

WASTE TO ENERGY (WtE) PROJECT PROFILE



2 x 600 TPD MSW Based Power Plant in Delhi



AVANT-GARDE SYSTEMS AND CONTROLS (P) LTD



(AN ISO 9001:2015 CERTIFIED ORGANISATION & ASME "S" STAMP HOLDER)

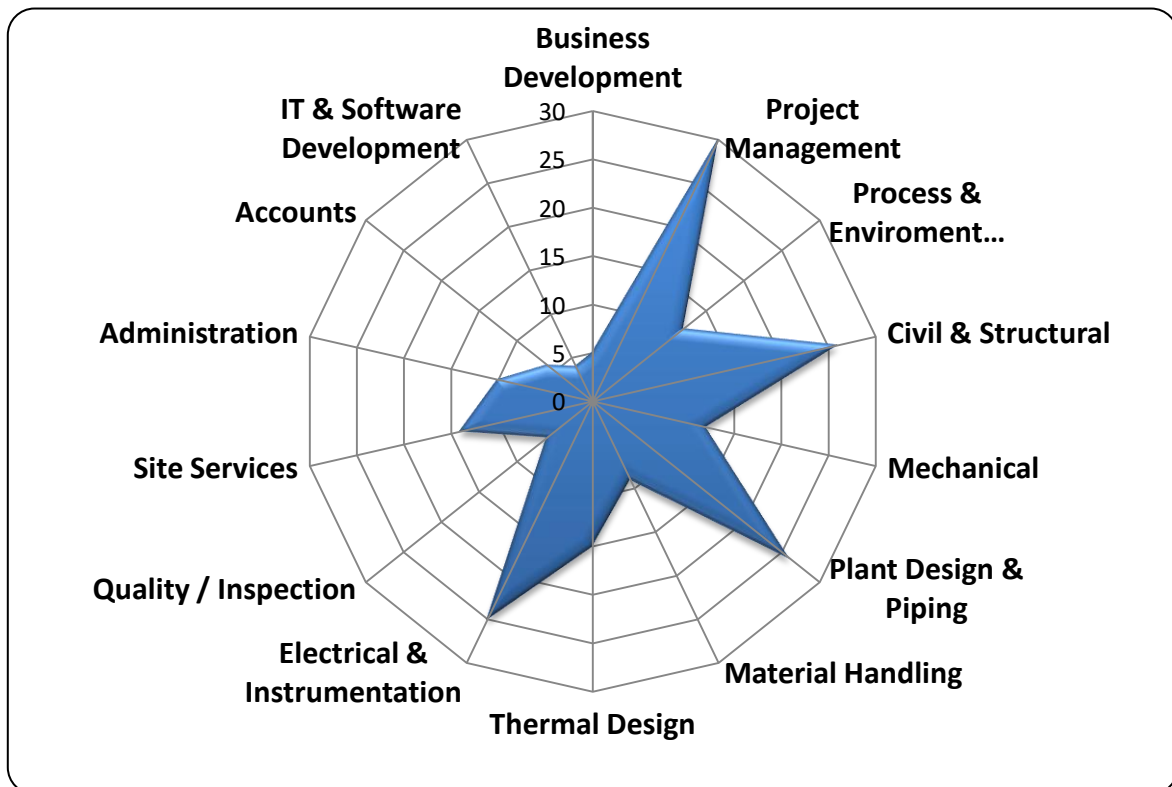
No: 67A, Poroor Kundrathur High Road,
Poroor, Chennai - 600 116, India
Tel: + 91 -44 -4598 1200 / 2482 8717 - 22
Fax: + 91 -44 -24828531
Email: agsc@avant-garde.co.in
Website: <https://avantgarde-india.com>

INCEPTION

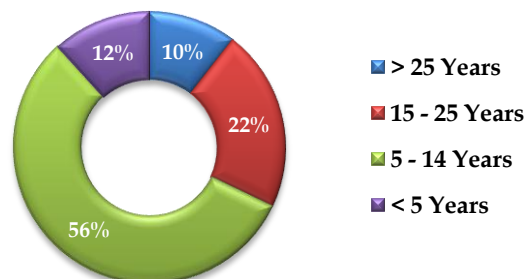
- ❖ ESTABLISHMENT - AVANT-GARDE ENGINEERS AND CONSULTANTS (P) LTD - 1990
AVANT-GARDE SYSTEMS AND CONTROLS (P) LTD - 1995

STAFFING

- ❖ MULTI DISCIPLINARY TEAM COMPRISE OF MORE THAN 200 WORKFORCE



YEARS OF EXPERIENCE



CONTACT PERSON

- ❖ P.S. SANKARANARAYANAN, MANAGING DIRECTOR

AREAS OF EXPERTISE

- Captive power plant
- Cogeneration plant
- Biomass based power plant
- Steam generator design and engineering
- Waste heat recovery systems
- Mini Hydro electric power plants
- Combined cycle power plants
- Solar Thermal & Solar PV power plants
- Sugar plant consultancy
- Distillery Plants
- Water and Waste Water treatment plants
- Industrial Effluent Treatment plants
- Process piping
- Equipment design
- Detailed engineering of electrical, mechanical, instrumentation, civil & structures
- Procurement & site supervision
- Third party inspection services
- Residual Life Assessment
- Energy Audit
- Engineering software development

SERVICES OFFERED FOR WASTE TO ENERGY (WtE) PLANTS

BASIC ENGINEERING SERVICES

- Preparation of Feasibility Reports
- Preparation of Detailed Project Reports
- Power Purchase Agreement
- Thermal Cycle Optimisation
- Plant Engineering

DETAILED ENGINEERING SERVICES

- Plant Layout
- Equipment Layout
- Piping Engineering
- Electrical Engineering
- Switchyard Design
- Instrumentation - DCS, PLC, Micro-processor
- Plant Building Design
- Civil works, civil foundation design for plant, equipment, TG, chimney etc
- Structural design and engineering

PROCUREMENT SERVICES

- Vendor rating
- Preparation of Specification for bought out items
- Evaluation of offers received.
- Preparation of Draft Purchase Order.
- Vendor Drawing Review.
- Expediting Services

- **PROJECT ENGINEERING AND CO-ORDINATION SERVICES**

- **INSPECTION SERVICES**

- **SUPERVISION OF ERECTION AND COMMISSIONING**

- **PERFORMANCE TESTING SERVICES**

A. WASTE TO ENERGY (WTE) PLANTS EXPERIENCE

I. LIST OF COMMISSIONED PROJECTS

S.No	Project	Capacity (MW)
1.	Shriram Energy Systems Ltd, Andhra Pradesh (Fuel used are MSW & RDF)	6.00
2.	Delhi MSW Solutions Ltd, Delhi (Fuel used is MSW)	24.00
3.	Hyderabad Integrated MSW Ltd, Hyderabad - (2 x 600 TPD) - Phase I	24.00
Total		54.00

II. LIST OF PROJECTS UNDER VARIOUS STAGES OF IMPLEMENTATION

S.No	Project	Capacity (MW)
1.	Pallavapuram Tambaram MSW Private Limited, Chennai (Essel Infra - RDF based Power Plant) - 300 TPD	5.00
2.	Rewa MSW Holding Limited, Rewa - 310 TPD	6.00
3.	Pune Bio-Energy Systems Private Limited, Pune - 2 x 375 TPD	13.00
4.	Providing Pre-ordering Services for Implementation of 1200 TPD (2 x 600 TPD) MSW based Power Plant at Jawaharnagar - Phase II	24.00
5.	Providing Pre-ordering Services for Implementation of 1000 TPD MSW based Power Plant at Dundigal - Phase III	15.00
6.	Providing Design and Detailed Engineering Services for Flue Gas Ducting for RDF fired boiler and Stack - on account of M/s. Jurong Engineering Limited - in Thailand	10.00

S.No	Project	Capacity (MW)
8.	Tuff Offshore, Singapore - Providing Pre-Bid Engineering Services for 2 x 600 TPD WtE project - Pre-Bid Engineering work has been completed	35.20
9.	Hyderabad MSW Energy Solution Pvt Ltd, Gachibowli, Hyderabad - Landfill Gas Project (LFG Extraction and CBG Plant) - 1200 Ncum / hr. bottling size Phase 1: LFG extraction and Flare Phase 2: LFG Engine and Generator System Phase 3: LFG to CBG Plant	1.00
Total		109.20

III. LIST OF BANKABLE DETAILED PROJECT REPORTS

S.No	Project	Capacity (TPD)
1.	RDF Power Projects Limited, Nalagonda	2 X 600
2.	Timarpur-Okhla Waste Managemenet Co. Pvt. Ltd, New Delhi (C/o.IL & FS, New Delhi) MSW and Biomethanisation Plant	1 X 1300 & 100
3.	East Delhi Waste Processing Co. Pvt. Ltd., Ghazipur - for IL & FS	1 X 1300
4.	Delhi MSW Solutions Ltd, (Group of Ramky Energy, Delhi)	2 X 600
5.	Hi MSW Ltd, (Group of Ramky Energy, Hyderabad)	2 X 600
6.	Guwahati Waste Management Company Pvt.Ltd, (Group of Ramky), Guwahati	1 X 600
7.	Ramky Energy & Environment Ltd, Bangalore	1 X 600
8.	Ramky Enviro Engineers Ltd, Pimpri	1 X 600
9.	IL&FS Energy Development Company Limited, Gurgaon (Puducherry Project)	1 X 600
10.	Pune Bio-Energy Systems Private Limited, Pune	2 X 375
11.	Rewa MSW Holding Limited, Rewa	1 X 310
12.	Dehradun Waste Management Private Limited, Dehradun	1 X 200
13.	Siemens Limited, Chennai	2 x 600
14.	Hyderabad MSW Energy Solutions Private Limited, Jawaharnagar - Phase II	2 x 600
15.	Hyderabad MSW Energy Solutions Private Limited, Dundigal - Phase III	2 x 500
16.	Thane Clean Environment Private Limited, Thane	1 x 800

B. FUELS THAT HAVE BEEN USED IN VARIOUS BOILERS INSTALLED IN THE WASTE TO ENERGY PLANTS FOR WHICH AVANT-GARDE HAVE PROVIDED ENGINEERING SERVICES

- Municipal Solid Waste (MSW)
- Refuse Derived Fuel (RDF)
- Poultry litter

GROUP COMPANY

- Avant-Garde Engineers and Consultants (P) Ltd, Chennai
- Avant-Garde Engineers & Consultants FZC, Sharjah, U.A.E

AFFILIATIONS & MEMBERSHIP

- CEAI - Consulting Engineers Association of India (CEAI is member of **FIDIC International Federation of Consulting Engineers**)
- Consultancy Development Centre (CDC)
- Registered with Indian Renewable Energy Development Agency (IREDA)
- Enlisted with Power Finance Corporation of India and Asian Development Bank
- IIT, Chennai - Industrial Associate ship Scheme (IAS) Membership and Library Membership
- Anna University - Industrial Associate ship Scheme (IAS) Membership and Library Membership
- BIS - Bureau of Indian Standards Library Membership
- Institute of Engineers Fellow Membership - Directors (Chartered Engineers)
- Indian Chamber of Commerce and Industry (ICCI)
- Madras Chamber of Commerce and Industry (MCCI)
- Indian Wind Power Association
- Indian Welding Society
- Institute of Fire Engineers
- Bureau of Energy Efficiency (BEE)
- Maharashtra Energy Development Agency (MEDA)
- South Indian Sugarcane and Sugar Technologists Association (SISSTA)
- Sugar Technologist Association of India (STAI)
- Engineering Export Promotion Council (EEPC)

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