



WASTE TO ENERGY PROJECTS BY MAHINDRA WASTE TO ENERGY SOLUTIONS LIMITED



Document Prepared by Infinite Solution

Project Title	Waste to Energy Projects by Mahindra Waste to Energy Solutions Limited
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Prepared By	Infinite Solutions
Contact	214-215 Milinda Manor, Opp. Next Treasure Island, 2 RNT Marg, Indore – 452001. Landline No.: 0731-4050174 Email: jimmy@infisolutions.org Website: www.infisolutions.org

1 SUMMARY OF SUSTAINABLE DEVELOPMENT CONTRIBUTIONS

Mahindra (hereafter referred as “project proponent”) is installing Bio-gas Plants (hereafter referred as “proposed project activity”) at various locations across India as a grouped project activity.

The objective of the grouped project activity is to develop a platform for reducing VCS Registration timelines and process costs for registration of individual projects under VCS by Mahindra.

Biogas technology provides an alternate source of energy in India, and is hailed as an archetypal appropriate technology that meets the basic need for cooking fuel in rural and urban areas. Using local resources, viz. food waste, cattle waste, vegetable and other organic wastes, energy and manure are derived. Realization of this potential and the fact that India supports the largest cattle wealth led to the promotion of National Biogas Programme in a major way in the late 1970s as an answer to the growing fuel crisis. As an extension of technology, Mahindra in the process of developing alternate fuel technologies for rural and urban India for quite long time.

The details of Project capacity and location details for all the project instances are as follows:

S No.	Project Instances No	Plant Location	Technology	Capacity (TPD)	Usage	Commissioning Date
1	Mahindra Waste to Energy Solutions Ltd.	Aurangabad Maharashtra	Bio Methanation	30	CNG sale	01/05/2019
2		Tirupati - AP	Bio Methanation	40	CNG sale	01/09/2019
3		Piduguralla - AP	Bio Methanation	20	CNG sale	01/06/2019
4		Adoni - AP	Bio Methanation	20	CNG sale	01/03/2020

The main purpose of the project is to incorporate competent biogas technology and implementation to support in the country by setting up to field scale biogas plant; to be located based on the continuous availability of raw materials. Anaerobic digestion is the prominent technology used for degradation of biodegradable organic waste.

Anaerobic Digestion (AD) is a biological process that happens naturally when bacteria breaks down organic matter in environments with little or no oxygen. It is effectively a controlled and enclosed version of the anaerobic breakdown of organic waste in landfill which release methane.

SDGs Contributions: -



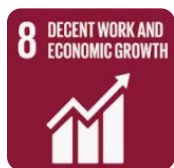
For SDG 2: Mahindra Waste to Energy Solutions Limited committed towards the ensuring a healthy life and promote wellbeing to the nearby villages. Hence, Mahindra Waste to Energy Solutions Limited started distributing groceries to the surrounding villages of the respective plants. The evidence for the same has provided in Appendix-1. **The SDG contribution through this project activity is mentioned below:**

Plant Location	Date	Beneficiaries
Tirupati	24 th Apr 2020	• 24 families / 84 beneficiaries
	16 th June 2020	• 24 families / 96 beneficiaries • 22 Families / 77 beneficiaries
Aurangabad	22 nd Apr 2020	• 28 families / 110 beneficiaries
	16 th Apr 2020	• 14 families / 52 beneficiaries



For SDG 3: Mahindra Waste to Energy Solutions Limited plays a vital role to fight against COVID-19 is continuing in its operational areas of pan India. Apart from the preventive measures, and support to the warriors like Police, Medical Department and Sanitary Workers, it started distributing PPE kit to sanitary Workers of municipal corporations of the respective plants. The evidence for the same has provided in Appendix-1. The SDG contribution through this project activity is mentioned below:

Plant Location	Beneficiaries
Tirupati	165
Piduguralla	165
Adoni	394



For SDG 8: Mahindra Waste to Energy Solutions Limited has initiated a **customized training program for their engineers and plant operators such as, Electrical safety, toolbox & fire safety training.** The evidence for the same has provided in Appendix-1.



For SDG 12: Mahindra Waste to Energy Solutions Limited committed promote wellbeing to the nearby villages. Hence, Mahindra Waste to Energy Solutions Limited started giving awareness session on adverse effect of waste and different strategies for waste collection at **Piduguralla Mahindra waste to energy Solutions conducted a door-to-door Awareness program on Waste Collection & Segregation along with Municipal staffs on 06-03-2020 and in adoni awareness program on Waste Collection & Segregation with Municipal staffs is conducted on 14th Dec 2020 and 21st Dec 2020.** The evidence for the same has provided in Appendix-1.



For SDG 13: Mahindra Waste to Energy Solutions Limited has shown leadership in workplaces and in their communities by advocating climate action consistent with the science. Hence, the project avoided release of 12,833 tCO₂e in to the atmosphere during the reporting period.

2 PROJECT CONTRIBUTIONS

Table 1 : Sustainable Development Contributions

Row number	SDG Target	SDG Indicator	Net Impact on SDG Indicator	Current Project Contributions	Contributions Over Project Lifetime
1)	2.1	2.1.2 Prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES)	Implemented activities to decrease	The Grocery distribution programs conducted by the Mahindra Waste to Energy Solutions Limited at Tirupati and Aurangabad location on dated 16 th , 22 nd and 24 th Apr 2020 where total 66 families are benefitted and on dated 16 th June 2020 total 46 Families are benefitted .	The Grocery distribution programs conducted at Tirupati and Aurangabad location on dated 16 th , 22 nd and 24 th Apr 2020 where total 66 families are benefitted and on dated 16 th June 2020 total 46 Families are benefitted . The photographic evidence for the same is provided in Appendix-1.
2)	3.8	3.8.1 Coverage of essential health services (defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, non-communicable diseases and service capacity and access, among the general and the most disadvantaged population)	Implemented activities to decrease	Mahindra Waste to Energy Solutions Limited plays a vital role to fight against COVID-19 is continuing in its operational areas of pan India. It started distributing PPE kit to sanitary Workers of municipal corporations at Tirupati, Piduguralla and Adoni location where 165, 165 and 394 peoples are benefitted .	Mahindra Waste to Energy Solutions Limited plays a vital role to fight against COVID-19 is continuing in its operational areas of pan India. It started distributing PPE kit to sanitary Workers of municipal corporations at Tirupati, Piduguralla and Adoni location where 165, 165 and 394 peoples are benefitted . The photographic evidence for the same is provided in Appendix-1.

3)	8.6	8.6.1 Proportion of youth (aged 15-24 years) not in education, employment or training	Implemented activities to increase	Mahindra Waste to Energy Solutions Limited has initiated a customized training program for their engineers and plant operators. The above Program is started as part of the health and electrical safety measures for high voltages equipment.	Mahindra Waste to Energy Solutions Limited conducted customized training program for their engineers and plant operators such as, Electrical safety, toolbox & fire safety training. The photographic evidence for the same is provided in Appendix-1.
4)	12.4	12.4.2 Hazardous waste generated per capita and proportion of hazardous waste treated, by type of treatment	Implemented activities to increase	Mahindra Waste to Energy Solutions Limited committed promote wellbeing to the nearby villages. Hence, Mahindra Waste to Energy Solutions Limited started giving awareness session on adverse effect of waste and different strategies for waste collection at Piduguralla and Adoni location.	Mahindra Waste to Energy Solutions Limited started giving awareness session on adverse effect of waste and different strategies for waste collection at Piduguralla and Adoni location. The photographic evidence for the same is provided in Appendix-1.
5)	13.0	Tonnes of greenhouse gas emissions avoided or removed	Implemented activities to increase	The project avoided release of 12,833 tCO ₂ in to the atmosphere during the reporting period.	Prevented the release of 12,833 tCO ₂ into the atmosphere.

APPENDIX 1: SUPPORTING EVIDENCE

1. Tirupati Plant

1. Groceries Distribution – Tirupati Plant on 24th Apr 2020 & 16th June 2020

(Evidence for SDG-2)

Groceries Distribution on 24-04-2020 (1st Time)



Groceries Distribution on 16-06-2020 (2nd Time)



Mahindra Waste to Energy Solutions Limited started distributing groceries to the surrounding villages of the respective plant. It conducted in two phases, the following information below shows the beneficiaries information in different areas:

Sr. No	BENEFICIARIES	Date
1	24 FAMILIES / 84 BENEFICIARIES	24 th Apr 2020
2	24 FAMILIES / 96 BENEFICIARIES and 22 FAMILIES / 77 BENEFICIARIES	16 th June 2020

2. PPE Distribution – Tirupati Plant To Tirupati Municipal Corporation - Sanitary Department on 21st Apr 2020

(Evidence for SDG-3)



Mahindra Waste to Energy Solutions Limited plays a vital role to fight against COVID-19 is continuing in its operational areas of pan India. It started distributing PPE kit to sanitary Workers of municipal corporations of the respective plants. **Total 165 sanitary workers are benefitted.**

2. AURANGABAD

1. Groceries Distribution – Aurangabad Plant on 22nd Apr 2020 & 16th Apr 2020

(Evidence for SDG-2)



Mahindra Waste to Energy Solutions Limited started distributing groceries to the surrounding villages of the respective plant. It conducted in two phases, the following information below shows the beneficiaries information in different areas:

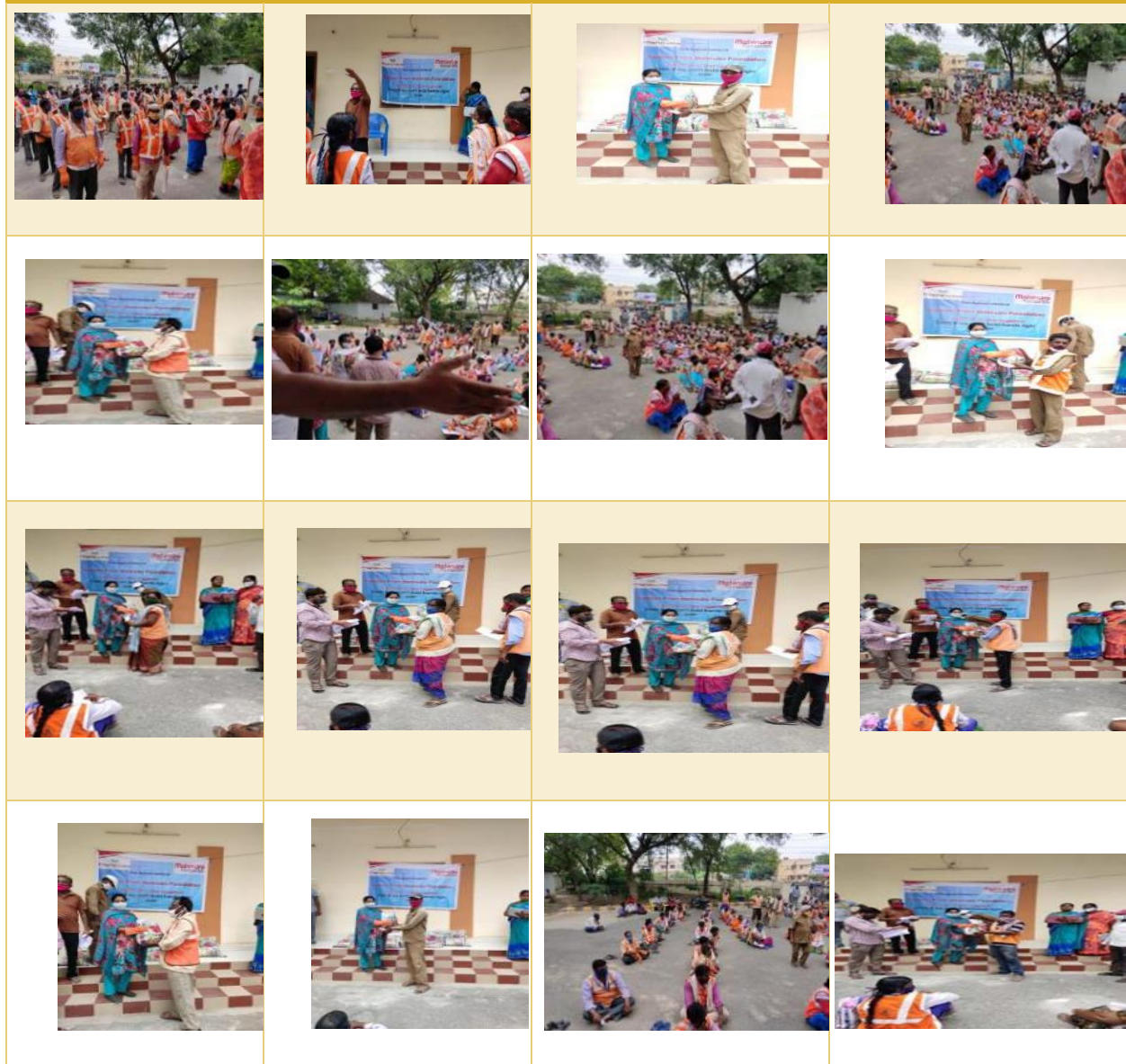
Sr.No	BENEFICIARIES	Date
1	28 FAMILIES / 110 BENEFICIARIES	22 nd Apr 2020
2	14 FAMILIES / 52 BENEFICIARIES	16 th Apr 2020

3. PIDUGURALLA

1. PPE Distribution – Piduguralla Plant to Piduguralla_Municipal Corporation - Sanitary department

(Evidence for SDG-3)

PPE Distribution – Piduguralla Plant to Piduguralla Municipal Corporation - Sanitary Department



- Total NO. OF Beneficiaries: 165 Beneficiaries / 94 Families

2. Groceries Distribution -Piduguralla Plant

(Evidence for SDG-2)

GROCERIES DISTRIBUTION – PIDUGURALLA Plant



1. Awareness Program to Public with Municipal Staffs – Piduguralla Plant

(Evidence for SDG-12)

AWARENESS PROGRAM TO PUBLIC WITH MUNICIPAL STAFFS – PIDUGURALLA PLANT



యలు వార్తనల్లులు.
**చెత్త నుంచి సంపదను
 సృష్టించాలి**



పిడుగురాళ్ళ: తడి, పొడి చెత్తలను వేరు చేయడం వల్ల అలోగ్యానిటి మంచిదని, అదే విధంగా చెత్త నుంచి సంపదను పొందే అవకాశం ఉందని మున్సిపల్ శానిటరీ ఇన్ స్పెక్టర్ రమాదేవి తెలిపారు. పట్టణంలోని 24వ వార్డులో వార్డు సచివాలయ సెక్రటరీల ఆధ్వర్యంలో తడి చెత్త, పొడి చెత్తపై శుక్రవారం ఇంటింటికీ తిరిగి అవగాహన కల్పించారు. తడి చెత్తతో బయోగ్యాస్ ఉత్పత్తి అవుతుందని, పొడి చెత్తతో పర్మి కం పోస్టు పంటివి తయారు చేయడం జరుగుతుందన్నారు. పట్టణంలోని డంపింగ్ యార్డులో వీటిని ఏర్పాటు చేయడం జరిగిందని, ప్రతి ఒక్కరూ తడి, పొడి చెత్తను వేరు చేసి మున్సిపల్ కార్మికులకు అందించాలని సూచించారు. ఈ కార్యక్రమంలో బయోగ్యాస్ ప్లాంట్ సిబ్బంది, వార్డు సెక్రటరీలు, సిబ్బంది పాల్గొన్నారు.

4. ADONI

1. Groceries Distribution –Adoni Plant on 20th Apr 2020 & 20th June 2020

(Evidence for SDG-2)

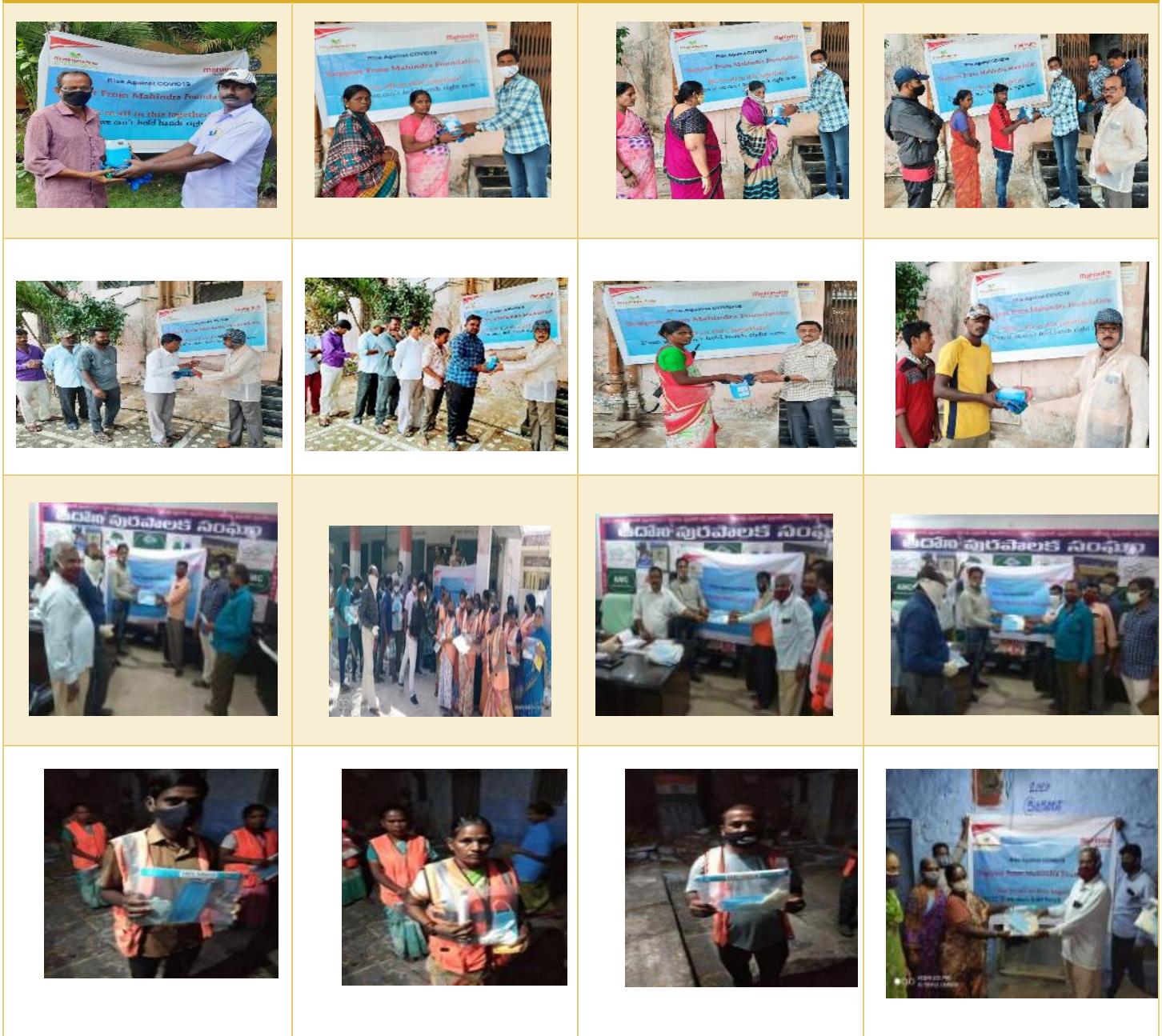


Mahindra Waste to Energy Solutions Limited started distributing groceries to the surrounding villages of the respective plant. It conducted in two phases, on dated 20th Apr 2020 & 20th June 2020.

2. PPE Distribution – Piduguralla Plant to Piduguralla Municipal Corporation - Sanitary department

(Evidence for SDG-3)

PPE DISTRIBUTION – – ADONI PLANT



Mahindra Waste to Energy Solutions Limited plays a vital role to fight against COVID-19 is continuing in its operational areas of pan India. It started distributing PPE kit to sanitary Workers of municipal corporations of the respective plants. **Total 394 sanitary workers are benefitted.**

3. AWARENESS PROGRAM - ADONI PLANT

(Evidence for SDG-12)

AWARENESS PROGRAM - ADONI PLANT	
Gram panchayat secretaries segregation awareness program on 21-12-2020	
	
Municipal staffs awareness program on 14-12-2020	
	

Mahindra Waste to Energy Solutions Limited committed promote wellbeing to the nearby villages. Hence, Mahindra Waste to Energy Solutions Limited started giving awareness session on adverse effect of waste and different strategies for waste collection at Adoni Municipal Corporation.

Supporting Evidence for training
(Evidence for SDG-8):

Supporting Evidence for training

