforts to further strengthen the ambient air quality network in the State as detailed below:

- a) Five (5) CAAQM stations are under installation at Vijayawada (4 Nos.) and Kadapa.
- b) Eleven (11) more CAAQM stations are under procurement to install at Srikakulam, Vizianagaram, Rajahmendravaram (the existing will be shifted to Kakinada), Vijayawada, Eluru, Guntur, Ongole, Nellore & Kurnool @ one each and Visakhapatnam @ two stations.
- c) Three (3) manual stations have been sanctioned by CPCB to install at Amaravathi region.
- d) It is under consideration of APPCB to reorganize the existing NAMP stations in the State that the new district Head Quarters are also covered for monitoring of ambient air.

5. State Action Plan:

The State Action Plan is to provide a guidance and mandatory activities be implemented by different stakeholder departments, civil societies and others concerned towards reducing the emissions and improving the ambient air quality. The increasing evidence on the health effects of air pollution from the studies across the globe shall be an alarm for sensitising the public, stakeholder departments and civil societies towards concerted actions for reducing the air pollution and thus providing a better and healthier society for the future generations.

Of the twelve notified parameters as per the National Ambient Air Quality Standards (NAAQS), two viz., PM10 (Respirable Particulate Matter) & PM2.5 (Fine Particulate Matter) are found to be exceeding the limits, particularly in respect of annual average standards. The general sources of air pollution identified in the State are Road Dust, Vehicular Emissions, Burning of municipal solid wastes, Industrial Emissions, Construction & Demolition waste, Emissions due to burning of agro residues, Household emissions, etc.

The Health impacts of PM10 are known to cause nasal and upper respiratory tract health problems. Fine particles (PM2.5) penetrate deeper into the lungs and cause

heart attacks, strokes, asthma, and bronchitis, as well as premature death from heart ailments, lung disease and cancer. Further studies of a UK based firm along with CII indicates loses of upto Rs.7.00 Lakh Crores annually i.e., about 3% of the GDP due to Premature mortality, loss of productivity and loss of consumer footfall. The Global Burden of Disease (GBD) – 2019 report also indicate 1.67 million deaths attributable to air pollution in India.

Action plans for improving the air quality by reducing the Particulate Matter emissions are under implementation in 13 non-attainment cities, viz., Srikakulam, Vizianagaram, Visakhapatnam, Rajamahendravaram, Eluru, Vijayawada, Guntur, Ongole, Nellore, Kurnool, Chittoor, Ananatapur & Kadapa. The State action plan is formulated in line with the existing city action plan which is under implementation in the non-attainment cities and in synchronization with the CPCB format communicated for preparation of the action plan.

The action plan provides the actions proposed for implementation targeting the following sources of pollution:

1. Industrial Emissions,
2. Vehicular Emissions,
3. Construction and Demolition waste and Road Dust,
4. Emissions from burning of Wastes,
5. Emissions from burning of agro residues and
6. Household emissions.

The action plan proposed for the above activities and others are tentative. The regulatory actions are continuous and any amendments in terms of the regulatory activities will be continued as they are in force. Those actions that require the budget will be taken as per the availability and approval of the financial allocations.

5.1 Industrial Emissions:

Andhra Pradesh is having a total of 9,609 industries. Of these, 3864 are Red category, 3,900 are Orange category, 1,355 are Green category and 490 are White

category industries. These industries are monitored periodically by the Andhra Pradesh Pollution Control Board and action is initiated against non-complying industries. The District-wise details of industries are as follows:

S. No.	District	Category				Total
		Red	Orange	Green	White	
1	Srikakulam	253	395	35	28	711
2	Vizianagaram	195	153	55	21	424
3	Visakhapatnam	402	364	193	86	1045
4	East Godavari	203	395	154	32	784
5	West Godavari	130	356	109	68	663
6	Krishna	220	437	192	49	898
7	Guntur	275	483	124	33	915
8	Prakasam	466	212	103	46	827
9	Sri Potti Sriramulu Nellore	332	252	131	20	735
10	Kurnool	257	199	33	11	500
11	Anantapur	458	204	60	14	736
12	YSR	176	175	36	62	449
13	Chittoor	497	275	130	20	922
Total		3864	3900	1355	490	9609

5.1.1 Policy for permitting new industries in Critically Polluted Areas (CPAs):

Central Pollution Control Board (CPCB) during the year 2009-10 has carried out comprehensive environmental assessment of 88 industrial clusters across the country and rated them on the concept of Comprehensive Environment Pollution Index (hereinafter referred to as CEPI). Out of 88 Industrial clusters, 43 industrial clusters in 16 States having CEPI score of 70 and above were identified as Critically Polluted Areas (CPAs). Further 32 industrial clusters with CEPI scores between 60 & 70 were categorized as severely polluted areas (hereinafter referred to as SPAs). It was suggested that areas having CEPI score between 60 to 70 i.e., severely polluted industrial cluster shall be kept under surveillance and pollution control measures should be effectively implemented. Whereas the Critically Polluted Industrial Areas need further detailed investigations in terms of extent of damage and formulation of appropriate remedial action plan.

Of the 88, two clusters, namely Visakhapatnam & Vijayawada have been identified as Critically Polluted and Severely Polluted Areas with the scores 70.82 & 60.57, respectively.

Accordingly, APPCB has submitted the action plan to CPCB for control of pollution in Visakhapatnam during November, 2010. Further as suggested by CPCB, vide its letter dated 20.12.2010, APPCB constituted a local committee with the concerned stakeholders for implementation and review of the action plan.

The EFS&T Department, Government of Andhra Pradesh constituted the “Comprehensive Environmental Pollution Index (CEPI) Committee”, vide G. O. Rt. No. 10, dated 29.01.2019 (**Annexure – 4**) as per the directions of Hon’ble NGT order dated 20.09.2018 in O.A. No. 1038/2018 for preparation of Action Plan for restoration of environmental conditions in the identified two Polluted Industrial Areas (PIA). Accordingly, APPCB has submitted the action plan to CPCB to control pollution for Vijayawada during November, 2020.

As per the interim assessment by CPCB the CEPI score is reduced from 70.82 to 52.31 in the year 2013. Accordingly, MoEF & CC has lifted the Visakhapatnam from the list of Critically Polluted Areas, vide its Office Memorandum dated 17.09.2013.

To improve the environmental quality in Visakhapatnam, as per Local Area Monitoring Committee recommendations, APPCB stipulated the following stringent standards in comparison with that of the general standards to the industries in the bowl area as detailed below:

Name of the industry	Parameter	National standard	APPCB standard to other areas	APPCB (stringent) standards for Visakhapatnam
M/s. Essar Steels Ltd,	SPM	150 mg/Nm ³	115 mg/Nm ³	50 mg/Nm ³
M/s. Rain CII India Ltd,	SPM	150 mg/Nm ³	115 mg/Nm ³	70 mg/Nm ³
	SO ₂	--	--	0.48 TPD
M/s. APCL	SPM	150 mg/Nm ³	115 mg/Nm ³	50 mg/Nm ³
M/s. HPCL, Refinery	SPM	150 mg/Nm ³	115 mg/Nm ³	50 mg/Nm ³
	SO ₂	--	--	11.5 TPD

M/s. Coromandel Fertilisers	SPM	150 mg/Nm ³	115 mg/Nm ³	50 mg/Nm ³
	Fluorine	25 mg/Nm ³	10 mg/Nm ³	5 mg/Nm ³
	SO ₂	--	2.0 Kg/T	0.65 Kg/T of H ₂ SO ₄
M/s. Hindustan Zinc Ltd.	SO ₂	--	4 Kg/T of H ₂ SO ₄	1.5 Kg/T of H ₂ SO ₄

In order to comply with the stringent standards, the industries in the bowl area made the following additional investment of Rs.1845.03 crores as detailed below:

S. No.	Name of the industry	Investment made for up-gradation of treatment systems during 2009-2013 (Rs. in crores)
1	M/s. Essar Steels (India) Ltd.	19.20
2	M/s. Rain CIL (Vizag) Ltd.,	3.50
3	M/s. Andhra Petro Chemicals Ltd.	4.17
4	M/s. HPCL, Refinery	178.70
5	M/s. Coromandel International Ltd.	55.30
6	M/s. Visakhapatnam Port Trust	1569.50
7	M/s. Hindustan Zinc Ltd., (Closed since 2012)	14.66
Total		1845.03

Further, APPCB has monitored the environmental quality for assessment of CEPI scores in the two clusters during the year 2016-17 for Visakhapatnam and during the year, 2018 for Vijayawada, and the scores were found to be as follows:

S. No.	Name of the industrial cluster	CEPI Score
1.	Visakhapatnam Bowl area	42.04
2.	Vijayawada	30.79

APPCB through the circular No. APPCB/UH-IV/HO-VJA/Petcoke/2020 dated 13.03.2020 (**Annexure – 5**),

- a) Prohibited use of pet coke as fuel by the industries located in Critically Polluted Area (CPA) and Severely Polluted Area (SPA) and shall switch over to the clean fuels like LDO, CNG, etc. within one year,
- b) Industries using furnace oil as fuel in Critically Polluted Area (CPA) based on the CEPI score shall install scrubbing system or any other proven system to reduce the SO₂ load with a minimum efficiency of 90% within six months.

Large scale units shall install online continuous emission monitoring systems within six months.

5.1.2 Restrictions on use of petcoke & furnace oil as fuel in the industries:

APPCB through the circular No. APPCB/UH-IV/HO-VJA/Petcoke/2020 dated 13.03.2020, has issued the following directions:

5.1.2.1 Petcoke:

- a) Industries shall install the scrubbing system or any other proven system like Flue Gas Desulfurization (FGD) unit to reduce the SO₂ load with minimum efficiency of 90% within six months.
- b) Shall install all the requisite air pollution control systems and measures so as to achieve the emission standards for SO₂ and providing minimum stack height as prescribed in Schedule I of the Environment (Protection), Rules 1986 framed under the Environment (Protection), Act 1986 as amended from time to time.
- c) Large and medium scale units shall install online continuous emission monitoring systems within three months i.e., by 30.06.2020.

5.1.2.2 Furnace Oil:

- a) Industries shall provide the stack height as per the following formula within six months:

$$H = 14 (Q)^{0.3}$$

Where, H is the physical stack height

Q is the SO₂ emission load at generation in kg/hr.

- b) As a general condition, APPCB is not permitting any industry to use Furnace oil as fuel in the industrial areas, viz., Jawaharlal Nehru Pharma City, Paravada & APSEZ, Atchyutapuram, Anakapalli District.

5.1.3 Installation of CAAQMS / OCEMS / Monitoring of the Industries:

- 5.1.3.1 APPCB insisting all the air pollution potential industries and for the stacks of boilers with capacity more than 10 TPH to install Online Continuous Emission Monitoring Systems (OCEMS). Accordingly, all the 17 category industries & other major air pollution potential industries such as Ferro alloys, grinding units, calcination, Pharma, Pesticides and other industrial sectors have installed OCEMS and the data transmitted to APPCB & CPCB.
- 5.1.3.2 370 no. of industries which includes 17 categories, highly air pollution potential industries, port activities, CETPs, CBMWTFs and common incinerators have installed 573 nos. of OCEMS for the point source emissions and linked to the data to the APPCB and CPCB website.
- 5.1.3.3 These industries have also provided the 417 Continuous Effluent Monitoring Systems which includes flow meter and web camera for ZLD units and 220 no. of Continuous Ambient Air Quality Monitoring Systems (CAAQMS) and are connected to the CPCB & APPCB website.
- 5.1.3.4 General to industry specific ambient air standards are stipulated to the industries to comply with through CFE & CFO orders. The industries are instructed for operation with enclosures, suction hoods with APC and to install sprinklers to control Fugitive Emissions. Compliance is monitored by APPCB at regular intervals.
- 5.1.3.5 Interlocking system of the Air Pollution Control (APC) equipment with the process plant is also made mandatory in all the industries to ensure the control of air pollution.
- 5.1.3.6 Separate Energy meters for the APC is also made mandatory for certain category industries viz., 17 category and Other Red category pollution potential industries to ensure the operation of the APC.
- 5.1.3.7 Siting guidelines for certain air pollution potential industries like sponge iron, cement grinding units, stone crushers, hot mix plants, tyre pyrolysis units, and the same are under implementation.

- 5.1.3.8 Greenbelt of 33% is being insisted to the industries to mitigate the dust pollution.
- 5.1.3.9 Most of the industries, particularly Cement industries are opting for heat recovery systems for better utilisation of the heat to generate power and to optimise the utilisation of the fossil fuels thereby reducing the emissions.
- 5.1.3.10 The industries are regularly monitored through randomized risk based inspections on half yearly basis under Ease of Doing Business (EoDB) for compliance verification and actions are being initiated in case of non-compliance by way of issuing directions, conditional Bank Guarantees and closure of the industry.

5.1.4 Regulations for conversion of brick kilns to clean technologies:

5.1.4.1 Existing guidelines:

Govt. of Andhra Pradesh, vide G.O. Ms. No. 80, dated 22.04.2010 (**Annexure – 6**) has specified:

- a) Industries Department shall issue acknowledgement subject to submission of NOC from local authority viz., Gram Panchayat, Zilla Parishad, Municipality or Municipal Corporation.
- b) Siting guidelines:
- i) 1 km from any human habitation, hospitals, educational or any other institutions,
 - ii) 100 m as far as practicable, but in no case less than 50 meters from the neighbours agricultural / horticulture lands. The Brick Clamp shall have the accessibility without disturbing the surrounding crops,
 - iii) 100 mtrs from flood banks of river,
 - iv) 200 mtrs from the National Highways / State Highways / Expressways / Ring Roads, and
 - v) 25m from the village roads.

- c) The Revenue Authorities viz., Collector and District Magistrate / R. D. O. / Tahasildar shall continue to take action against defaulting units under the provisions of Cr. P Code as upheld by the Hon'ble High Court in the W.P. No. 12138/2008 and batch cases.

5.1.4.2 Proposed Guidelines for conversion of Brick Kilns to Cleaner technologies:

- a) Inventorization of Brick Kilns in the State - **Within one year by Industries Department / District Industries Center.**
- b) Notification / G.O. to be issued for conversion of all Brick Kilns being operated with conventional technologies to cleaner technologies - **Within one year by EFS & T Department.**
- c) Conversion of all Brick Kilns from conventional technologies to cleaner technologies (zig-zag technology) – **Within five years by Industries Department / District Industries Center.**

5.1.5 Policy to set up E-Waste recycling unit in Industrial areas and in the State as a whole:

5.1.5.1 Existing Guidelines:

Govt. of India, as per the powers conferred by sections 6, 8 and 25 of the Environment (Protection) Act, 1986 (29 of 1986), and in supersession of the e-waste (Management and Handling) Rules, 2011, has notified the E-Waste (Management) Rules, 2016 in March 2016 and are effective from 23.03.2016. These Rules shall apply to Producer, Consumer or Bulk Consumer, Collection centre, Dismantler and recycler of e-waste involved in the manufacture, sale, purchase and processing of electrical and electronic equipment of components as specified.

APPCB has issued Authorizations for six facilities for collection & dismantling and three facilities for collection, dismantling & recycling of e-Waste in the State as detailed below:

S. No.	Name of the Facility	Installed capacity
I	Collection & dismantling units:	
1	M/s. Veera Waste Management Systems, Plot No. 42, Block-D Extension, IDA, Autonagar, Visakhapatnam District.	19.4 TPD
2	M/s. Ramky ARM Recycling Pvt. Ltd., Plot no. 84/A & B, Road No. 20/5, JNPC, Parawada, Visakhapatnam District.	5 TPD
3	M/s. Clean Earth Green Earth Solutions, R.S. No. 48 & 49, Jewellery Park, Machilipatnam, Krishna District.	75 Kgs / day
4	M/s. Binbag Recycling Services Pvt. Ltd., Plot No. 83 & 84, APIIC Growth Centre, Thumukunta, Hindupuram, Anantapuram District	300TPA
5	M/s. World Scrap Recycling Solutions Pvt. Ltd., Old Sy. No. 31, R.Sy. No. 519 Part, Plot No. 5, Thukivakram, Renigunta, Chittoor District.	23 TPD
6	M/s. Green Waves Environmental Solutions, Sy. No. 43/1, Mindi Village, Gajuwaka, Visakhapatnam District	40 TPM
II	Collection, dismantling & recycling	
1	M/s. Sungeel India Recycling Pvt. Ltd., Plot No. 59 C & 59 D, APIIC Industrial Park, Gollapuram, Hindupur, Anantapur District.	865 TPM 150 TPM recycling of Lithium ion battery strap
2	M/s. APNA Bhomi E-waste Management Service, Sy. No. 119, Plot No. D5 & D6, IDA, Kusalapuram, Etcherla, Srikakulam District.	60 TPM
3	M/s. E-Parisara Pvt. Ltd., Plot No. 42 A/4, Sy.No. 285 Part and Sy. No. 288 (P), APIIC Industrial Park, Gollapuram, Hindupuram, Anantapuram District.	20.9205 TPD

The total e-waste collected in the State during FY 2020-21 is 229.10 tons / year. The filing of returns is mandated by all the e-waste handling producers, dismantlers and recyclers.

5.1.5.2 Proposed Guidelines:

a) Inventorization of e-Waste generation in the State - **Within one year by APPCB.**

- b) Notification / G.O. to be issued by the Govt. of A.P. for implementation of e-Waste (Management) Rules, 2016 in the State - **Within one year by EFS & T Department.**
- c) Ear-marking or allocation of space for e-waste collection, dismantling & recycling in the existing and upcoming IEs / IDAs - **Within two year by Industries Department.**

5.1.6 Continuous Power Supply & Non-operation of DG sets:

Andhra Pradesh is one of the State in the Country selected for implementation of “Power for All” – flagship program of Govt. of India.

Accordingly, Transmission Corporation of Andhra Pradesh Limited, vide Notification dated 14.06.2021 (**Annexure – 7**) formulated State Electricity Plan for the four years, FY 2020 to FY 2024 with the objective to supply 24x7 quality, reliable and affordable power supply to all domestic, commercial and industrial consumers within a fixed timeframe. This program covers the entire gamut of power sector, including generation, transmission, distribution, consumer initiatives, renewable energy, energy efficiency measures, financial health of the utilities and support required from Govt. of India to achieve the objectives of the program.

- The total installed capacity of Andhra Pradesh is 18589 MW as on 31.03.2022, comprising 4,850 MW of thermal (AP Genco - 3410 MW & APPDCL - 1440 MW), 1,774 MW of AP Genco Hydel, 216 MW of Gas projects, 1,981 MW of CGS Share, 1961 MW of IPP's & others and 7807 MW of NCE's.
- The total energy consumption in Andhra Pradesh during FY 2021-22 was 68,972 MU and the peak demand was 12032 MW.
- The total number of consumers in the state are 184.93 lakhs out of which 184.80 lakhs LT consumers which includes 146.35 lakhs of domestic, 15.96 lakhs of commercial, 0.82 lakhs of industrial, 3.42 lakhs of institutional & others, 18.25 lakhs of agricultural categories and 0.13 lakhs consumers under H.T category as on 31.03.2022.
- Per Capita Consumption in Andhra Pradesh for the FY 2021-22 is 1285 Kwh.

- There is a continuous power supply to all the sectors except Agriculture, thus rendering the usage of the DG sets to a minimum period in the state.
- Demand and Supply of Energy in million units for the last five years (from FY 2017-18 to FY 2021-22).

Financial Year	Demand (MU)	Supply (MU)
2021-22	69153.72	68971.65
2020-21	63075.89	63070.26
2019-20	65084.75	65048.64
2018-19	63611.32	63604.82
2017-18	58714.61	58704.55

As per Central Electricity Authority's Estimates of Energy requirement in the 20th Electric Power Survey for the Andhra Pradesh State to meet the Power Demand in the next ten years is given in the table.

Financial Year	Energy Requirement (MU)
2022-23	72961
2023-24	78134
2024-25	84245
2025-26	90889
2026-27	98162
2027-28	105792
2028-29	113859
2029-30	123361
2030-31	130196
2031-32	137022

New Power Projects planned for the next five years as per the Power System Studies, AP Transco viz., Thermal, Hydel, Solar, Wind, etc. projects are as follows: (Units in MW).

Type of Projects	2022-23	2023-24	2024-25	2025-26	2026-27	Total
APGENCO	-	-	-	-	-	-
Hydro Plants	-	-	-	-	-	-
Polavaram (12 x 80 MW)	-	-	560	400	-	960
Lower Sileru (2 x 115 MW)	-	-	230	-	-	230
Upper Sileru Pumped Storage(9x150MW)	-	-	-	-	1350	1350
Thermal Plants	-	-	-	-	-	-
Vijayawada TPP Stage V (1x800 MW)	800	-	-	-	-	800

Krishnapatnam TPP (JVP) Stage II (1x800 MW)	800	-	-	-	-	800
APGENCO Total	-	-	-	-	-	-
Medium / Case – 1 Bid	-	-	-	-	-	-
Sembcorp, Krishnapatnam	-	625	-	-	-	625
CGS Share	-	-	-	-	-	-
Bhavini (Nuclear)	-	100	-	-	-	100
Neyveli Stage 2	-	-	-	255	-	255
Private Projects	-	-	-	-	-	-
Solar (SECI from Rajasthan)	-	-	3000	3000	1000	7000
Total Capacity Addition	1600	725	3790	3655	2350	12120

The anticipated total capacity addition is 12,120 MW for the FY 2022-23 to FY 2026-27. The Per MW Estimated Project Cost of the Generating Plants varies according to type of Generation Plant (Thermal - 8 Crores, Hydel - 5 Crores, Nuclear- 12 Crores, Solar 2-3 Crores)

Generation Planning in accordance with the 20th Electric Power Survey by CEA					
Units in MU					
Generator	2023	2024	2025	2026	2027
AP Genco	30403	33384	32695	32551	33106
CGS	14183	14845	14546	16081	16348
IPPs	7639	7649	11405	11356	11545
Gas	1386	1386	1386	1386	1386
Wind	7467	7467	7467	7467	7467
Solar	5980	7174	7174	7174	7174
Others	665	665	665	665	665
Hydel	4071	4483	4483	4564	6019
SECI, Rajasthan	0	0	2616	7561	10761
Total Despatch	71794	77053	82437	88805	94471
Required Energy	72961	78134	84245	90889	98162
Deficit(-)	-1167	-1081	-1808	-2084	-3691
Market purchases	1167	1081	1808	2084	3691

It is programmed to cover the estimated deficits by purchasing power from the Market.

Solar Roof Top Installations – Implementation Status:

- MNRE, GoI, New Delhi has issued the Operational guidelines for implementation of Phase-II of Grid Connected Rooftop Solar Programme for achieving cumulative capacity of 40,000 MW from Rooftop Solar (RTS) Project by the year 2022 vide MNRE Office Memorandum dated 20.08.2019. The Grid

Connected Roof Top Solar Programme Phase – II was further extended up to 31.03.2026, vide MNRE Office Memorandum dated 06.10.2022.

- MNRE has assigned AP DISCOMS as State Implementation Agencies (SIA) for implementation of Solar Rooftop Program under subsidy scheme for domestic consumers.
- Govt. of India, MNRE extending grant up to 40% of the system cost for domestic consumers.
- In the FY 2021-22, MNRE has set target of 25 MW to AP DISCOMS (8 MW – APEPDCL and 17 MW – APSPDCL / APCPDCL).
- Domestic consumers are showing interest across the state in Solar Rooftop System and enquiring NREDCAP on MNRE subsidy scheme.

Solar Roof top Plants installed in Andhra Pradesh (Including SRT Phase-II)

Year	No. of Units Synchronized				Capacity in MW			
	EPDCL	CPDCL	SPDCL	Total	EPDCL	CPDCL	SPDCL	Total
As on 31.03.2017	414	228	182	824	7.71	3.00	5.17	15.88
2017-18	490	195	214	899	8.74	2.48	16.14	27.36
2018-19	538	333	241	1112	15.38	4.52	10.18	30.08
2019-20	576	398	421	1395	17.00	4.47	17.63	39.10
2020-21	358	319	131	808	10.94	3.48	8.21	22.63
2021-22	483	479	187	1149	10.55	6.80	10.77	28.12
Total	2859	1952	1376	6187	70.32	24.75	68.10	163.17

Energy Efficiency Programs:

- AP ranked as one of the top ten best states in energy efficiency as per State Energy Efficiency Index (SEEI) - 2020 released by Ministry of Power, Gol.
- Initiated project of Construction of G+2 floors building in compliance with super ECBC-2017 norms for APEPDCL training institute at Sagar Nagar, Vizag to demonstrate the energy savings when compared with conventional buildings.
- Implemented IoT based technology project in MSMEs in co-ordination with IIT, Hyderabad and installed 65 Nos. IoT power monitoring devices in MSME units to improve their power factor enhance equipment life and their productivity.

- Implemented Perform Achieve & Trade (PAT) scheme in 30 high energy intensive industries and achieved savings of 0.295 million ton of oil equivalent equals to 3430 MU.
- Organized awareness and capacity building programs on ECONIWAS Samhitha to engineers/employees of GVWV & VSWS Department in 13 districts towards Implementation of Energy efficiency measures in 28.3 lakh houses under Jagananna colonies under Navaratnalu Pedalandariki Illu.
- Conducted an Investment Grade Energy Audit (IGEA) in Tirumala Tirupati Devasthanam (TTD) pumping stations and the study reveals an energy saving opportunity of 4.5 Million Units per annum by replacement of 213 Nos. inefficient pump Sets with Energy Efficient pump sets of various capacities.
- Research & Development of most Energy Efficient 5HP pump set prototype using Permanent Magnet Brush Less Direct Current (PMBLDC) technology for application in agricultural/Domestic/ commercial sectors is in progress through Andhra University.
- Organized Workshops and awareness Programs to the Pump Technicians, farmers, Municipal officials under Agricultural & Municipal Demand Side Management (AgDSM & MuDSM). Conducted state energy conservation awards – (SECA) 2020 and 2021 in energy intensive sectors, competitions to school children, mega workshop with SHG women etc as a part of energy conservation week 2021 celebrations.
- Conducting Investment Grade Energy Audit (IGEA) study in Aquaculture sector (Allied category of Agriculture) in selected 9 locations in state.
- Conducting of Investment Grade Energy Audit in 17 Nos. Municipal Corporations in 13 districts.
- Implementation of energy efficiency measures in EHT substations of APTRANSCO by replacing conventional lighting with LEDs.

Awards for Energy Conservation Measures:

S. No.	Name of the award	Award to	Date of award	Award given for
1	National Energy Conservation Awards-2015	AP State Energy Conservation Mission	14.12.2015	Best State Designated Agency (SDA) for effectively monitoring, devising, studying the best practices & advising the State Govt. for implementation of Energy Efficiency activities.
2	WORLD BANK	Andhra Pradesh State	04.11.2016	World Bank has ranked AP state as No. 1 in the country in the area of "Energy Efficiency Implementation Readiness"
3	National Energy Conservation Awards -NECA-2016	AP State Energy Conservation Mission	14.12.2016	2nd Prize in Best SDA category
4	Central Board of Irrigation and Power (CBIP) Awards-2016	AP State Energy Conservation Mission	29.12.2016	CBIP Award for Excellence in Promotion of Energy Efficiency
5	ISGF - India Smart Grid Forum- Appreciation Award for Best Energy Efficiency Program of the year 2016	AP State Energy Conservation Mission	09.03.2017	Energy Efficiency
6	National Energy Conservation Awards-2017 by Bureau of Energy Efficiency, Govt. Best State Designated Agency (SDA) for effectively monitoring, devising, studying the best practices & advising the State Govt. for implementation of Energy Efficiency	AP State Energy Conservation Mission	14.12.2017	Energy Efficiency

activities.			
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5.1.7 Laying of City Gas Distribution networks and shifting of industries to gaseous fuels:

5.1.7.1 Godavari Gas Pvt. Ltd.:

Godavari Gas Pvt. Ltd. is a joint venture organization of Andhra Pradesh Gas Distribution Corporation Ltd., (APGDC) and Hindustan Petroleum Corporation limited (HPCL) a Central Government Public Sector Enterprise (PSU). The objective of the company is to design and develop natural gas supply / distribution network systems to transport and distribute natural gas in entire East and West Godavari GA's of state of Andhra Pradesh.

The policy of GGPL for creation of natural gas distribution network in the State is as follows:

- To lay built and operate City Gas Distribution in the entire East and West Godavari GA's.
- To minimize the pollution in East and West Godavari GA's by establishing CNG Stations, PNG networks.
- To cater uninterrupted PNG supply to Domestic, Commercial, industrial Customers.
- To create a green CNG corridor along NH-16 from Eluru to Tuni.

Detailed action plan for creation of natural gas distribution network by GGPL in the geographical areas of EG & WG districts in the State on 100% basis are as follows:

S. No.	Particulars	Length in Kms	Budget / Expenditure (Rs. in crores)	Timelines
1	Pipeline network required to cover the State on 100% basis.	1470 KM / 3600 Inch-Km	535	March, 2025
2	Pipeline network completed (areas covered: Kovvuru, Chagallu,	726 KM/ 1654 Inch	-	March, 2025

	Jangareddygudem, Nidadavolu, Eluru, Tadepalligudem, Tanuku, Narasapuram, Palacole, Bhimavaram, Rajahmundry, Amalapuram, Drakshramam, Mandapeta, Peruru, Rajolu, Ramachandrapuram, Kothapeta, Ravulapalem)	-KM		
3	Ongoing pipeline network (areas covered: Rajahmundry, Kothapeta, Ravulapalem, Mandapeta, Draksharamam, Ramachandrapuram, Razole, Bhimavaram, Palakole, Narsapur, Eluru, Tadepalligudem, Bhimadole)	744 Km/ 1946 Inch-Km	-	March, 2025
4	Proposal stage covering the rest of the areas.	-	Progressively development of CGD network will be taken up in other cities of East and West Godavari districts.	-

Gas requirements:

S. No.	Category	Actual requirement (in scm)	Supply as on date (in scm)	Action plan for meeting the demand
1	Industries	6,97,900	587032	Gas will be sourced from GAIL KG Basin Network.
2	Commercial	19,200	4936	
3	Domestic	76,900	21500	

The total investments of ~Rs 320 Crores has already been made till date in Andhra Pradesh for creating CGD infrastructure and the likely investment planned for next 2 years is ~Rs. 215 crores. Presently, CNG dispensing stations in Andhra Pradesh are 35.

5.1.7.2 Bhagyanagar Gas Ltd.:

Detailed action plan for creation of natural gas distribution network in the State (Vijayawada & Kakinada) on 100% basis by Bhagyanagar Gas Ltd., is as follows:

S. No.	Particulars	Length in Kms	Budget / Expenditure (Rs. in crores)	Timelines
1	Pipeline network required to cover the State on 100% basis	993.00*	-	-
2	Pipeline network completed (areas covered : Vijayawada & Kakinada)	808.60**	-	Completed
3	Ongoing pipeline network (areas covered : Vijayawada & Kakinada)	184.40	-	Ongoing
4	Proposal stage covering the rest of the areas.	-	-	-
* Target as per PNGRB in inch per km & **BGL achievement in inch per km				

Gas requirements:

S. No.	Category	Actual requirement (in Scm)	Supply as on date (in Scm)	Action plan for meeting the demand
1	Industries	2,92,800	2,92,800	As per demand
2	Commercial	2,42,500	2,42,500	
3	Domestic	61,63,800	61,63,800	

The total investments of ~Rs 367 Crores has already been made till date in Andhra Pradesh for creating CGD infrastructure and the likely investment planned for next **One year** is ~Rs. 100 crores. Presently, CNG dispensing stations in Andhra Pradesh are **47 nos.** and it is proposed to expand to ~**25 nos.** dispensing stations in the next one decade.

5.1.7.3 IOCL:

5.1.7.3.1 Vizag Gas Agency:

Vizag GA comprises of the 03 erstwhile districts of Visakhapatnam, Vizianagram & Srikakulam. There is a plan of laying around 2300 Inch Km of Steel Pipeline in the three districts within 08 years of the date of availability of Gas through Trunk Pipeline

of APGDC (KSPL). The plan includes infrastructure to cater to 9.3 Lakhs of Domestic PNG connection and setting up of 211 CNG Retail outlets at an estimated expenditure of Rs. 1330 crores.

In Visakhapatnam city total 63 Km of Steel Pipeline network & 340 Km of MDPE Pipeline network has been laid by IOCL till now. However as Trunk Line connectivity is not available in Vizag due to delayed APGDC Pipeline from Kakinada to Srikakulam, there is no gas availability in Vizag. 13 CNG RO's are under operation by bringing Gas through Cascades from BGL Kakinada. Upon availability of Gas through Trunk Line the demand in the three districts will be around 2 MMSCMD in next 25 years.

5.1.7.3.2 Guntur Gas Agency:

Guntur GA comprises of 03 erstwhile districts of Guntur, Kurnool &Prakasam , There is a plan of laying around 1412 Inch Km of Steel Pipeline in the three districts within 08 years. The plan includes infrastructure to cater to 45 Lakhs of Domestic PNG connection and setting up of 301 CNG Retail outlets at an estimated expenditure of Rs. 1420 crores.

The total investments of ~Rs 157 crores has already been made till date in Andhra Pradesh for creating CGD infrastructure and the likely investment planned for next 8 years is ~Rs. 2593 crores. Presently, IOCL CNG dispensing stations in Andhra Pradesh (Visakhapatnam & Guntur District) are 14 and it is proposed to expand to 512 dispensing stations in the next one decade.

5.1.8 LPG Coverage in Andhra Pradesh:

“Pradhan Mantri Ujjwala Yojana” was launched by Prime Minister of India on 1st May, 2016 to distribute 50 million LPG connections to women of Below Poverty Line families. Pradhan Mantri Ujjwala Yojana - 2.0 to offer 1 crore more LPG connections. The same is under implementation. The penetration of the LPG - as per Active Consumer count in the Andhra Pradesh is 104.0 % as on March, 2022.

S. No.	Category / Service provider / Oil company	No. of households covered	% of coverage	Gap
I	Below Poverty Line (BPL):			
1	IOCL	2887977	104.8	Nil
2	BPCL	1389549		
3	HPCL	2691628		
Total		6969154		
II	General (Non BPL & Commercial):			
1	IOCL	3812860	104.8	Nil
2	BPCL	2025749		
3	HPCL	5069538		
Total		10908147		

There are 372 distributorships and 9 exclusive non domestic packed distributorships across Andhra Pradesh to cater to commercial / industrial LPG needs operated by HPCL and 460 distributorships and 2 exclusive non domestic packed distributorships across Andhra Pradesh to cater to commercial / industrial LPG needs operated by IOCL.

5.1.9 PNG Coverage:

The new townships are encouraged to opt for PNG coverage wherever feasible. Status of PNG existing & ongoing connections and volume of gas consumption company-wise and year-wise is as follows:

S. No.	Gas agency	Cities / towns	No. of households	Year	Volume (SCM)
1	BGL	Vijayawada & Kakinada	1,18,000	2019-20	5287699
				2020-21	5624572
				2021-22	8028788
2	AGPCGP	Anantapur, YSR Kadapa District and Naidupeta, Gudur & Nellore	19,400	2019-20	Nil
				2020-21	Nil
				2021-22	Nil
3	GGPL	Rajahmundry, Amalapuram, Tadepalligudem, Kovvur, Eluru and Bhimadole	2,451	2019-20	155825
				2020-21	291831
				2021-22	268024
4	MEIL	Nuzvid, Agiripalli, Nunna, Gannavram, Nagyalanka,	21,000	2019-20	2000
				2020-21	5200
				2021-22	8400

		Avanigadda, Vijayawada Rural, Gudlalleru, Pedana			
Total in the State:			1,60,851	2019-20	5445524
				2020-21	5921603
				2021-22	8305212
SCM: Standard Cubic Meter.					

5.1.10 CNG Coverage:

As on date, 128 CNG stations covering 50 cities & towns in the State have been installed for auto gas supply and public transport vehicles.

5.1.11 Co-processing of Hazardous Waste in Cement Kilns:

The incinerable waste generated in the state is being used for co-processing in the cement industries as a result of which the fuel used for incineration and the cost of operation of the APC are saved leading to lesser air pollution and is managed in an environmentally sound methods. The amount of material co-processed in cement plants during the year 2019-20, 2020-21 & 2021-22 is 1,30,669 MT, 80,475 MT & 80,914 MT respectively.

5.1.12 Management of Thermal Power Plants Fly Ash:

APPCB is implementing the MoEF & CC, GoI Fly Ash Notification, dated 31.12.2021 in the State for better monitoring and utilization of Fly Ash generated by coal based Thermal Power Plants (TPPs).

In this regard, APPCB has organized an implementation review meeting with the representatives of TPPs and other user agencies on 10.06.2022 and directed to strictly comply with the provisions of Fly Ash Notification, 2021.

The State is having 10 thermal power plants generated about 14.12 million metric tons of ash and utilized an amount of 13.76 million metric tons of ash in the year 2021-22 as detailed below:

S. No.	Generation of Electricity in MW (as per CFO)	2021-2022		
		Fly Ash Generation	Fly Ash Disposed	Percentage of fly ash disposal
1	M/s. Rashtriya Ispat Nigam Limited, Kurmannapalem, Visakhapatnam.			
	325	5,11,145	4,66,745	91
2	M/s. NTPC Ltd, Simhadri Thermal Power Plant, Simhadri, Visakhapatnam.			
	2000	35,91,587	40,17,370	111.86
3	M/s Hinduja National Power Corporation Ltd, Palavalasa (V), T. Devada (P), Pedagantyada (M), Visakhapatnam.			
	1040	84,494	4,04,704	479
4	Dr. Narla Tata Rao Thermal Power Station, Ibrahimpatnam (V&M), Krishna District.			
	1750	3,98,552	4,92,324	123.53
5	M/s Sri Damodaram Sanjeevaiah Thermal Power Station of APGENCO, Nelatur and Pynapuram villages, Muthukur Mandal, SPSR Nellore District.			
	1600	12,32,856	7,63,865	63.46
6	M/s Sembcorp Energy India Limited, Project 1, Painampuram, SPSR Nellore District			
	1320	16,99,373	16,99,912	100
7	M/s Sembcorp Energy India Limited, Project 2, Ananthavaram Village Varakavipudi Panchayat TP Gudur Mandal, SPSR Nellore District.			
	1320	6,90,990	6,81,685	100
8	M/s Meenakshi Energy Pvt. Ltd., Sy. Nos. 45, 46, etc., Thammenapatnam, Chillakur (M), SPSR Nellore District.			
	1000	17,175	1,633.8	9.513
9	M/s Simhapuri Energy Pvt. Ltd., Thammenapatnam and Mommidi Villages, Chillakur (M), SPSR Nellore District.			
	600	Not In Operation		
10	M/s Rayalaseema Thermal Power Plant, V.V. Reddy Nagar, Muddanur, YSR Kadapa District.			
	1650	2,14,0407	1565173	73.13
Total	12605	1,03,66,579	1,00,93,411.8	

Further, APPCB has issued directions to all the Thermal Power Plants of the State for disposal of the fly ash through APEMCL to end users. Accordingly, APEMCL developed the fly ash module for disposal of fly ash through APEMCL online portal for effective monitoring of fly ash generation and disposal.

5.1.13 Formation of Andhra Pradesh Environment Management Corporation Limited:

Government of Andhra Pradesh, Environment, Forests, Science & Technology Department, vide G. O. Ms. No. 39 dated 05.12.2019 (**Annexure – 8**) formed Andhra

Pradesh Environment Management Corporation Limited (APEMCL) under its aegis for providing effective mechanism of collection, transportation, storage, treatment, processing, delivery and disposal of the industrial waste and other wastes from their generation until the end of its lifecycle, in close coordination with APPCB.

The APEMCL commenced its Platform Business Model operations from 05.11.2020. About 987 (A.P State - 961, Other states - 26) number of waste generating industries, 171 (A.P State - 108, Other state - 63) number of waste receiving industries, 170 number of transporters, 1279 number of transporting vehicles are registered in APEMCL portal till date and successfully utilizing the online portal for exchange of the wastes to benefit out of the disposal.

Since inception, the APEMCL has successfully handled 8,32,225 MT (Landfill waste - 3,98,358.81 MT, Incinerable waste - 9,134.73 MT, recyclable waste - 14,502.87 MT, Utilizable waste - 4,10,228.57 MT) of hazardous waste (solid) through 49,587 online manifests. Similarly, 6,03,016 KL of liquid waste handled through 32,273 of online manifests, till 21.12.2022.

5.1.14 Control of VOC emissions from Storage of Petroleum Crude and its Products:

The Petroleum and Explosives Safety Organization (PESO) grants licenses under Petroleum Rules, 2002 stipulated the conditions that storage of hazardous petroleum products shall be provided with floating roofs and double seals for the storage tanks to ensure prevention of escape of fugitive VOC emissions into the environment.

5.1.15 Control of Emissions from Fire Crackers:

In compliance of Hon'ble Supreme Court of India directions in I. A. No. 44727/2021 in writ petition No. 728/2015, in respect of fire crackers PESO has approved the improved and new formulation (green crackers) fireworks composition to all the manufacturers and submitted to the Chief Controller of Explosives, Nagpur for implementation.

5.1.16 Control of Emissions from mining activities:

APPCB has identified the following listed 22 mining clusters in the State having potential for air pollution.

S. No.	Mine type	Address
1	Color granite	Tekkali (M), Srikakulam District
2	Road metal	Jami (M), Vizianagaram District
3	Road metal	Sompuram, Vepada (M), Vizianagaram District
4	Manganese	Garividi (M), Vizianagaram District
5	Road metal, Gravel, Rough stone	Martur, Anakapalle (M), Visakhapatnam District
6	Road metal	Prathipadu (M), Kakinada District
7	Road metal	Kovvuru (M), East Godavari District
8	Road metal	Devarapalli (M), East Godavari District
9	Road metal	Perecherla, Medikonduru (M), Guntur District
10	Black granite	Chimakurthy (M), Prakasam District
11	Grey granite	Ballikuruva (M), Bapatla District
12	Lime stone	Betamcherla (M), Nandyala District
13	Lime stone	Banaganapalli (M), Nandyala District
14	Color Granite	Tuggali (M), Kurnool District
15	Road metal	Bommanahal (M), Ananthapur District
16	Road metal	Anantapuram Rural, Ananthapur District
17	Lime stone	Tadipatri (M), Ananthapur District
18	Color granite	Madakasira (M), Sri Satya Sai District
19	Barytes	Mangampet (M), YSR District
20	Road metal	Nagari (M), Chittoor District
21	Road metal	Satyavedu (M), Tirupathi District
22	Road metal	KVB Puram (M), Tirupathi District

A Discussion Forum at State level was conducted by APPCB, Vijayawada on 11.02.2020, with the representatives of mining clusters, stakeholders & experts in air pollution monitoring in mining areas to discuss issues related to air pollution in the mining areas and the following decisions for implementation by the stakeholders:

1. Constitution of Implementation Committee for each district comprising of:
 - i) Representative from A.P. Mineral Development Corporation (APMDC),
 - ii) Representatives from three quarry owners,
 - iii) Representative from Mining Department,
 - iv) Regional Officer, APPCB and

- v) The Zonal Officer, APPCB is the member convener of the Committee.
2. The committee shall estimate the Budget required for:
 - i) Cleanup of the cluster area with the own machinery of mining units like road proclainers and tippers,
 - ii) Pitting the area for plantation,
 - iii) Carryout the plantations in the cluster areas with plants of 3 meters height and 3 years old,
 - iv) Asses the number of Continuous Ambient Air Quality Monitoring Stations (CAAQMS) required for the area to monitor PM10, PM2.5 & NO_x and the same shall be charged from the quarry owners on per Hector basis.
 3. The committee, in-consultation with the District Collector shall identify two or three areas within the cluster for dumping the overburden.
 4. The individual industries have to take-up dust suppression measures by mist sprinkling of water with high pressure pump to control air pollution, provide Kirby sheets of height 20 to 25 feet around the mining area to avoid dust flying on to the cluster area and provide 33 % of the mining area with greenbelt within the mine area, if area not available, the same shall be developed outside the mining area under afforestation.
 5. The dusty materials transporting vehicles shall be covered with tarpaulin, so as to avoid spillage of dust.
 6. To start with, the above air pollution control measures shall be implemented in Chimakurthy Granite Mining area as a model and can extend the same to other mining areas in future.
 7. The ZO, Vijayawada shall take steps for the constitution of the committee and the 1st meeting of the committee shall take place by 25.02.2020 and the implementation measures in Chimakurthy area shall be completed within 30 days.
 8. If the above measures are not implemented, the APPCB will invoke the provisions of Environmental Compensation as per the Orders of the Hon'ble NGT.

Minutes of the Discussion Forum enclosed (**Annexure - 9**).

Accordingly, the Zonal Offices, Visakhapatnam, Vijayawada & Kurnool, APPCB are directed to take steps for implementation of the decision taken during the Discussion Forum on 11.02.2020.

5.1.17 Common guidelines / Action points for implementation in industrial estates and areas to reduce the air pollution:

- Insisting the industries to have 33% green cover in their premises through CFE & CFO Orders and also in the industrial areas - **Concerned industries, industrial associations, APIIC.**
- The roads in the industrial estates / areas are to be maintained regularly without potholes, end-to-end pavement and sweeping to remove the silt -**APIIC, IALA.**
- The loading and unloading operations are to be taken up in covered areas to prevent any lofting of dust – **APPCB, APIIC, Industries Department & Industries.**
- Industries shall be mandated with suitable air pollution control equipment to meet the environmental standards - **APPCB.**
- All in-charges of industrial estates and areas to monitor the construction works, loading and unloading activities. Also to have a dedicated public redressal system to address the grievances - **APIIC & IALA.**
- Monitoring of all the industrial estates and areas to be carried out at regular intervals for EC, CFE & CFO compliance verification and to take corrective measures required if any – **APPCB.**
- All the air polluting industries with boilers, furnaces and any other should be monitored for compliance verification at regular intervals. The Online Continuous Emission Monitoring and Ambient Air Quality Systems shall be made mandatory based on the category of the industry - **APPCB.**
- All concerted efforts are to be made for switching over to cleaner fuels like CNG & LPG and for the new industries subject to availability of these fuels - **APIIC, APPCB, Civil Supplies & Industries Department.**
- The Pollution Under Control (PUC) for the vehicles plying in the estates shall be mandatory – **Industries concerned and IALA.**

- All measures to be taken to prevent any sort of open burning and all such incidents shall be stopped and punitive action to be initiated – **APPCB, APIIC & IALA.**
- All fire accidents within the industrial estate / area are to be mitigated at the earliest and the environmental damage need to be fixed as per the procedures - **APIIC, APPCB, Industries & IALA.**
- Hotspots for air pollution need to be identified within 30 days of approval of the State action plan by APIIC, APPCB, Inspector of Factories and Industries Department. A micro action plan has to be prepared for mitigation of the air pollution at such hotspots and placed before the competent authority (District Collector) for approval and implementation.
- A half yearly report has to be prepared by APPCB, APIIC and Industries Department on the compliance status of air pollution with respect to PM₁₀ and PM_{2.5} along with the actions initiated as per the State Action Plan and approved micro action plan. The recommendations, if any are to be made.

5.2 Vehicular emissions:

Andhra Pradesh along with other States has been recording a sustained growth in the number of vehicles over the years. The development of good infrastructure, besides, the State has the proposals to develop industrial corridors along the coast line accelerated the growth of vehicles. The following table provides the details of the vehicles in the state:

Details of total vehicles in the State with break-up in Vehicular fleet							
As Per Bharath Stage Norms Vehicle Strength as On 31/03/2022							
S. No.	Category	BOV	BSII	BSIII	BSIV	BSVI	Grand Total
1	Auto rickshaw	2889	33308	253697	109352	26276	425522
2	Contract Carriage	1	953	2479	1051	335	4819
3	Educational Institute Buses	0	2377	6231	2628	196	11432
4	e-Rickshaw/e-Cart	0	0	0	0	0	0
5	Goods	314	37640	127164	85148	61538	311804

	Carriages						
6	Maxi Cab	1	1985	1948	3096	911	7941
7	Motor Cab	225	2995	8510	11405	5654	28789
8	Motor Car	4756	2039	75708	170189	154584	407276
9	Motor Cycle	27003	367950	3509494	2693546	1515354	8113347
10	Other Vehicles	635	1647	13819	8519	2380	27000
11	Private Service Vehicles	2	137	424	199	165	927
12	Stage Carriages	11	1115	5174	82	2	6384
13	Tractor and Trailers	0	363	25944	2	0	26309
Grand Total		35837	452509	4030592	3085217	1767395	9371550

The total number of vehicles using CNG in Andhra Pradesh is autorickshaws 22,391, four wheelers 9,054 and Public transport buses 212.

5.2.1 Notification of phasing out old vehicles (Commercial: 10 years and private: 15 years):

The Govt. issued G.O. Ms. No. 124, dated 07.10.1999 prescribing that no four-wheeler and above vehicles of more than 15 years old are allowed to ply unless scientifically tested and certified by competent authority. 3 wheeler vehicles which have covered 15 years shall not ply within Vijayawada and Visakhapatnam. The details of the vehicles category wise, 15 years old vehicles as on 31.03.2022.

Category Wise, 15 Years Old Vehicles As On 31.03.2022		
S. No.	Category	Count
1	Autorickshaw	42,728
2	Contract Carriage	1,018
3	Educational Institute Buses	3,315
4	Goods Carriages	71,985
5	Maxi Cab	2,761
6	Motor Cab	12,668
7	Motor Car	1,58,456
8	Motor Cycle	22,70,936
9	Other Vehicles	26,968
10	Private Service Vehicles	573

11	Stage Carriages	----
12	Tractor and Trailers	1,48,194
13	APSRTC Buses	8,341
Total		27,47,943
Note: All the APSRTC buses are treated as Stage Carriages.		

5.2.2 Policy of Scrapping the old vehicles:

Ministry of Road Transport and Highways, Govt. of India has issued Notification G.S.R. 653 (E) dated 23rd September, 2021 on Motor Vehicles (Registration and Functions of Vehicle Scrapping Facility) Rules, 2021 as required sub-section (1) of section 212 of the Motor Vehicles Act, 1988 (59 of 1988).

Industries Department, Govt. of Andhra Pradesh has prepared draft policy on Vehicle Scrap Yards Promotion to promote the establishment of vehicle scrapping units and Automated Testing Stations and submitted for approval.

5.2.3 Policy / Plan for Li-battery waste management from scrapped vehicles:

The State has adopted and implementing the Battery Waste Management Rules, 2022 issued through Notification by Govt. of India, vide S. O. 3984 (E), dated 22.08.2022.

As per the Rules, the producer shall have the obligation of Extended Producer Responsibility for the Battery that they introduce in the market to ensure the attainment of the recycling or refurbishing obligations. Producer shall meet the collection and recycling and / or refurbishment targets as mentioned in Schedule II for Battery made available in the market. Waste Battery collected by the Producer shall be sent for recycling or refurbishing and shall not be sent for landfilling or incineration.

S. No.	Mandatory Waste Battery collection target and 100% of refurbishment or recycling of the collection target (Weight)	Mandatory Waste Battery collection target, and 100% refurbishment and/or recycling target for every fourteen year cycle (Weight)
---------------	---	---

I	For Electric Vehicles (EV) Battery of two wheelers	
	Minimum 70% of the quantity of batteries placed in the market in a financial year shall be collected after three (3) years.	Collection of 100% Waste Battery and of 100% of refurbishment / recycling shall be mandatory by end of seven year compliance cycle (end of 7th year) against the Battery placed in the market during seven year compliance cycle.
II	Electric Vehicles (EV) Battery of E-rickshaw (three wheelers)	
	Minimum 70% of the quantity of batteries placed in the market in a financial year shall be collected after two (2) years.	Collection of 100% Waste Battery and of 100% of refurbishment / recycling shall be mandatory by end of seven year compliance cycle (end of 7th year) against the Battery placed in the market during seven year compliance cycle.
III	For Electric Vehicles (EV) Battery comprising of four wheelers	
	Minimum 70% of the quantity of batteries placed in the market in a financial year shall be collected after seven (7) years.	Collection of 100% waste battery and of 100% of refurbishment or recycling shall be mandatory by end of fourteen year compliance cycle (end of 14 th year) against the Battery placed in the market during fourteen year compliance cycle. However, there may be a carry forward of up to 60% of the average quantity of Battery placed in the market per year during the fourteen year cycle to the next compliance cycle.

5.2.4 Policy for Augment of E-vehicles:

Industries & Commerce Department, Andhra Pradesh has notified the “Electric Mobility Policy 2018-23”, vide G.O. MS. No. 74, dated 08.06.2018. Under the policy,

- All forms of government vehicles, including vehicles under government corporations, boards and government ambulances etc. will be converted to electric vehicles in two years by 31.12.2024.
- Target to have 10 lakh Evs, combined across all segment of vehicles in two years by 31.12.2024.

- Target to have 1,00,000 slow and fast charging stations in three years by 31.12.2025.

Under this policy, Government approved the following benefits covering the areas of (1) Manufacturing (2) Charging Infrastructure (3) Demand Creation (4) Research and Development in order to make projects under these areas viable. The “Electric Mobility Policy 2018-23” of the State is enclosed (**Annexure – 10**).

5.2.4.1 Status of Implementation of E-mobility policy in the State:

Industries & Commerce Department has issued “Electric Mobility Policy 2018 -23”, vide G.O. MS. No. 74, dated 08.06.2018. Under the said Policy, Transport Department granted exemption of tax and registration fees to motor vehicles operated with batteries / ultra capacitors / fuel cells registered on or before 07.06.2023, vide G.O. Ms. No. 69 & 70 of Transport, Roads & Buildings (Tr. I) Department, dated 27.12.2018 (**Annexure – 11**) in addition to G.O. Ms. No. 57 of Transport, Roads & Buildings (Tr. I) Department, dated 01.11.2018 (**Annexure – 12**).

This exemption is applicable to all categories of vehicles. Permit is also exempted in respect of vehicles operated with battery, ethanol / methanol, vide Govt. of India notification No. S.O. 5333 (E) dated 15.10.2018. The cumulative numbers of electric vehicles registered in Andhra Pradesh are 35,837.as on 31.03.2022.

Govt. of Andhra Pradesh has issued G.O. Ms. No. 4, dated 06.07.2021 (**Annexure – 13**) facilitating the supply of E-2 Wheelers to the Government employees on EMI basis through NREDCAP. NREDCAP has converted 5 numbers of ICE 3 Wheeler Passenger Autos into Electric Autos with swapping facility on pilot basis in Tirupati City.

10 nos. of E- Garbage Autos have been deployed at 4 Grampanchayaths with a total cost of Rs. 28,36,000/-

300 numbers of Electric cars have been deployed to various government departments in Andhra Pradesh.

Deployment of Electric Vehicles in Andhra Pradesh				
S. No.	District	Department	No. of Vehicles	Total Vehicles District Wise
1	Visakhapatnam	APEPDCL	32	63
		GVMC	30	
		DC Vizag	1	
2	Krishna	APSPDCL	24	55
		VMC	24	
		APCRDA	5	
		NREDCAP	1	
		EESL	1	
	Guntur	AP Secretariat		
3	Guntur	APSPDCL	14	14
4	East Godavari	APEPDCL	4	19
		RMC	15	
5	West Godavari	APEPDCL	1	1
6	Vizianagaram	APEPDCL	1	1
7	Srikakulam	APEPDCL	2	2
8	Chittoor	APSPDCL, Tirupati		
	Chittoor	APSPDCL, Chittoor	56	56
9	Prakasam	APSPDCL, Ongole	12	12
10	Nellore	APSPDCL, Nellore	27	27
11	Kadapa	APSPDCL	12	12
12	Kurnool	APSPDCL	13	13
13	Anantapur	APSPDCL	11	21
		AMC	9	
				296

The vehicles are provided through EESL on dry lease basis @ Rs. 16,000/- per month.

5.2.4.2 Electric Vehicle Charging Stations:

A total of 148 charging stations have been installed in the State covering 25 Districts under private sector. Further, 103 institutional charging stations have been installed in the State under Govt. sector. Apart from these, it is proposed to install 3,032 more charging stations in the State by the private and public sector organizations by 31.03.2024. NREDCAP has empanelled 12 service providers as Charge Point Developers (CPD) in the State as detailed below:

S. No.	Name of the CPD	Address
1	lcharge Energy Solutions Private	Plot No. 4/B, Hitendranagar Sahakari Audhyogik Vasahat Ltd., Nr. Naroda Railway Crossing, B/h.

	Limited	Cartec Honda Showroom, Naroda, Ahmedabad – 382 340, Gujarat.
2	Sharify services private limited	Nasscom, Plot No.1 Udyog vihar phase 1. Sector 20, gurugram, Haryana 122011, India.
3	Volty NXT energy private limited	Level 3, Spacion Towers, next to The Westin Hotel Road, Vittal Rao Nagar, HITEC City, Hyderabad, Telangana 500081.
4	TVSAS Electric Solutions Private Limited	Registered Office New Colony, Bijaura Bhawarnath, Azamgarh, Uttar Pradesh, 276001. Corporate Office Sector 64 Noida, Uttar Pradesh, 201201, India.
5	ETO Motors Pvt. Ltd.	My Home Hub, 5th Floor, Block - II, HITEC City, Madhapur, Telangana 500081.
6	GOEGO Network (Impactware)	GOEGO Office, Apramey Building, Lane Number 3, Behind Westside Mall, Laxman Nagar, Baner, Pune, Maharashtra - 411045.
7	Joule Point Private Limited	3-1- 429, road no 11, Maithri Nagar Colony Dhanapuram, L B Nagar Hyderabad.
8	Sahana Systems Limited	A901, Mondel Square, Near Prahalaad Nagar Cross Road, S.G. Highway, Ahmedabad-380015.
9	Verde Mobility	Plot#32, Zone-D/4, Phase-1, GIDC Estate, V.U. Nagar, Gujarat - 388 121.
10	26 Eleven Solutions Private Limited	Ground floor, 3-119/10/a, Daspalla layout, Near St. James school, Yendada, Visakhapatnam, AP – 530045.
11	Evigo Charge Private Limited	D-1, Udyog Sadan No3, MIDC Marol Industrial Area, Andheri East – 400093.
12	TecSo Charge Zone Limited	401, Benison Complex, Opp. Shiv Mahal Palace, Old Padra Road, Vadodara – 390007, Gujarat.

The development of Charging Infrastructure is taken up with private investment and operational guidelines are awaited from Industries Department based on that incentives will be extended and demand will be generated based on the demand cost can be arrived.

5.2.5 Public Transport:

5.2.5.1 Andhra Pradesh State Road Transport Corporation (APSRTC):

The total fleet of State owned APSRTC is 9014, of it 77 are >15 years old, 212 are CNG driven and rest are diesel driven buses as on 31.03.2022. The corporation is also operating city services in the million-plus cities, viz., Visakhapatnam & Vijayawada with a fleet of 532 and 426, respectively. In Vijayawada city, 212 out of 426 are CNG driven buses.

In a bid to reduce carbon emissions in the pristine Tirumala hills and Seshachalam forests, which is a world renowned pilgrimage center, the State Government has sanctioned 100 e-buses to Tirupati region to operate by APSRTC during November, 2021 has issued supply order to the Olectra and Every Trans Consortium to supply 100 electric buses under FAME-II scheme of the Government of India and to operate on a Gross Cost Contract (GCC) / OPEX model basis for 12 years. Of the 100, 50 buses will ply between Tirupathi & Tirumala and 50 buses will ply between Tirupati and other neighbouring towns.

Accordingly, the first batch of 10 e-buses was delivered to APSRTC on 27.09.2022 to ply between Tirumala and Tirupati.

5.2.5.2 Bus Rapid Transport System (BRTS):

Visakhapatnam City: A total length of 42 kms of two BRTS corridors, (1) Pendurthi Transit Corridor – Pendurthi to Hanumanthawaka covering Pendurthi to NAD junction, NAD to Thatichetlapalem via Marrisipalem, Thatichetlapalem to Railway Station, Rama Talkies to Maddilapalem & Maddilapalem to Hanumanthawaka, and (2) Simhachalam Transit Corridor - Simhachalam to Hanumanthawaka was developed and made available in Visakhapatnam city.

Vijayawada City: BRTS corridor covering a distance of 3.8 km from Padavalarevu Junction to CK Reddy Road is available in Vijayawada city.

5.2.6 Notification and enforcement of PUC norms:

In the state, there are a total of 429 PUC testing centers and out of which 300 are active and 129 are expired. The integration of the issue of certificates is maintained through online and with calibration.

Transport Department, Govt. of AP has issued Memo. No.768854 / K1 / 2017, dated 05.10.2017 (**Annexure – 14**) wherein,

- a) All Pollution Under Control (PUC) centres to be informed to take up calibration of their machines every year. One month time may be given to PUC centres which have no calibration certificate.
- b) The Deputy Transport Commissioners should conduct random checks of PUC centres every month and also carry enforcement drives for PUC certificates on regular basis.

5.2.7 Green Tax:

S. No.	Class of Vehicles	Amount of Tax
1	Transport Vehicles that have completed 7 years of age from the date of their registration	Rs.5000/- (Per annum)
2	Non-Transport Vehicles that have completed 15 years of age from the date of their registration.	---
	(a) Motor Cycles	Rs.1000/- (Per Annum)
	(b) Other than motor Cycles	Rs.5000/- (Per Annum)

There shall not be any levy of Green Tax if the vehicle is operated by LPG, CNG, Battery or Solar Power.

5.2.8 Refilling stations retrofitted with vapor recovery system:

CPCB through its O.M., vide Lr. No. B-13011/1/2019-20/AQM/10802-10847, dated 07.01.2020, issued guidelines for setting up of new petrol pumps in compliance of Hon'ble NGT order dated 18.01.2019 in O A No. 86/2019. As per the guidelines the newly coming up petrol pumps / filling stations have to install Vapour Recovery System (VRS) to control VOC emissions as detailed below:

S. No.	Population	Sale potential of MS/month (KL)	Remarks
1	> 1 Lakh	300	VRS should be made functional by the time of sale of MS touch 300 KL, failing which environmental compensation will be levied by SPCB / PCCs equivalent to the cost of VRS and this will further increase proportionate to the period of non-compliance.
2	> 10 Lakhs	100	VRS should be installed within a period of 3 months from the day of sale of MS touch 100 KL, failing which environmental compensation will be levied by SPCB / PCCs equivalent to the cost of VRS and this will further increase proportionate to the period of non-compliance.

Oil Manufacturing Companies (OMCs) are responsible for maintaining the installed VRS. Working of dispenser shall be interlinked with VRS functioning. Work zone monitoring for TOCs and Benzene shall be conducted by OMCs for petrol pumps selling more than 300 KL per month and more than 10 lakhs population. There are 14 petrol pump stations in the million-plus cities with a sale potential of >100 KL MS per month each, of which five have been provided with VRS. Similarly, there are 26 petrol pump stations in the 11 non-attainment cities with a sale potential of >300 KL month MS each, which have to be provided with VRS.

5.2.9 Developing of parking facilities:

In Greater Visakhapatnam Municipal Corporation (GVMC), a multi-level car parking project with an estimated cost of Rs.11.45 crores is being developed at Jagadamba area under Smart City project to provide parking facility for 100 cars. 31 more parking facilities in the city have also been proposed, of which three are under construction stage.

Visakhapatnam Metropolitan Region Development Authority (VMRDA) has also plans for development of 4 multi-level car parking facilities which can provide space for 300 vehicles under its jurisdiction.

Municipal Corporation, Ananthapuramu is developing a multi-layer two-wheeler parking facility at Old Market, Near Pavani Hospital, Sai Nagar & Police Complex @ 30 units per location with an estimated cost of Rs.50.00 lakhs under NCAP which will be completed by 31.03.2023.

In all the 17 Municipal Corporations, designated parking sites are earmarked for the para-transit vehicles and cabs. Bus shelters and bay areas have also been provided to avoid obstruction of the free flow of the traffic. Impounding of the vehicles with penalties for parking at non-designated areas including towing facilities were provided at all major towns.

Transport, Roads & Buildings Department, Govt. of Andhra Pradesh has issued G. O. Ms. No. 21 dated 21.10.2020 (**Annexure – 15**), under section 190 (2) MV Act, 1988, Rs.1500/- to 3000/- can be charged as fine.

5.2.10 Common guidelines / Action points for implementation to reduce the traffic congestion and road dust:

- All commercial goods vehicles shall not be allowed to enter and ply within the city and major towns from 8.00 am to 10.00 pm. This will reduce the traffic congestion and also the disturbances caused due to loading and unloading activities - **ULB and Traffic Police.**
- Construction / erection of medians with greenery / dividers may be ensured on all the main arterial and radial roads duly encouraging lane discipline - **ULB and Traffic Police**
- Separate bus bays and designated parking for para-transit modes is to be developed to prevent traffic congestion and facilitate commuters - **ULB and Traffic Police.**
- Minimize the no. of traffic intercepts / signals to optimize the average speed, and 'U' turns shall be provided to facilitate smooth flow of traffic - **ULB and Traffic Police.**
- Online linking of PUC for the vehicles and verification - **RTA and Traffic police.**
- Enforcing lane discipline at major traffic junctions through linking of IP cameras to command control centre and levying penalties - **Traffic Police.**

- Earth works on the main traffic corridors to be restricted with containment of loose soil and providing enclosures - **ULB and other stakeholders.**
- Enforcement of parking restrictions along the arterial & sub-arterial roads, commercial places, cinema halls / multiplexes, etc. in the cities & towns - **ULB and Traffic Police.**

5.3 Construction & Demolition (C & D) Waste and Road Dust Management:

5.3.1 C & D Waste Management:

5.3.1.1 Status on implementation of C & D Rules, 2016:

Government of Andhra Pradesh (GoAP) is following the Construction and Demolition (C & D) Waste Management Rules, 2016 to manage the C & D waste generated in the State. The GoAP in G.O. Ms. No. 350, MA & UD (B2) Department, dated 29.10.2018 (**Annexure – 16**) (a Model notification on handling of C & D Waste Rules, 2016) issued instructions to follow the C&D Waste Management Rules, 2016 which was communicated to all Commissioners in the State, vide Endt. Roc. No. 11119 / C & D W / 2016-M3, dated 30.10.2018 of C&DMA (**Annexure – 17**). Instructions were also issued to all MCs, vide circular Roc.No.12057/27/2020-M3, dated 15.06.2020 of CDMA (**Annexure – 18**) to ensure notifications issued on by-laws for implementation of C & D Waste Management Rules, 2016.

There are 123 ULBs in the State. Out of 123 ULBs, 73 ULBs have taken Council Resolutions for implementation of C & D Waste Management Rules, 2016. The total C & D waste generation is 521 TPD (GVMC: 80 TPD, VMC: 70 TPD & other ULBs: 401 TPD). 5 nos. of C & D recycling plants exist in 5 ULBs with a total capacity of 270 TPD are under operation as detailed below:

S. No.	City / ULB	Generation (TPD)	Plant Capacity (TPD)
1	Vijayawada	70	80
2	GVMC	80	80
3	Tirupathi	25	80
4	Kakinada	04	15
5	Kurnool	40	15
Total		219	270

City-wise proposals for C & D waste processing facilities are in pipeline in other non-attainment cities viz., Srikakulam, Vizianagaram, Rajahmundry, Eluru, Guntur, Nellore, Chittoor & Ananthapuram.

The process of identifying suitable sites to establish the C & D waste processing facilities in the ULBs on standalone basis wherever it is feasible is under progress. Cluster approach will be adopted for establishment of processing units / crushing units for ULBs with smaller quantities of C & D waste generation.

Separate site for storing C & D waste has been earmarked in 86 ULBs. In the remaining ULBs separate sites will be provided by 31.03.2023. 44 ULBs have levied penalties on instances of illegal debris dumping by making bye-laws with suitable provisions.

MA & UD Department, Govt. of Andhra Pradesh through the G.O. Ms. No. 168 MA, dated 07.04.2012 (**Annexure – 19**), made it mandatory to obtain Environmental Clearance from MoEF & CC, Govt. of India for the buildings with $\geq 20,000$ sq. mts of built-up area and to have an Environmental Management Plan (EMP) for compliance.

5.3.1.2 Proposed Action points:

- 5.3.1.2.1 Development of cluster based (atleast one facility per district) C & D Waste Management facility so as to cover both rural and urban population – **CDMA and PR & RD.**
- 5.3.1.2.2 Ensure strict compliance of air pollution control measures as per the EC, CFE & CFO conditions – **APPCB.**
- 5.3.1.2.3 Strict enforcement of C & D Waste Management Rules, 2016 & its amendments at construction site, material handling, transportation and till disposal to the C & D waste management facility - **ULBs & APPCB.**
- 5.3.1.2.4 Utilization of the products made out of C & D waste by the ULBs & private establishments - **ULBs.**

5.3.2 Road Dust Management:

5.3.2.1 Road Dust Management by ULBs:

As per the guidelines of Ministry of Housing & Urban Affairs, Govt. of India and as per the provisions of Solid Waste Management Rules, 2016 and its amendments thereof, all the ULBs of the State are ensuring regular sweeping of streets, lanes and by-lanes either manually or using mechanical road sweepers depending on the population & road conditions and disposing of the swept road dust in the low lying areas.

Segregation of the swept road material for plastics, biomass, etc. is ensured and disposed of as per the provisions of their respective waste management rules.

Maintenance of the Road is being practiced by all the ULBs and R & B.

ULBs / City / Town	Total road length (km)		Road length covered through manual sweeping	No. of mechanical sweepers required to cover remaining road length	No. of mechanical sweepers in operation and their coverage	Action plan for 100 % coverage
	Paved	Unpaved				
123 ULBs	16144	5788	15016	1461	848	For balance road length, sweeping will be covered with manual sweeping.

The maintenance work fall in three categories of maintenance as under:

5.3.2.1.1 Routine Maintenance:

The following are the routine activities performed on regular basis throughout the year. It consists of both off-carriageway and on-carriageway activities:

- Filling potholes, patching surface and repair edges of pavement.
- Repair shoulders and side slopes.
- Clear drains, allowing free passage of water.
- Remove debris from roadway and drains.

- Maintain road sign boards and pavement markings.

5.3.2.1.2 Periodic Maintenance:

Periodic maintenance covers renewal of road surface depending upon the initial construction standards and quality, traffic and weathering effect.

5.3.2.1.3 Others:

During emergencies on account of natural phenomena or any other situations like accidents.

The plantation activity is being taken up regularly on the kerbside and also in the medians under State Programme of Haritha Nagaralu, NCAP and 15th FC grants under air quality improvement component.

State has initiated the Project “Jagananna Haritha Nagarulu” a Green City Challenge in the Urban Local Bodies with selected species and the said initiative was commenced and completed by 30th December, 2022. Under this programme a total road length of 1500 kms (224 kms in Central Medians & 1276 kms Avenue Plantation) will be covered with 3 lakh Plants (45,000 in Central Median & 2,55,000 Avenue). The entire programme is being monitored through comprehensive IT Solutions including Geo Tagging of Plants.

5.3.2.2 Road Dust Management by NHAI:

The State is having total length of 8,255 kms of National Highways. Of it, 2,714 km of Highways has been laid by NHAI. Laying of 1,008 km length of road by NHAI is in progress which will be completed by 31.05.2023 with a total estimated cost of Rs. 20,324.11 crores.

Projects for laying of 298 kms awarded by NHAI for an estimated cost of Rs. 10,802.24 crores which are waiting for appointed date. There are also proposals for laying down of 1682 kms with a total estimated budget of Rs. 51,712 crores under

Bharath Mala and port connectivity (PC) projects with the timelines for awarding between 2022-23 and 2024-25.

For providing port connectivity with the main highways, NHAI has taken up for laying of 327.45 kms with a total estimated cost of Rs. 14,245.76 crores, which are under different stages, viz., in-progress (16.18 kms), awarded (99.14 kms) and DPR stage (211.62 kms).

NHAI has a well defined protocol as per the scope of work (**Annexure – 20: Scope of Work**) for,

- Road maintenance and horticulture development for their projects – Section 6.2,
- Performance standards for road maintenance (pot hole filling, rutting, cracking, etc.) as per MOST guidelines – Section 6.8.1,
- Performance standard for carrying out cleaning, removing of dust /silt / thrash from carriageway – Section 6.10.

NHAI has policy guidelines for development of avenue and median plantations all along the National Highways, vide circular dated 12.07.2022 (**Annexure – 21**).

5.3.3 Action points to reduce the emissions from Road dust:

5.3.3.1 End-to-end pavement in all the identified traffic corridors and junctions within two years in a phased manner – **ULBs, Roads & Buildings and NHAI.**

5.3.3.2 Ensure pothole free roads - **ULBs, Roads & Buildings and NHAI.**

5.3.3.3 Streamlining of cleaning of roads and removal of silt from roads particularly during monsoon season and at regular intervals throughout the year – **ULBs, Roads & Buildings and NHAI.**

5.3.3.4 Identification sites for greenery development (including vertical gardens) within the ULBs, along the State & National Highways within two years in a phased manner - **ULB, Roads & Buildings and Forest Department.**

5.3.3.5 Earth works on the main traffic corridors to be restricted with containment of loose soil and providing enclosures - **ULB and other Stakeholders.**

5.3.3.6 Sprinkling of water as a dust suppression measure wherever required during earthworks till completion of the pavement / road work – **ULBs, Roads & Buildings and NHAI.**

5.4 Emissions from burning of the waste:

Generally, municipal solid wastes and bio-medical wastes are susceptible for burning in the cities, towns and rural areas thereby causing air pollution in the surroundings. To control these emissions, the provisions of the Solid Waste Management Rules, 2016 and Bio-Medical Waste Management Rules, 2016 are being implemented for safe handling and disposal of these two wastes in the State. Circular instructions were issued by CDMA in Roc.No.11119/SWM/2016-M3, dated 09.02.2017 for strict implementation on control of open burning of waste on lands including landfill sites (**Annexure – 22**).

5.4.1 Handling of Municipal Solid Waste at city / town and rural level:

5.4.1.1 At city / town level:

The MA & UD Department, Govt. of Andhra Pradesh Memo No. 1872299/UBS/2022, dated 17.10.2022 issued directions to all the 123 Municipal Corporations & Municipalities on handling of wet & dry Municipal Solid Waste as an interim plan till the full-fledged Waste-to-Energy and Compost plants came up at individual ULB level (**Annexure – 23**).

The State is having 123 ULBs, 17 Municipal Corporations and 106 Municipalities and the expected quantity of generation of municipal solid waste is 6,890 TPD. In the State there are 29 waste-to-compost plants covering 33 ULBs are functional, 4 Bio-methanation plants covering 8 ULBs are functional, 37 Integrated Solid Waste Management (ISWM) Plants covering 51 ULBs are awarded and in 15 ULBs ISWM plants under tender process. There are 2 Waste-to-Energy projects at Guntur and Visakhapatnam each with 1200 TPD capacity and 15 MW power generation covering

50 ULBs and 1 Waste-to-Energy project at Rajahmundry covering 22 ULBs with 400 TPD is in proposal stage.

Total population of ULBs	Total quantity of MSW generated (TPD)	Quantity & % of MSW collection (TPD)	Segregated components of MSW		Gap (TPD)
			Type	Quantity (TPD)	
1.49 crores (44.57 lakhs households)	6890	6890 (100%)	Plastic for recycling	945	0
			Refuse Derived Fuel (RDF) to Cement Factories	410	
			Compostable	1265	
			Biomethanation	174	
			Windrow Composting	2296	
			Waste To Energy Plant	1800	
			Landfill waste	0	
			Other material recovered	0	

Details of existing, ongoing & under proposal stage plants in the State to treat the different components of MSW in the ULBs:

5.4.1.1.1 Details of Waste-to-Energy plants:

S. No.	ULBs covered	Expected quantity of RDF from ULBs (TPD)	RDF quantity received presently for combustion (TPD)	Proposed action plan for 100% coverage
I	Existing Plants			
1	Visakhapatnam cluster - 15 MW			
	M/s. Jindal Urban Waste Management (Visakhapatnam) Limited, Sy. Nos. 410 & 415, Kapuluppada (V), Bheemunipatnam (M), Visakhapatnam District			
	15 ULBs - GVMC, Srikakulam, Vizianagaram, Nellimarla, Amudalavalasa, Rajam, Palakonda, Bobbili, Parvathipuram, Salur,	1200	900	Completed

	Narsipatnam, Yelamanchili, Tuni, Ichchapuram & Palasa-Kasibugga.			
2	Guntur cluster - 15 MW M/s. Jindal Urban Waste Management (Guntur) Limited at Sy. No.933 & 938, Kondaveedu(V), Edlapadu(M), Guntur District			
	35 ULBs - Vijayawada, Guntur, Mangalagiri-Tadepalli, Chilakaluripet, Sattenapalli, Narasaraopeta, Ponnur, Tenali, Nuzivid, Jaggaihpet, Nandigama, Tiruvuru, Gudivada, Machilipatnam, Pedana, Vuyyuru, YSR Tadigadapa, Kondapalli, Bapatla, Repalle, Piduguralla, Vinukonda, Ongole, Chimakurthy, Addanki, Chirala, Darsi, Dachehalli, Markapur, Kanigiri, Macharla, Kandukur, Kavali, Gurajala, Podili.	1200	900	Completed
II Proposed Plants				
1	Rajahmundry cluster – 7 MW			
	22 ULBs - Kakinada, Rajahmundry, Gollaprolu, Pithapuram, Peddapuram, Samalkot, Yeleswaram, Ramachandrapuram, Mandapeta, Mummidivaram, Amalapuram, Eluru, Tadepalligudem, Tanuku, Palacole, Narsapur, Bhimavaram, Nidadavole, Kovvur, Jangareddygudem, Akiveedu & Chintalapudi	700	-	Proposal Submitted to Energy Dept for Approval To Treat the Combustible Waste. Till the commencement of the Project, these ULBs are Mapped with WtE, Visakhapatnam & WtE Guntur.

5.4.1.1.2 Status of Waste-to-Compost plants:

S. No.	ULBs	Installed capacity of the plant (TPD)	Present processing quantity (TPD)
1	Addanki	16	11
2	Allagadda	12	11
3	Amudalavalasa	11	11
4	Bobbili	18	16
5	Chirala	40	25
6	Giddalur	14	11
7	GVMC	520	519
8	Ichchapuram	18	11
9	Jammalamadugu	23	12
10	Kalyandurgam	11	11
11	Kanigiri Cluster – 2 ULBs: Kanigiri & Podili	16	15
12	Macherla Cluster – 2 ULBs: Macharla & Gurajala	22	24
13	Markapur	26	19
14	Narsipatnam	19	16
15	Nuzivid	28	16
16	Palamaneru	20	15
17	Palasa- kasibugga	18	17
18	Ponnur	14	16
19	Pulivendula	24	19
20	Punganur	23	16
21	Puttaparthi Cluster – 2 ULBs: Puttaparthi & Penukonda	11	13
22	Rajam	12	12
23	Rayadurgam	31	18
24	Salur	18	16
25	Tadipatri	53	31
26	Tenali	45	44
27	Tiruvuru	10	9
28	Vijayawada Cluster – 2 ULBs: Vijayawada & YSR Tadigadapa	290	298
29	Yellamanchili	14	13
Total		1377	1265

5.4.1.1.3 Status of Integrated Solid Waste Management (ISWM) plants:

ULBs have awarded for establishment of 37 ISWM plants on individual and cluster basis with a total installed capacity of 2926 TPD to cater the needs of 51 ULBs.

5.4.1.1.4 Status of Material Recovery Facility (MRF) plants:

All the 123 ULBs have their own Material Recovery Facilities (MRFs) installed and is recovering a total quantity of 945 TPD in the State.

5.4.1.1.5 Details of biomethanation plants existing in the State:

S. No.	ULBs	Installed capacity of the plant (TPD)	Present processing quantity (TPD)
1	Piduguralla Cluster – 4 ULBs: Piduguralla (L), Narasaraopeta, Sattenapalle, Dachepalli	45	45
2	Madanpalle	30	28
3	Adoni Cluster – 2 ULBs: Adoni (L), Yemmiganur	45	46
4	Tirupati	55	55
Total		175	174

5.4.1.1.6 RDF & other incinerable waste sent to cement industries for co-incineration:

A total quantity of 410 TPD of RDF & other incinerable waste is being sent by the 51 ULBs to Cement Industries for co-incineration.

5.4.1.1.7 Management of legacy waste dump sites:

Quantification of legacy waste is completed in all the 123 ULBs & estimated the quantity of legacy waste as 86 lakh tones. Status of management of legacy waste as on date in the State is as follows:

ULBs with above one (1) lakh population (32 ULBs):

- In 2 ULBs Vijayawada & Tirupati, Bio-remediation completed.
- In remaining 30 ULBs work awarded for Bio-remediation of legacy waste and work commenced in all ULBs.

ULBs with below one (1) lakh population (91 ULBs):

- 91 ULBs (below 1 lakh population) have been grouped into 10 clusters and tenders have been called for management of legacy waste.
- Work awarded and work commenced in all 91 ULBs.

S. No.	Particulars	Cities / towns	Total quantity of waste (lakh tons)	Status / Action Plan proposal
1	Total no. of legacy waste dump sites identified in the State	123	85.59	-
2	No. of legacy waste dump sites identified for treatment	123	85.59	-
3	No. of legacy waste dump sites cleared	2	8.52	Completed
4	Balance	121	77.07	Work awarded in all ULBs

Action plan to clear all the legacy waste dumpsites at city / town level on 100% basis:

- **Work awarded in all 121 ULBs**
- **Timeline for Completion: March, 2023.**

5.4.1.1.8 Action plan to bridge gap between Installed Capacity and Current Utilization of processing facilities (if Gap > 20%)

- Initiated on-site composting across the State of Andhra Pradesh by Bulk Waste generators and home composting by individual households.
- CDMA vide Cir.Roc.No.12057/31/2022/L, dated 18.10.2022 have issued instructions for implementation of Interim action plan to process wet waste **(Annexure – 24)**.

- For processing of wet waste, ULBs within 25 kms radius are tied up with existing Waste-to-Compost (WtC) / Bio-CNG plants. Thus 41 ULBs are covered by existing 33 WtC / Bio-CNG plants. In remaining 82 ULBs, windrow composting is started.
 - MRFs are established in all 123 ULBs to sort out recyclables & combustible waste.
 - The combustible waste sorted out through MRFs from 27 ULBs of Visakhapatnam cluster (ULBs from 8 Districts) is being sent Waste-to-Energy plant, Visakhapatnam, 45 ULBs of Guntur cluster (ULBs from 9 Districts) is being sent to Waste-to-Energy plant, Guntur & 51 ULBs of Rayalaseema cluster (ULBs from 8 Districts) is being sent to tied up nearby 7 cement plants in Rayalaseema cluster.
- iii. Enhancing capacities of DRCC to meet 100% dry waste handling within 6 months.
- iv. Waste-to-Compost plants were completed in 29 ULBs. Four ULBs are clustered with completed WtC plants. 5 No. of agencies, **(1)** M/s. Sanghamitra Research Training & Consultancy Services, **(2)** M/s. CUBE Bio-Energy Pvt. Ltd., **(3)** M/s. Harsha Eco projects, **(4)** M/s. Ecopie Services LLP, **(5)** M/s. Mahindra Waste to Energy Solutions Ltd., have been shortlisted and are proposed to provide MSW processing facilities in 14 ULBs.

5.4.1.2 At rural level:

The State is having 660 Mandals, 13,301 Gram Panchayats and 47 Census towns with a total households of 99,98,955 with a population of 4,93,86,799 in the State and the expected quantity of generation of municipal solid waste is 1400 TPD. Of the 1400 TPD, 878 TPD is being handled by the local authorities as 500 TPD compostable and 378 TPD of mixed waste.

The Government of Andhra Pradesh is aimed to achieve 100% door-to-door collection of segregated waste in all villages by January 2023. A 100 Day comprehensive sanitation advocacy campaign was launched by the Government of

Andhra Pradesh under **Jagananna Swaccha Sankalpam - Clean Andhra Pradesh (JSS-CLAP)** from 01.10.2021 to “Create Litter free – Garbage free - Visually clean Villages” to manage both Solid and Liquid Wastes in rural areas covering 13,371 villages. The objectives and their compliance are as follows:

Out of 13301 Gramapanchayats in 12,060 GPs Door to door Collection of waste is being taking place.

S. No.	Objective point	Compliance
1	Construction of a Solid Wealth Processing Centre (SWPC) in every village for scientifically processing the garbage.	Solid Wealth Processing Center (SWPC) sheds have been constructed and made operational in 41 of the 47 Census Towns and 10,458 SWPCs have been constructed and made functional in villages / Gram Panchayats under MGNREGS.
2	Deployment of sanitary workers (CLAP-Mitras) for ensuring 100% door-to-door collection of segregated garbage @ one worker per 250 households.	Door-to-Door collection of garbage by 36,770 Clap-Mitras. 10,314 Clap-Mitras at shed for second level segregation.
3	Provide Garbage Tippers, High Pressure Toilet Cleaners and Fogging Machines, etc., to all Gram Panchayats for effective utilization.	Transportation through 24,000 tri-cycles, 1000 garbage trippers supplied to the villages
4	Vermi-composting, segregation of reusable materials etc., at all SWPCs to generate income.	Production of organic rich vermi compost out of wet waste in 7414 Gram Panchayats
5	End-to-End implementation (collection of garbage, treatment & disposal) in all villages.	Production of organic rich vermi compost out of wet waste in 7307 Gram Panchayats. 100% will be achieved by June, 2023. Recyclables are sold to the bulk purchasers & non-recyclables are sent to nearby ULBs to RDF (Refuse Derived Fuel) units, Waste to Energy Plants (WtE) and Cement Factories.
6	SOP for disposal of legacy waste and	SOP issued on Surveillance

	garbage heaps.	Information Response Analysis (SIRA) framework. Clearance of the dumps by utilizing available Skid Steer Loaders & Tractors.
7	Mapping of Gram Panchayats within 25 km radius of waste-to-energy plants.	Cluster mapping of Gram Panchayats within 25 km radius of the waste to energy plant. Guntur District has taken on pilot basis for implementation, and replicates the same to other Districts.
8	Sensitization of District, Mandal & Panchayat functionaries and other Stake holders groups on sanitation	Involvement of Stakeholders for better results to achieve Visually Clean Villages.
9	Capturing real time data through JSS app and web application and monitoring through State and District level Command Control Centers.	Integration of JSS-APP, Citizen APP and Vector Control & Hygiene APP.

Government of Andhra Pradesh has declared 945 villages as Model villages in respect of compliance of environmental norms in the State. Of the 13,301, 12,060 Gramapanchayats have been covered for door-to-door collection of waste. 100% will be achieved by March, 2023.

Government of Andhra Pradesh has issued SOP on Surveillance Information Response Analysis (SIRA) framework for the field level functionaries from District level to the Grama Panchayat level in respect of Sanitation activities for achieving Visually Clean Andhra Pradesh, vide Panchayat Raj & Rural Development (PR & RD) Department Memo dated 25.07.2022 (**Annexure – 25**).

PR & RD Department has formulated SOPs on solid, liquid and plastic waste management and issued Memo No. PRR02 - 23026 (31) / 14 / 2022 - SWM - PMU, dated 10.11.2022 (**Annexure – 26**). SOP is also issued on operation & maintenance of community sanitary complexes, legacy dumps and littering hotspots to comply with. Alert notifications facility was also made available to the citizens on daily garbage collection and recording citizen response.

PR & RD Department has made available the following machinery to the Grampanchayaths to manage solid waste and sanitary activities:

Item	Supplied Quantity
Tri-Cycles	22426
Incinerators	6056
High Pressure-Toilet Cleaners	11440
Fogging Machines	11239

Government accorded permission for procurement of two (2) crore dustbins for an amount of Rs. 121.00 crores to distribute to the individual households and for procurement of 5,500 tractors & trailers to tractors with an amount of Rs. 309.50 crores & Rs. 152.10 crores, respectively to handle the solid waste.

5.4.1.2.1 Action plan to bridge gap between installed capacity and current utilization of processing facilities (if Gap > 20%):

- Along with existing 10,458 SWPC sheds, 2837 sheds are in under construction and will be completed by 31.03.2023 to ensure availability & functionality of SWPC shed in all the Grampanchayats.
- Develop two Model SWPCs in each Mandal and keep them ready by December, 2022 for inspection by the teams constituted. (These villages should be visibly clean, and SWPC adopted Standard Procedures under SWM).
- Planned to establish Material Recovery Units at Constituency level for effective plastic waste management.

5.4.2 Handling of Bio-Medical Waste at city / town and rural level:

Under the provisions of the Bio-medical Waste Management Rules, 2016, APPCB has issued authorizations to 13,058 Health Care Establishments (HCE) viz., Hospitals (bedded & non-bedded), Laboratories, Clinics, Diagnostics, etc. for collection, segregation, storage, partial treatment & disposal to Common Bio-Medical Waste Treatment Facilities (CBMWTF). The District-wise details of HCEs authorized, quantity of BMW generated and quantity of BMW collected & treated by CBMWTF is as follows:

S. No.	District	Number of Health Care Facilities (Hospitals (bedded & non-bedded), Laboratories, Clinics, Diagnostics, etc.)	Quantity of BMW generation (approx in Kgs per month)	Quantity of collection (approx in Kgs per month)	Gap, if any
1	Srikakulam	573	9357.29	9357.29	Collection of 100% BMW generated in the State is ensured.
2	Vizianagaram	470	7971.027	7971.027	
3	Visakhapatnam	1673	89403	89403	
4	East Godavari	1431	45877	45877	
5	West Godavari	1132	33503.3	33503.3	
6	Krishna	1451	70755.8	70755.8	
7	Guntur	1312	68468.71	68468.71	
8	Prakasam	616	9155.1	9155.1	
9	Nellore	924	70853	70853	
10	Chittoor	1076	42392	42392	
11	Kadapa	691	12234.24	12234.24	
12	Kurnool	766	30440	30440	
13	Anantapur	943	13253.76	13253.76	
Total:		13,058	5,03,664.2	5,03,664.2	

Details of CBMWTFs authorized by APPCB for collection, transport, treatment and safe disposal of BMW generated in the State are as follows:

S. No.	Area coverage (erstwhile districts)	Installed capacity		
		Incinerator	Autoclave	Shredder
1	M/s. Rainbow Industries, Sy. No. 21/1, Pathakunkam (V), Laveru(M), Srikakulam District.			
	Srikakulam & Vizianagaram	100 Kgs/hr	100 Ltrs.	100 Kgs/hr
2	M/s. Maridi Eco Industries (Andhra) Pvt. Ltd., Sy. No. 314, Kapulupada, Bheemunipatnam (M), Visakhapatnam district.			
	Visakhapatnam	250 Kgs/hr	3500 Kg/day	3500 Kg/day
3	M/s. Vasishta Environ Care, Plot No 27A25, Denotified Area AP SEZ, Atchutapuram Rambilli (M), Visakhapatnam district.			
	Visakhapatnam	200 Kg/hr	350 Kg/day	350 Kg/day
4	M/s. EVB Technologies (P) Ltd., Sy. No. 560, Kanavaram (V), Rajanagaram (M), East Godavari District.			
	East Godavari	100 Kg/hr	1800 Kg/day	---
5	M/s Safenviron & Associates, R. S. No.181/1, Nallamadu (V), Ungutur (M), West Godavari District.			
	West Godavari	100 Kg/hr	70 Kg/hr	600 Kg/day
6	M/s. Safenviron Private Limited (Formerly Safenviron (Unit-II)),			

	Sy.No.164/1A,Dharmavarapupadu Thanda (V), Jaggaiahpet (M), Krishna District.			
	Krishna	270 Kg/hr	1680 Kg/day	---
7	M/s. Safenviron Private Limited (Formerly M/s. Safenviron), Chinakakani (V), Mangalagiri (M), Guntur District.			
	Guntur	200 Kg/hr	70 Kg/hr	50 Kg/hr
8	M/s. Ongole Medical Waste Treatment Facility, Sy. No. 316/1, Kanduluru (Village), Tanguturu (Mandal), Prakasam District.			
	Prakasam	150	25 Kg/hr	100 Kg/hr
9	M/s. AWM Consulting Ltd, Pachikapalem post, Vedurukuppam Mandal, Chittoor District.			
	Chittoor	100 Kg/hr	850 Kg/day	2150 Kg/day
10	M/s. Medical Waste Solutions, Sy. No. 200, Chetlamallapuram (V), Kalluru (M), Kurnool District.			
	Kurnool	100 Kg/hr	840 ltrs/day	1440 Kg/day
11	M/s. Sriven Environ technologies, Sy. No. 277-1A, Dumpetla (V), Dharmavaram (M), Anantapur District.			
	Anantapur & YSR Kadapa	150 Kg/hr	150 ltrs/hr	50 Kg/day
12	M/s. S S Bio Care, Sy. No. 61, Plot No-2, APIIC, Attivaram village, Ozili (M), SPSR Nellore District.			
	SPSR Nellore	100 Kg/hr	35 Kg/hr	20 Kg/hr

All most 100% BMW generated in the State is being collected and treated by these above listed 12 CBMWTFs. Further, APPCB issued work order to M/s. Andhra Pradesh Environmental Management Corporation Limited, Vijayawada to conduct gap analysis study, vide order dated 06.07.2021, and the study is in progress.

5.4.3 Action points for implementation to stop the burning of the waste:

- Public awareness to be increased on the segregation and on open burning – **ULBs, Grampanchayats & APPCB.**
- Awareness to the ULBs / Grampanchayat staff for stopping the open burning practice – **ULBs & Grampanchayats.**
- Levying of penalties on offences of open burning of waste – **ULBs / Panchayat Raj department and APPCB.**
- Public Grievance Redressal Portal (PGRP) to be strengthened for tracking of open burning related complaints and recurrence areas to be kept under surveillance through IP cameras – **ULBs, Grampanchayats & APPCB.**
- Segregation of the waste to be promoted for easy disposal of waste – **ULBs & Grampanchayats.**

5.5 Emissions due to burning of agro residues:

The stubble leftover in the fields after harvesting is generally treated as waste and subjected to burning in the fields. Burning of stubble is also treated as a control mechanism of weeds and pests.

But, burning of the stubble is contributing to air pollution in the surroundings and global warming to some extent with the emissions of greenhouse gases like CO₂, Methane and Oxides of Nitrogen.

Burning also contributes to nutrient losses from the stubble approximately by 80% Nitrogen, 50 – 80% Sulphur and 40% of Phosphorous.

Burning of stubble can be minimized by adopting the following Integrated Crop Residue Management techniques:

- 1) Use of Happy Seeder device for sowing seeds,
- 2) Composting, biochar production and mechanization of farming activities,
- 3) Use of Rotavator, Rotary Slasher, Rotary Mulcher and Shredder for land preparation and to incorporate crop residue in the soil,
- 4) Use of Zero-till seed drill for land preparation and directly sowing seeds in the previous crop's stubble,
- 5) Use of baler's to collect and compress residue into compact bales for easy transportation of the stubble to the briquette manufacturing units,
- 6) Use of stubble as fuel / co-fuel in the boilers in the form of briquettes.

Agriculture, Horticulture and Forest departments to take up the following actions:

- Agriculture and Horticulture department to establish mechanisms for preventing open fires and burning of agro residues - **Agriculture and MA & UD and Swatch Andhra Corporation.**
- Awareness campaigns are to be conducted to the farmers on the air pollution issues related to the stubble burning - **Agriculture Department.**
- Develop use of biomass / crop residue based pellets mass blending with coal and its co-firing in thermal power plants with blending ratio which needs no

modification in boilers – **Industries Department, EFS & T Department / APPCB & individual Industries.**

- A Policy for supply chain mechanism for in-situ and ex-situ management of stubble burning to be made and awareness on the same to be created – **Agriculture Department.**
- Collaboration with ISRO and preparation of Satellite based maps for monitoring of fire incidence – **Forest, APSAC and Agriculture Department.**

5.6 Household emissions:

Mainly, air emissions are expected from households is due to use of wood, coal, kerosene, saw dust, rice husk, etc. for cooking purpose. One of the main alternative fuels to ward-off toxic air emissions during cooking is use of LPG by the households and commercial establishments like, Hotels, Restaurants, Eateries, Sweet houses, Dhabhas, etc. with LPG as fuel in the State.

“Pradhan Mantri Ujjwala Yojana” was launched by Prime Minister of India on 1st May, 2016 to distribute 50 million LPG connections to women of Below Poverty Line families. Pradhan Mantri Ujjwala Yojana - 2.0 to offer 1 crore more LPG connections. The same is under implementation. The penetration of the LPG in the Andhra Pradesh is 104 % as on March, 2022 as detailed below:

S. No.	Category / Service provider / Oil company	No. of households covered	% of coverage	Gap
I	Below Poverty Line (BPL):			
1	IOCL	2887977	104.8	Nil
2	BPCL	1389549		
3	HPCL	2691628		
	Total	6969154		
II	General (Non BPL & Commercial):			
1	IOCL	3812860	104.8	Nil
2	BPCL	2025749		
3	HPCL	5069538		
	Total	10908147		

5.6.1 Control of Emissions from Fire Crackers:

In compliance of the Hon'ble NGT directions in the order, dated 05.11.2020 in O. A. No. 249 of 2020, Health, Medical & Family Welfare Department, Government of Andhra Pradesh has issued G. O. Rt. No. 692, dated 10.11.2020 for implementation by the concerned stakeholders on the use of fire crackers and the G. O. is enclosed (**Annexure – 27**).

As per the G. O., only green crackers shall be sold and used and the timings for use and bursting of crackers is restricted to 2 hours i.e., 08.00 P.M to 10.00 P.M. on Deepavali day. All shops selling crackers shall maintain 10 feet distance between each shop and the persons coming for purchasing the crackers shall be made to maintain 6 feet social distance in the queue before shops. The purchasers shall also be advised to not to use hand sanitizer during the Diwali celebrations but use normal soap in its place while bursting crackers and lighting diyas / candles.

Further, APPCB has addressed all the District Collectors, vide letter dated 18.12.2020 (**Annexure – 28**) communicating the Hon'ble NGT orders dated 01.12.2020 in O.A. No. 249/2020 for implementation of directions on the use of firecrackers during various occasions viz., Deepavali, Gurupurab, Chatt, Christmas Eve, New Year Eve, etc .

5.7 Public Awareness:

APPCB is conducting public awareness programmes / events on regular basis during observation of World Environment Day on 5th June, International Day of Clean Air for Blue Skies on 7th September, Ozone Day on 16th September and National Anti Pollution Day on 2nd December at Regional Office and Zonal Office levels.

APPCB is also conducting workshops and seminars on air pollution control in the 13 non-attainment cities of Andhra Pradesh involving the stakeholders utilizing the funds released under “Capacity Building & Public Outreach” (CBPO) under NCAP.

Apart from the above Public Awareness programmes and sensitization of stakeholders, APPCB is creating awareness among the general public through electronic media with the scrollings on Do's & Dont's during Deepavali festival every year.

6. Implementation of Graded Response Action Plan (GRAP) in the 13 non-attainment cities of Andhra Pradesh:

The proposed Graded Response Action Plan is meant to be temporary measures for duration of smog episodes and is implemented according to the severity of the daily air pollution levels. Once the levels come down and stabilize, measures are withdrawn. The objective of the GRAP is to prevent pollution from getting worse when adverse weather conditions trap and spike pollution.

The proposed GRAP is linked to the national air quality index that categorizes daily air quality as good, satisfactory, moderate, poor, very poor, severe, and emergency. All actions suggested for each category are cumulative and add up to the level of emergency as air quality worsens.

For GRAP implementation the scientific Task Force under APPCB will advise the High-powered committee on the daily pollution levels and forecasting based on real time monitoring. Accordingly the High-powered Committee may issue notices to the city authorities to implement the pre-defined action. The action notified for moderate and poor that are largely about stringent enforcement in different sectors can become default action for continuous implementation throughout the year. Additional measures meant for very poor and severe may be notified which such situation develops especially during calm and inversion conditions.

This will require daily air quality data reporting on the SPCB website and public dissemination system on air quality and health alert.

Moderate to poor

Moderate - When PM_{2.5} is between 61–90 microgramme per cum or PM₁₀ is between 101–250 microgramme per cum; Poor - When PM_{2.5} levels are between 91–120 microgramme per cum or PM₁₀ levels are between 251–350

microgramme per cum.	
Action to be taken	Agency responsible
Stringently enforce/stop garbage burning in landfills and other places and impose heavy fines on person responsible	Municipal Corporations
Close/stringently enforce all pollution control regulations in brick kilns and industries	State Pollution Control Board
Stringently enforce pollution control in thermal power plants through Pollution Control Board monitoring	State Pollution Control Board
Do periodic mechanized sweeping on roads particularly in roads with heavy traffic and water sprinkling every two days	Municipal Corporations, Traffic, Police, PWD
Strict vigilance and no tolerance for visible emissions—stop plying of visibly polluting vehicles by impounding or heavy fine	Department of Transport, Traffic Police
Stringently enforce rules for dust control in construction activities and close non-compliant sites	District Administration, Police
Deploy traffic police for smooth traffic flow at identified vulnerable areas	Traffic Police
Divert non-destined truck traffic	Municipal Corporations, Traffic Police
Strictly enforce Supreme Court orders on firecrackers	SPCB, District Administration in consultation with Chief Controller of Explosives, Petroleum and Explosive Safety Organization (PESO); Police
Ensure fly ash ponds are watered every alternate day during summer months (March-May)	Plant in charge of Power Plants
Information dissemination, social media, mobile Apps should be used to inform people about the pollution levels, contact details of control room, enable them to report polluting activities/sources to the concerned authorities, and actions that will be taken by government based on the level of pollution.	State Pollution Control Board, District Administration
<u>Very poor</u>	
When PM2.5 levels are between 121–250 microgramme per cum or PM10 levels are between 351 - 430 microgramme per cum	
Action to be taken	Agency responsible
Stop use of diesel generator sets	State Pollution Control Boards
Increase parking fee by three to four times	Municipal Corporations

Augment public transport services by increasing frequency	Department of Transport State Transport Corporation
Stop use of coal/firewood in hotels and open eateries	Municipal Corporations
Residential societies and individual house owners to provide electric heaters during winter to security staff to avoid open burning	Municipal Corporations Resident Welfare Associations
Alert in newspapers/TV to advise people with respiratory and cardiac patients to avoid polluted areas and restrict outdoor movement.	State Pollution Control Board

<u>Severe</u>	
When PM2.5 levels are above 250 microgramme per cum or PM10 levels are above 430 microgramme per cum	
Action to be taken	Agency responsible
Close brick kilns, hot mix plants, Stone Crushers and other highly polluting units	State Pollution Control Board, District Administration Police
Shut down / minimize operation of polluting coal based power plant and incentivize power generation from existing natural gas based plants	State Pollution Control Boards
Intensify public transport services. Introduce differential rates to encourage off- peak travel.	Transport Department, State Transport Corporations
Increase frequency of mechanized cleaning of road and sprinkling of water on roads. Identify road stretches with high dust generation.	All road owning agencies including Municipal Corporations, Public Works Department and National Highway Authority of India
Restrict movement of trucks inside the coal field mine areas	State Pollution Control Board, Department of Steel and Mines

<u>Severe + or Emergency</u>	
When PM2.5 levels cross 300 microgramme per cum or PM10 levels cross 500 microgramme per cum (or 5 times above the standard) or persist for 48 hrs or more.	
Action to be taken	Agency responsible
Stop entry of diesel truck traffic into city (except essential commodities)	Traffic Police, Municipal Corporations
Stop construction activities	Pollution Control Board, Municipal Corporations
Introduce odd and even scheme for private vehicles based on license plate numbers Or introduce low	Transport Department, Traffic Police

emissions zones in the city to stop entry of polluting vehicles (old and ageing and polluting diesel vehicles etc). For this purpose introduce sticker system as per MORTH guidelines to indicate fuel and date of manufacture of vehicles.	
State Pollution Control Board Task Force to take decision on any additional steps including shutting of schools	

Action to be taken by public:

While the National Air Quality Index (AQI) and health advisory will inform people about the dangers of exposure, people are also expected to take precautionary measures to protect themselves. Suggested actions by public are listed below:

Level according to AQI	Action
Very poor, severe	Those suffering from heart diseases, asthma, and other respiratory disease may consider avoiding undue and prolonged exposure
	Schools to suspend all outdoor activities and sport events
	Report visible emissions from vehicles, industries, power plants, garbage burning, and other non compliances to the respective control rooms
	Do not use diesel and kerosene generators
	Maintain vehicles properly (PUC certificate, replace car air filter, maintain right tyre pressure)
	Minimize unnecessary travel, use public transport & avoid using private vehicles

Annexure – I
Indicative template for State Action Plan

1. Industrial Emissions:

S. No.	Activities	Status of activity (Completed / Ongoing / To be Started)	Timeline for completion	Target (Coverage/ Percentage)	Financial implications (Yes/ No)	Funds Allocated (Rs. crore)	Funds Utilized as on date (Rs. crore)
1	Policy for permitting new industries in Critically Polluted Areas (CPAs).	No Red and Orange category industry is permitted in the bowl area of Visakhapatnam. Notification to this effect to be issued.	Medium term - One year by 31.12.2023 for framing of guidelines and subsequent notification.	100%	No	Nil	Nil
2	Policy for replacement of heavy oil (eg., furnace oil, diesel etc.) based industries to alternate energy sources (CNG / PNG / Electricity)	To be formulated.	Medium term – One year by December, 2023.	100%	No	Nil	Nil
3	Rules and regulations on uninterrupted power supply in State.	Policy of AP Transco, vide Notification dated 14.06.2021 formulated State Electricity Plan for four years from FY 2020 to 2024 to ensure uninterrupted power supply in the state.	Completed and ongoing	100% coverage	No	Nil	Nil

S. No.	Activities	Status of activity (Completed / Ongoing / To be Started)	Timeline for completion	Target (Coverage/ Percentage)	Financial implications (Yes/ No)	Funds Allocated (Rs. crore)	Funds Utilized as on date (Rs. crore)
4	Policy for use of DG sets in industries.	Supply of uninterrupted power to the industries is ensured as per the AP Transco Notification dated 14.06.2021.	Ongoing	100% coverage	No	Nil	Nil
		APPCB has issued the order no. APPCB/NGT/ 681-2018 / DG sets / HO / 2020, dated 05.11.2020 shall retrofit with emission control devices for the DG sets of 125 KVA and above in the State of Andhra Pradesh.	Ongoing	100% coverage	No	Nil	Nil
5	Policy regarding installation of CAAQMS based on the emission potential or capacity of air polluting industries.	All 17 category & Red hazardous industries have to install the CAAQMSs. 220 no. of Continuous Ambient Air Quality Monitoring Systems (CAAQMS) and are connected to CPCB & APPCB website.	Ongoing	100%	No	Nil	Nil
6	Policy regarding installation of OCEMSs based on the emission potential or capacity of air polluting industries.	All 17 category & red hazardous industries have to install the OCEMSs. 370 no. of industries which includes 17 categories,	Ongoing	100%	No	Nil	Nil

S. No.	Activities	Status of activity (Completed / Ongoing / To be Started)	Timeline for completion	Target (Coverage/ Percentage)	Financial implications (Yes/ No)	Funds Allocated (Rs. crore)	Funds Utilized as on date (Rs. crore)
		highly air pollution potential industries installed 573 nos. of OCEMS for the point source emissions and linked the data to APPCB and CPCB website.					
7	Mechanisms to control fugitive emissions sources in the industries.	Industry-specific conditions are being stipulated in the CFO Orders to comply with.	Ongoing	100%	No	Nil	Nil
8	Regulations for conversion of brick kilns to clean technologies.	Govt. of Andhra Pradesh, vide G.O. Ms. No. 80, dated 22.04.2010, specified siting guidelines, authority for issuing licenses and enforcement.	Completed	100%	No	Nil	Nil
		Inventorization of brick-kilns in the State.	Medium term - One year by 31.12.2023	100%	No	Nil	Nil
		Conversion from conventional to Zig-zag technology.	Long term - Five years by 31.12.2027	100%	No	Nil	Nil
9	Policy to set up e-waste recycling unit in industrial areas in compliance with e-Waste Management	Industry department / APIIC shall ensure ear-marking or allocation of space for e-waste collection, dismantling	Medium term - Two years by	100%	No	Nil	Nil

S. No.	Activities	Status of activity (Completed / Ongoing / To be Started)	Timeline for completion	Target (Coverage/ Percentage)	Financial implications (Yes/ No)	Funds Allocated (Rs. crore)	Funds Utilized as on date (Rs. crore)
	Rules, 2016.	& recycling in the existing and upcoming IEs / IDAs.	31.12.2024				
10	Number of industries in the state complying emission standards.	Industries are regularly monitored for their compliance of stipulated air emission standards through automated and manual means.	Ongoing	100%	No	Nil	Nil
11	Shifting of industries / commercial units to gaseous fuels (CNG / PNG).	Policy to be formulated. No new industry is allowed to use fuels other than gaseous fuels (CNG / PNG) after 01.01.2030.	Medium term - One year by 31.12.2023.	100%	No	Nil	Nil
		Ensuring the supply of required quantity of gaseous fuels (CNG / PNG).	Medium term - Two years by 31.12.2024.	100%	No	Nil	Nil
		Shifting of industries / commercial units to gaseous fuels (CNG / PNG).	Long term - Seven years by 31.12.2029. 20% year-by-year for the existing industry from 31.12.2024 onwards.	100%	No	Nil	Nil

S. No.	Activities	Status of activity (Completed / Ongoing / To be Started)	Timeline for completion	Target (Coverage/ Percentage)	Financial implications (Yes/ No)	Funds Allocated (Rs. crore)	Funds Utilized as on date (Rs. crore)
12	Number of households shifted to PNG / LPG.	100% households are covered with LPG in urban areas of the State.	Completed & ongoing	100%	No	Nil	Nil
		99.2% households are covered with LPG and 3.5% with PNG in rural areas of the State.	Medium term - One year by 31.12.2023 for LPG and Long term - three years by 31.12.2025 for PNG.	100%	No	Nil	Nil
13	Restriction on use of pet coke as fuel by the industries.	APPCB circular No. APPCB / UH-IV / HO-VJA / Petcoke / 2020 dated 13.03.2020.	Completed	100%	No	Nil	Nil
14	Restriction on use of furnace oil as fuel by the industries.						
15	Siting guidelines for establishment of SEZs, IDAs, IEs, etc. in the State.	G. O. Ms. No. 275, MA & UD Department, GoAP, dated 18.07.2017.	Completed	100%	No	Nil	Nil
16	Constitution of district level implementation committee to oversee the air pollution control measures in the identified 22 mining clusters in	To be initiated as per the Memo. No. APPCB / B.O. / VJA / UH-IV / CFO / 2020, dated 21.02.2020.	By 31.12.2023	100%	No	Nil	Nil

S. No.	Activities	Status of activity (Completed / Ongoing / To be Started)	Timeline for completion	Target (Coverage/ Percentage)	Financial implications (Yes/ No)	Funds Allocated (Rs. crore)	Funds Utilized as on date (Rs. crore)
	Andhra Pradesh.						
17	Budget estimation by the committee for cleanup of the cluster area, pitting the area for plantation, plantations and assess the no. of CAAQM stations for installation.	To be initiated as per the Memo. No. APPCB / B.O. / VJA / UH-IV / CFO / 2020, dated 21.02.2020.	30.06.2024	100%	No	Nil	Nil
18	Identification of two or three areas within the cluster for dumping the overburden.	To be initiated as per the Memo. No. APPCB / B.O. / VJA / UH-IV / CFO / 2020, dated 21.02.2020.	30.06.2024	100%	No	Nil	Nil
19	Providing water sprinkling systems, Kirby sheets of 20 to 25 feet around the mining area and 33% of the mining area with greenbelt.	To be initiated as per the Memo. No. APPCB / B.O. / VJA / UH-IV / CFO / 2020, dated 21.02.2020.	31.12.2024	100%	No	Nil	Nil
20	Vehicles transporting dusty material shall be covered with tarpaulin.	To be initiated as per the Memo. No. APPCB / B.O. / VJA / UH-IV / CFO / 2020, dated 21.02.2020.	Ongoing	100%	No	Nil	Nil

2. Vehicular Emissions:

S. No.	Activities/ Action plan	Status of activity (Completed / Ongoing / To be Started)	Timeline for completion	Target (Coverage / Percentage)	Financial implications (Yes / No)	Funds Allocated (Rs. crore)	Funds Utilized as on date (Rs. crore)
1	Notification / G. O. for phasing out old vehicles (Commercial: 10 years; Private & Government: 15 years).	To be formulated by Industrial Department.	Medium term - One year by 31.12.2023.	100%	No	Nil	Nil
2	Policy for scrapping old vehicles.	To be formulated by Industrial Department.	Medium term - One year by 31.12.2023.	100%	No	Nil	Nil
3	Policy for augment e-vehicles.	Industries & Commerce Department has issued "Electric Mobility Policy 2018 -23", vide G.O. MS. No. 74, dated 08.06.2018.	Completed	100%	No	Nil	Nil
		Industries Department is to issue operational guidelines for implementation.	Short term - Six months by 30.06.2023.	100%	No	Nil	Nil
3(a)	Conversion of 100% of APSRTC bus fleet of over 11,000 buses into electric buses (BEVs / FCEVs).	To be initiated in a phased manner.	Long term - Seven years by 31.12.2029.	100%	No	Nil	Nil
3(b)	First phase of 100% conversion of bus fleet in top 4 cities, viz.,	Govt. has sanctioned 100 e-Buses to Tirupati region to operate by APSRTC under	Medium term - Two years by	100%	No	Nil	Nil

S. No.	Activities/ Action plan	Status of activity (Completed / Ongoing / To be Started)	Timeline for completion	Target (Coverage / Percentage)	Financial implications (Yes / No)	Funds Allocated (Rs. crore)	Funds Utilized as on date (Rs. crore)
	Visakhapatnam, Vijayawada, Amaravathi & Tirupati.	FAME –II of Gol. First batch of 10 e-Buses was delivered during September, 2022.	31.12.2024.				
3(c)	Phase out all fossil fuel based commercial fleets and logistics vehicles.	Industries Department is to issue operational guidelines for implementation in top 4 cities, viz., Visakhapatnam, Vijayawada, Amaravathi & Tirupati by 31.12.2024 and all cities by 31.12.2030.	Short term - Six months by 30.06.2023.	100%	No	Nil	Nil
4	Notification & enforcement of PUC norms.	Enforcing PUC norms through licensing the PUC testing stations for issue of certificates.	Ongoing	100%	No	Nil	Nil
5	Online monitoring of PUC implementation.	Integration with NIC, Vahan software is initiated.	Medium term - One year by 31.03.2023.	100%	No	Nil	Nil
6	Mechanism for centralized record maintenance of PUC checks, certification and cross check by the concerned transport authorities to be incorporated.	Transport Department, Govt. of AP Memo. No. 768854 / K1 / 2017, dated 05.10.2017.	Completed	100%	No	Nil	Nil
7	Construction of bypass / ring roads.	Constructed a length of 247.45 kms bypasses / ring	Completed	100%	-	-	-

S. No.	Activities/ Action plan	Status of activity (Completed / Ongoing / To be Started)	Timeline for completion	Target (Coverage / Percentage)	Financial implications (Yes / No)	Funds Allocated (Rs. crore)	Funds Utilized as on date (Rs. crore)
		roads covering 25 ULBs in AP.					
		Construction of 168.726 kms length of bypasses / ring roads covering 14 ULBs of AP are in progress.	In progress	100%	Yes	5,722.23	709.4756
8	Petrol / Diesel / Gas filling stations retrofitted with Vapor Recovery System.	CPCB O.M., vide Lr. No. B-13011 / 1 / 2019-20 / AQM / 10802 - 10847, dated 07.01.2020.	Ongoing	100%	No	Nil	Nil
9	Incentive of setting up R&D facilities related to EVs.	Industries & Commerce Department has issued "Electric Mobility Policy 2018 -23", vide G.O. MS. No. 74, dated 08.06.2018. Industries Department is to issue operational guidelines for implementation.	Short term - Six months by 30.06.2023.	100%	No	Nil	Nil
10	Prepare action plan to check fuel adulteration and random monitoring of fuel quality data.	As per the laid down protocol of Oil Companies.	Continuous as a Regular activity.	100%	No	Nil	Nil
11	Alternative clean fuel policy for vehicles.	To be formulated.	Medium term - One year by 31.12.2023.	100%	No	Nil	Nil
12	Development of Multi-	Ongoing at Visakhapatnam	Medium term	304 & 60	Yes	11.56 &	-

S. No.	Activities/ Action plan	Status of activity (Completed / Ongoing / To be Started)	Timeline for completion	Target (Coverage / Percentage)	Financial implications (Yes / No)	Funds Allocated (Rs. crore)	Funds Utilized as on date (Rs. crore)
	layer parking	& Ananthapuramu.	- One year by 31.12.2023 & 31.03.2023, respectively.	Units, respectively		0.50, respectively	
		To be developed at 15 Municipal Corporations	Medium term - Two years by 31.12.2024.	100%	-	-	-
13	Penalize parking of vehicles in non-designated areas.	As per G. O. Ms. No. 21 dated 21.10.2020, of Tr, R & B (TR. I) Department (under section 190 (2) MV Act, 1988, Rs.1500/- to 3000/- can be charged as fine.	Ongoing	100%	No	Nil	Nil
14	CNG infrastructure for auto gas supply in the city and transition of public transport vehicles to CNG mode.	128 CNG stations covering 50 cities & towns in the State have been installed for auto gas supply and public transport vehicles.	Continuous as a Regular activity.	-	-	-	-
15	Steps for promoting battery operated vehicles (like e-rickshaw, e- cart etc.).	Industries & Commerce Department has issued "Electric Mobility Policy 2018 -23", vide G.O. MS. No. 74, dated 08.06.2018.	Short term - Six months by 30.06.2023.	100%	No	Nil	Nil

S. No.	Activities/ Action plan	Status of activity (Completed / Ongoing / To be Started)	Timeline for completion	Target (Coverage / Percentage)	Financial implications (Yes / No)	Funds Allocated (Rs. crore)	Funds Utilized as on date (Rs. crore)
		Industries Department is to issue operational guidelines for implementation.					
16	Launch extensive drive against polluting vehicles for ensuring strict compliance.	Regular checks are being conducted by Transport Officials. Valid PUC certificates are being insisted for all transactions.	Completed & regular activity.	100%	No	Nil	Nil
17	To increase fine on vehicle owners (not drivers) where the visible smoke is emitted and noticed.	As per G. O. Ms. No. 21 dated 21.10.2020, of Tr, R & B (TR. I) Department (under section 190 (2) MV Act, 1988, Rs.1500/- to 3000/- can be charged as fine.	Ongoing	100%	No	Nil	Nil

3. Construction & Demolition Waste and Road Dust Management:

S. No.	Activities/ Action plan	Status of activity (Completed / Ongoing / To be Started)	Timeline for completion	Target (Coverage / Percentage)	Financial implications (Yes / No)	Funds Allocated (Rs. crore)	Funds Utilized as on date (Rs. crore)
1	Policy for development of projects / plants for C & D waste management.	Municipal Administration and Urban Development (B2) Department G.O. MS. No. 350, dated 29.10.2018.	Completed	100%	No	Nil	Nil
1(a)	Targeting the 13 non-attainment city Municipal Corporations.	Existing in 5 Municipal Corporations. City-wise proposals are in pipeline for remaining non-attainment city Municipal Corporations.	Medium term – One year by 31.12.2023	100%	-	-	-
1(b)	Targeting the other 4 Municipal Corporations and 106 Municipalities.	Individual / Cluster approach will be adopted for establishment of processing units / crushing units in Municipalities.	Medium term – One year by 31.12.2023	100%	No	0	0
2	Policy for use of C & D waste in laying and construction of State highways.	“IRC: 121-2017 Guidelines for use of Construction and demolition waste in Road section” is being used for laying and construction of National Highways.	Ongoing	100%	No	Nil	Nil
3	Demand creation for C & D waste and alternative use of C & D waste material.	Demand creation for C & D waste utilization in preparation of paver blocks used in road construction, filling of low lying areas, laying of kucha roads. In Corporations, the	Short term - Six months by 30.06.2023.	100%	Yes	11.03	1.68

S. No.	Activities/ Action plan	Status of activity (Completed / Ongoing / To be Started)	Timeline for completion	Target (Coverage / Percentage)	Financial implications (Yes / No)	Funds Allocated (Rs. crore)	Funds Utilized as on date (Rs. crore)
		contractors are insisted to use fabricated paver blocks made from C & D waste in laying end-end dust free roads.					
4	Schemes for development of greenery in open spaces and street sides greening on State highways.	“Jagananna Haritha Nagaralu” is being implemented for development of Greenery.	Ongoing	100%	Yes	34.31	7.47
5	Penalty provisions for non-compliance of C&D waste management rules at construction sites.	In 73 ULBs, Council Resolutions were taken for enforcement. 44 ULBs have levied penalties on instances of illegal debris dumping by making bye-laws with suitable provisions.	Medium term - One year by 31.12.2023.	100%	No	Nil	Nil
6	Maintenance, repair and paving of state highways	State Highways are passing through 73 ULBs. 5 ULBs i.e., Srikakulam, Guntur, Tiruvuru & Tenali have allocated & utilized funds for maintenance of State Highways.	Ongoing / Regular activity. Mechanical / Manual sweeping	100%	Yes	1.28	0.82
7	Monitoring of road dust especially in and around hotspot areas and in the vicinity of State	Mechanised / Manual sweeping along with water sprinkling in and around hotspot areas and in the	Regular activity	100%	No	Nil	Nil

S. No.	Activities/ Action plan	Status of activity (Completed / Ongoing / To be Started)	Timeline for completion	Target (Coverage / Percentage)	Financial implications (Yes / No)	Funds Allocated (Rs. crore)	Funds Utilized as on date (Rs. crore)
	highways.	vicinity of State Highways.					
8	Mechanism for development and maintenance of road infrastructures for industrial estates and clusters.	Industrial Estates infrastructure development by AP Industrial Infrastructure Corporation Limited (APIIC) and maintenance by APIIC – Industrial Area Local Authorities (IALAs).	Ongoing and continuous process	100%	No	Nil	Nil

S. No.	Activities/ Action plan	Status of activity (Completed/ Ongoing/ To be Started)	Target Number (No.) / (%)	Target Number (TPD) / Coverage (Acres)	Funds Allocated (Rs. crores)	Timeline for completion	Target completed as on date	Funds Utilized as on date (Rs. crores)
9	C&D waste processing plants.	Existing in 5 Municipal Corporations. City-wise proposals are in pipeline for remaining 8 non-attainment city Municipal Corporations. Individual / Cluster approach will be adopted for establishment of processing units / crushing units in 110 Municipal Corporations	123 ULBs / 100%	521 TPD	Nil	Medium term - One year by 31.12.2023.	219 TPD	Nil

S. No.	Activities/ Action plan	Status of activity (Completed/ Ongoing/ To be Started)	Target Number (No.) / (%)	Target Number (TPD) / Coverage (Acres)	Funds Allocated (Rs. crores)	Timeline for completion	Target completed as on date	Funds Utilized as on date (Rs. crores)
		& Municipalities under PPP mode.						
10	Greening of open spaces / parks development.	The activity going on in 123 ULBs	123 ULBs /100%	-	77.52	Medium term - One year by 31.12.2023.	23 ULBs	33.65
11	Control measures for fugitive emissions from material handling, conveying and screening operations through water sprinkling, curtains, barriers and dust suppression units at C & D processing facilities.	Implementation of CFE & CFO conditions followed by enforcement, after establishment of C&D Waste Processing Plants in all ULBs.	123 ULBs / 100%	-	Nil	Medium term - One year by 31.12.2023.	-	Nil
12	Strict enforcement of CPCB guidelines for construction activities (use of green screens, side covering of digging sites, etc.).	Council Resolutions were obtained by 73 ULBs. Notifications have been issued by the 5 ULBs.	All 123 ULBs / 100%	-	Nil	Medium term - One year by 31.12.2023.	23 ULBs	Nil
13	Greening of open areas, gardens, community places,	A.P. Building Rules 2017 issued in G.O. Ms. No. 119, dated	All 123 ULBs / Ongoing activity.	100%	15.02	Ongoing	-	5.75

S. No.	Activities/ Action plan	Status of activity (Completed/ Ongoing/ To be Started)	Target Number (No.) / (%)	Target Number (TPD) / Coverage (Acres)	Funds Allocated (Rs. crores)	Timeline for completion	Target completed as on date	Funds Utilized as on date (Rs. crores)
	schools and housing societies.	28.03.2017.						
14	Prepare plan for widening of roads and improvement of infrastructure for decongestion of roads.	Prepared Master Plan in 33 ULBs and in remaining ULBs preparation of plans were under progress.	All 123 ULBs	100%	104.87	Medium term - One year by 31.12.2023.	33 ULBs	57.31
15	Blacktopping of metalled roads, including pavement of road shoulders.	Length of paved road is 16,144 kms, length of unpaved road is 5,788 kms.	All 123 ULBs	100% @ 25% per year	85.11	Ongoing 31.12.2026.	18 ULBs	33.05
16	Maintain potholes free roads for free-flow of traffic.	Phase-I: 44,412 potholes identified and filled	Completed	100%	-	-	-	58.20
		Phase-II: 20,180 potholes identified	2097/10.39%	100%	22.98			1.35

4. Emissions from burning of waste:

S. No.	Activities/ Action plan	Status of activity (Completed / Ongoing / To be Started)	Timeline for completion	Target (Coverage / Percentage)	Financial implications (Yes / No)	Funds Allocated (Rs. crore)	Funds Utilized as on date (Rs. crore)
1	Notification and Enforcement of Municipal Solid Waste (MSW) Management Rules, 2016.	Municipal Administration and Urban Development (B2) Department G.O. Ms. No. 348 dated 29.10.2018	Completed	100%	No	Nil	Nil
1(a)	Notification / Counsel resolution at Municipal Corporation / Municipality level for enforcement of MSW Rules, 2016.	Notifications issued in 7 ULBs. Resolutions taken in 70 ULBs.	Short term - Six months by 30.06.2023	100%	No	Nil	Nil
1(b)	Notification / GO for Enforcement of MSW Rules, 2016.	PR & RD Department has formulated SOPs on solid, liquid and plastic waste management and issued Memo No. PRR02 - 23026 (31) / 14 / 2022 - SWM - PMU, dated 10.11.2022.	Completed	100%	No	Nil	Nil
2	Policy for MSW management.	Municipal Administration and Urban Development (B2) Department G.O. Ms. No. 348 dated 29.10.2018.	Completed	100%	No	Nil	Nil
3	Policy for legacy waste management at dumpsites.	Municipal Administration & Urban Development (UBS) Department G.O. Rt. No. 102 dated 12.03.2021.	Completed	123 ULBs / 100%	No	Nil	Nil
4	Policy for implementation	Circular Roc.No.12059 / 1 /	Completed	123 ULBs /	No	Nil	Nil

S. No.	Activities/ Action plan	Status of activity (Completed / Ongoing / To be Started)	Timeline for completion	Target (Coverage / Percentage)	Financial implications (Yes / No)	Funds Allocated (Rs. crore)	Funds Utilized as on date (Rs. crore)
	of ban on single use plastics.	2022 / L Sec dated 18.11.2022 of CDMA.		100%			
5	Policy for development and construction of Waste-to-Energy plants.	Municipal Administration and Urban Development (B2) Department G.O. Ms. No. 348 dated 29.10.2018.	Completed	123 ULBs / 100%	No	Nil	Nil
5(a)	Non-recyclable / combustible dry waste.	Two WtE plants at Visakhapatnam & Guntur are functioning. One at Rajahmundry is on proposal.	Medium term - One year by 30.12.2023	100%	Yes	PPP Mode	-
5(b)	Bio-methanation / Bio CNG.	4 Bio CNG Plants Covering 8 ULBs are functional, 2 plants are in progress.	Short term - Three months by 30.03.2023	100%	Yes	PPP Mode	-
5(c)	Composting plant etc.	29 Waste to Compost plants functional, 14 Waste to Compost plants are In progress, and 37 ISWM plants covering 51 ULBs are awarded. 15 ISWM plants pending in 15 ULBs.	Short term - Three months by 30.03.2023.	100%	Yes	PPP Mode	-

S. No.	Activities/ Action plan	Status of activity (Completed/ ongoing/ To be Started)	Target Number (No.) / (%)	Total Capacity (TPD) / Coverage (Acres)	Funds Allocated (Rs. crore)	Timeline for completion	Target Completed as on date	Funds Utilized as on date (Rs crore)
6	Municipal Solid Waste collection status in the State.	Total waste generation: 6890 tons / day.	123 ULBs / 100%	6890	Nil	-	6890 TPD	-
		Door-to-door collection: 6890 tons / day.	123 ULBs / 100%	6890	Nil	-	6890 TPD	-
		Compostable waste: 3735 tons / day.	123 ULBs / 100%	3790 TPD	Nil	-	3735TPD	-
		Dry waste: 3155 tons / day.	123 ULBs / 100%	3155 TPD	Nil	-	3155 TPD	-
		100% Door-to-door collection.	123 ULBs / 100%	6890 TPD	Nil	It is a continuous activity	-	-
7	MSW segregation status in the State.	98.16 % source segregation.	123 ULBs / 100%	6890 TPD	Nil	It is a continuous activity	6763 TPD	-
8	Material Recovery Facility.	Established in all ULBs.	123 ULBs / 100%	945 TPD	PPP Mode	-	945 TPD	-
9	Waste to Energy plants.	Existing: One plant at Visakhapatnam covering 15 ULBs and one plant at Guntur covering 35 ULBs.	72 ULBs tied up / 100%	3100 TPD	PPP Mode	Medium term - One year by 31.12.2023	1800 TPD	-

S. No.	Activities/ Action plan	Status of activity (Completed/ ongoing/ To be Started)	Target Number (No.)/ (%)	Total Capacity (TPD) / Coverage (Acres)	Funds Allocated (Rs. crore)	Timeline for completion	Target Completed as on date	Funds Utilized as on date (Rs crore)
		Proposed: One plant at Rajahmundry covering 22 ULBs.						
10	Waste to compost plants.	29 waste-to-compost plants covering 33 ULBs are functional.	123 ULBs / 100%	3561 TPD	PPP Mode	Medium term - One year by 31.12.2023	3561 TPD	-
11	Remediation of dumpsites in the city.	Of the 123 ULBs, 2 ULBs remediated and 121 ULBs have awarded work order.	123 ULB's / 100 %	85.59 Lakh Tones	352.00	Short term – Three months by 30.03.2023	8.52 lakh tons	-
12	Control open burning of MSW.	Municipal Administration and Urban Development (B2) Department G.O. Ms. No. 348 dated 29.10.2018. Circular instructions were issued by CDMA in Roc.No.11119/SWM/2016-M3, dated 09.02.2017 for strict implementation on control of open burning of waste on lands including landfill sites.	123 ULB's / 100 %	-	-	Regular activity	-	-

S. No.	Activities/ Action plan	Status of activity (Completed/ ongoing/ To be Started)	Target Number (No.)/ (%)	Total Capacity (TPD) / Coverage (Acres)	Funds Allocated (Rs. crore)	Timeline for completion	Target Completed as on date	Funds Utilized as on date (Rs crore)
13	Launch extensive drive against open burning of biomass, crop residue, garbage, leaves, etc.	Circular instructions were issued by CDMA in Roc.No.11119/SWM/2016-M3, dated 09.02.2017 for strict implementation on control of open burning of waste on lands including landfill sites.	-	-	-	Regular activity	-	-

5. Emissions due to burning of agro residues:

S. No.	Activities/ Action plan	Status of activity (Completed / Ongoing / To be Started)	Timeline for completion	Target (Coverage / Percentage)	Financial implications (Yes / No)	Funds Allocated (Rs. crore)	Funds Utilized as on date (Rs. crore)
1	Policy for management and ban on open burning of agricultural wastes.	To be formulated by Agriculture Dept. & Horticulture Dept.	Short term - Six months by 30.06.2023	100%	No	Nil	Nil
2	Awareness campaign among the farmers on control of crop residue burning.	Ongoing Taking measures to include in the curriculum of all farmer training programmes under different schemes of Department.	Once in six months.	100%	No	Nil	Nil
3	Schemes for purchase / installation of balers / pellet / briquette machines, etc.	Ongoing Promoting straw balers with subsidy of 40% under cluster level CHCs under the Centrally sponsored scheme, Sub – Mission on Agriculture Mechanization (SIMA).	Ongoing	40 units	Yes	0.48	0.14
4	Use of decomposer for in-situ crop residue management.	Ongoing Encouraging the farmers to adopt insitu crop residue management using waste decomposer.	Ongoing	1,000 Ha of Sugarcane, 10,000 Ha of Paddy.	No	Nil	Nil

5	Assistance for establishment of farm machinery banks / custom hiring centers.	Ongoing Promoting chaf cutters with 40% subsidy in CHCs.	Short term – Six months by 31.03.2023	200 units	Yes	1.00	0.50
6	Collaboration with ISRO and preparation of Satellite based maps for monitoring of fire incidence.	In proposal stage. Planned to meet AP Space Application Center (APSAC) & Planning Department during January, 2023 for obtaining satellite based maps for monitoring of fire incidents.	Medium term - One year by 31.12.2023	100%	-	-	-

6. Household emissions:

S. No.	Activities/ Action plan	Status of activity (Completed / Ongoing / To be Started)	Timeline for completion	Target (Coverage / Percentage)	Financial implications (Yes / No)	Funds Allocated (Rs. crore)	Funds Utilized as on date (Rs. crore)
1	Schemes for LPG / PNG coverage to all the households as cooking fuels.	Ongoing under "Pradhan Mantri Ujwal Yojana" (PMUY), Central Govt. scheme.	Ongoing	100%	-	-	-
2	Policy for coverage of all Hotels, Restaurants, Eateries, Sweet Houses, Dhabhas, etc. with LPG / PNG.	Ongoing with sufficient numbers of 381 HPCL and 462 IOCL distribution agencies across the State.	Ongoing	100%	-	-	-
3	Amendments to the Building by-laws for "Indoor Air Quality Management".	A.P. Building Rules 2017 issued in G.O. Ms. No. 119, dated 28.03.2017.	Ongoing	100%	No	Nil	Nil
4	Use of firecrackers during various occasions viz., Deepavali, Gurupurab, Chatt, Christmas Eve, New Year Eve, etc.	HM&FW Department, Govt. of AP, G. O. Rt. No. 692, dated 10.11.2020 and APPCB Lr. dated 18.12.2020.	Ongoing	100%	No	Nil	Nil

7. Public Awareness:

S. No.	Activities/ Action plan	Status of activity (Completed / Ongoing / To be Started)	Timeline for completion	Target (Coverage / Percentage)	Financial implications (Yes / No)	Funds Allocated (Rs. crore)	Funds Utilized as on date (Rs. crore)
1	Celebration of World Environment Day on 5 th June of every year.	Ongoing	Ongoing	100%	Yes	0.13	0.13
2	Celebration of International Day of Clean Air for Blue Skies on 7 th September every year.	Ongoing	Ongoing	100%	Yes	0.01	0.01
3	Workshops (6 nos.) under Capacity Building & Public Outreach (CBPO) guidelines under NCAP in 3 Zones of Andhra Pradesh.	Ongoing	Ongoing	100%	Yes	0.06	0.06
4	Public awareness through electronic media by scrolling Do's & Dont's during Deepavali festival every year.	Ongoing	Ongoing	100%	Yes	0.15	0.15



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केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE, GOVT. OF INDIA

EMAILREMINDER-I

CM-13013/56/2021-LAW-HO-CPCB-HO

To,

The Member Secretaries
State Pollution Control Boards /PCCs
(As per list)



Subject: Hon'ble NGT Order dated 09.05.2024 in the matter of OA No. 159 of 2021 (SZ) -
Guidelines for preparation of State Action Plan for clean air - reg.

Sir,

This has reference to CPCB letter no. CM-13013/56/2021-LAW-HO-CPCB-HO dated 13.06.2024 regarding formulation of State Action Plan for clean air as per the Guidelines prepared by CPCB (copy enclosed for ready reference).

It is understood that in compliance to Hon'ble NGT order, the states/UTs may have formulated /revised their respective State Action Plans (SAP) for clean air as per the said guidelines.

Accordingly, SPCBs/PCCs are once again requested to forward the copy of the approved SAP of the respective State/UT to CPCB at the earliest.

This issues with approval of the Competent Authority.

Yours faithfully,

(P. Agarwal)

Director & Head AQM

Encl: As above

Copy to:

1. Additional Secretary, CP, MoEFCC :for kind information please
Indira Paryavaran Bhawan
Jor Bagh, Aliganj, New Delhi- 11003
2. Principal Secretaries-Environment :for kind information please
All States/UTs


(P. Agarwal)

'परिवेश भवन' पूर्वी अर्जुन नगर, दिल्ली-110032

Parvesh Bhawan, East Arjun Nagar, New Delhi - 110032

दूरभाष/Tel: 43102030, 22305792, वेबसाइट/Website : www.cpcb.nic.in

Hon'ble NGT Order dated 09.05.2024 in the matter of OA No. 159 of 2021 (SZ) - State Action Plan for clean air for the state of Andhra Pradesh - Information furnished-reg.

From : JCES, Central Lab <boardlab-jces@appcb.gov.in> Wed, Oct 16, 2024 05:56 PM
Subject : Hon'ble NGT Order dated 09.05.2024 in the matter of OA No. 159 of 2021 (SZ) - State Action Plan for clean air for the state of Andhra Pradesh - Information furnished-reg. 
To : CPCB AQM NCAP <ncap.cpcb@gov.in>
Cc : CEE, APPCB <chiefengineer@appcb.gov.in>, reddymadhuri09@gmail.com, NCAP MoEFCC <ncap.moefcc@gov.in>, Sakshi Batra <sakshi.cpcb@nic.in>, N Subrahmanyam <n.subrahmanyam@gov.in>, hopcblegal <hopcblegal@gmail.com>, P V S CHALAM <boardlab-jso2@appcb.gov.in>

Sir/Madam,

With reference to the above subject, APPCB is herewith furnishing the Revised State Action Plan for clean air along with the reports filed by APPCB dated 30.07.2024 to Hon'ble NGT Order in the matter of OA No. 159 of 2021 (SZ), and relevant documents for information.

With Regards,

M. Sree Ranjani,
Joint Chief Environmental Scientist (FAC),
A.P. Pollution Control Board,
Central Laboratory - Vijayawada.

Mobile No: 9177303280.

From: hopcblegal@gmail.com
To: "JCES, Central Lab" <boardlab-jces@appcb.gov.in>
Cc: "CEE, APPCB" <chiefengineer@appcb.gov.in>, reddymadhuri09@gmail.com
Sent: Thursday, September 26, 2024 10:26:36 AM
Subject: Fwd: Hon'ble NGT Order dated 09.05.2024 in the matter of OA No. 159 of 2021 (SZ) -Guidelines for preparation of State Action Plan for clean air - reg.

The Hon'ble NGT matter-

Important

Madam,

The mail received from the CPCB in the matters of O.A. No. 159 of 2021(SZ) is forwarded for favour of information and taking further necessary action in the matter.

--
With regards,

Legal Cell, Head Office,
 Vijayawada.

----- Forwarded message -----

From: **Member Secretary APPCB** <membersecy@appcb.gov.in>

Date: Wed, Sep 25, 2024 at 12:10 PM

Subject: Fwd: Hon'ble NGT Order dated 09.05.2024 in the matter of OA No. 159 of 2021 (SZ) -Guidelines for preparation of State Action Plan for clean air - reg.

To: CEE, APPCB <chiefengineer@appcb.gov.in>, JCEE, Water <unit1-jcee@appcb.gov.in>, JCEE, ECS <unit2-jcee@appcb.gov.in>, JCEE, Air <unit4-jcee@appcb.gov.in>, JCES, Central Lab <boardlab-jces@appcb.gov.in>, APPCB Legal <hopcblegal@gmail.com>

From: "CPCB AQM NCAP" <ncap.cpcb@gov.in>

To: "Vivek Pandey" <cpcc-chd@nic.in>, "Dr. K.S Jayachandran" <msdpcc@nic.in>, "ms msoffice" <ms-mppcb@mp.gov.in>, "mspcb-hp" <mspcb-hp@nic.in>, "Member Secretary" <member-secretary@rpcb.nic.in>, "RAJESH KUMAR" <ms.wbpcb-wb@bangla.gov.in>, "member secy" <member.sec@ospboard.org>, hocecb@gmail.com, "Member Secretary" <msbspcb-bih@gov.in>, "MS TNPCB" <memsec@tnpcb.gov.in>, "Ravi Gugulothu" <ms-tspcb@telangana.gov.in>, "Member Secretary Karnataka State Pollution Control Board" <memsecy@kspcb.gov.in>, membersecretaryjkspcb@gmail.com, ms@uppcb.in, "Member Secretary APPCB" <membersecy@appcb.gov.in>, megspcb@rediffmail.com, ms-gpcb@gujarat.gov.in, ms@mpcb.gov.in, "Member Secretary PPCB"

<msppcb@punjab.gov.in>, npcb2@yahoo.com, msukpcb@gmail.com, membersecretary@pcbassam.org, ranchijspcb@gmail.com, hspcbms@gmail.com
Cc: "Naresh Pal Gangwar" <asnpg.mefcc@gov.in>, "Mandip Singh Brar" <hs-chd@nic.in>, "Sh. A.K Singh" <senv@nic.in>, "PS, H&E Dept" <pshousenv-mp@nic.in>, "Prabodh Saxena" <envsecy-hp@nic.in>, "prsecy-forests-rj gov inenv dept" <prsecy-forests-rj.gov.inenv.dept@rajasthan.gov.in>, acsenvwb@gmail.com, "Secretary-Env & Forest Odisha" <fesec.or@nic.in>, forestenv2016@gmail.com, "Sangeetha P IAS" <sangeethap@ias.nic.in>, "Environment Forest and Climate Change" <efd-bih@nic.in>, forsec@tn.gov.in, "Principal Secretary EFST" <prlsecy_efst@telangana.gov.in>, "L.Khiangte, IAS" <cs-jharkhand@nic.in>, secyforest-fee@karnataka.gov.in, secyenv-fee@karnataka.gov.in, csforestjk@gmail.com, "Sanjiv Saran" <psecforest-up@nic.in>, psforest2015@gmail.com, "Spl CS EFST" <splcs_efst@ap.gov.in>, pwingty@yahoo.co.in, secfed@gujarat.gov.in, "psec env" <psec.env@maharashtra.gov.in>, "Admin Secretary TE" <secy.te@punjab.gov.in>, nagaforest@gmail.com, "Secretary Forest" <secy-for-ua@nic.in>, "Forest and Environment Department Gos" <pccf-fewd@sikkim.gov.in>, envtforest2016@gmail.com, "DIRECTORATE OF ENVIRONMENT AND CLIMATE CHANGE" <envt.dir@kerala.gov.in>, "PCCF Secretary" <pccfnsecy-arn@nic.in>, "Environment Govt of Haryana" <environment@hry.nic.in>, "D eputy Conservator of Forest" <lak-dcf@nic.in>, "Barun Kumar Sahu" <prsecy-forest@tripura.gov.in>, pccfaizawlmizoram@gmail.com, "PCCF Manipur" <pccf-mn@nic.in>, "Chief Conservator of Forest" <ccf-dmn-dd@nic.in>, "Conservator of Forests Pondicherry" <dcf@py.gov.in>, "Director Environment" <dir-env.goa@nic.in>, "Pankaj Agarwal" <pagarwal.cpcb@gov.in>, "Sakshi Batra" <sakshi.cpcb@nic.in>, sundaramism707@gmail.com, "Satpal Madaan" <satpal.cpcb@supportgov.in>, "Tanya Chhabra" <tanya.cpcb@supportgov.in>

Sent: Tuesday, September 24, 2024 2:30:58 PM

Subject: Re: Hon'ble NGT Order dated 09.05.2024 in the matter of OA No. 159 of 2021 (SZ) -Guidelines for preparation of State Action Plan for clean air - reg.

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Reminder-I

Sir/Madam,

With reference to the trailing email, I am directed to forward the CPCB letter for kind information and necessary action please.

Thanks & Regards
NCAP Team
CPCB Delhi

---- On Thu, 13 Jun 2024 18:08:32 +0530 **CPCB AQM NCAP** <ncap.cpcb@gov.in> wrote ---

Sir,

With reference to captioned subject, I am directed to share the letter for kind information and necessary action please.

Thanks & Regards
NCAP Team
CPCB Delhi

 **MS_APPROVED STATUS REPORT ON NGT OA NO.159_2021 NCAP SAP.pdf**
418 KB

 **Annexure-2 - State Action Plan on NCAP.pdf**
669 KB

 **Annexure-1 - OA No 159 of 2021 - 09-05-2024.pdf**
128 KB

 **Annexure 3 SAP Communicated to stakeholders.pdf**
811 KB

 **ANNEXU~4.PDF**
386 KB

 **appcb ngt oa 159 of 2021.pdf**
478 KB

 **Letter for _SAP_24-09-2024.pdf**
3 MB

 **Letter for Preparation of SAP-1.pdf**
878 KB
