

Waste Business Monitor

The only source of "real time" trend data analysing global waste plant developments

AcuComm

Waste > Renewables > Energy > Profit

ALL DATA CURRENT AT

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In this month's report...

The latest waste plant developments in July 2015

- Latest Monthly Projects by Facility Type and Feedstock
- Latest Monthly Capacity by Facility Type and Feedstock
- Latest Power Generation Projects Listed by Facility Type and Feedstock
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- Completion Date Focus

 **ISWA**
International Solid Waste Association

Essential for waste equipment manufacturers, operators and service companies

Welcome to Waste Business Monitor.

Welcome to your complimentary issue of AcuComm's Waste Business Monitor (WBM).

WBM provides an ongoing and comprehensive analysis of current projects in the global waste industry, enabling you to establish the level of activity in the different sectors of the waste industry around the world. The data in is taken from AcuComm's Business Database. This is a database of projects compiled and maintained by us on a daily basis. The information in it – and therefore in Waste Business Monitor – is not readily available from any other source.

WBM is organised in the following sections:

The first section examines new projects reported in the latest month. It looks at the overall number and value of these, and then divides them in two ways. Each project is allocated a principal facility type, such as anaerobic digestion, gasification plant or WtE incineration plant.

Secondly, each project is allocated a principal feedstock type, such as municipal solid waste, plant biomass or food for example. Then, the waste capacity and power generation capacity of each project is examined. After this, we look at which countries are most active, and when projects are reported as being likely to complete.

I hope Waste Business Monitor is useful to you. If you have any questions or queries, or if you have a project which you would like to see included in our Business Database – free of charge – then please do get in touch

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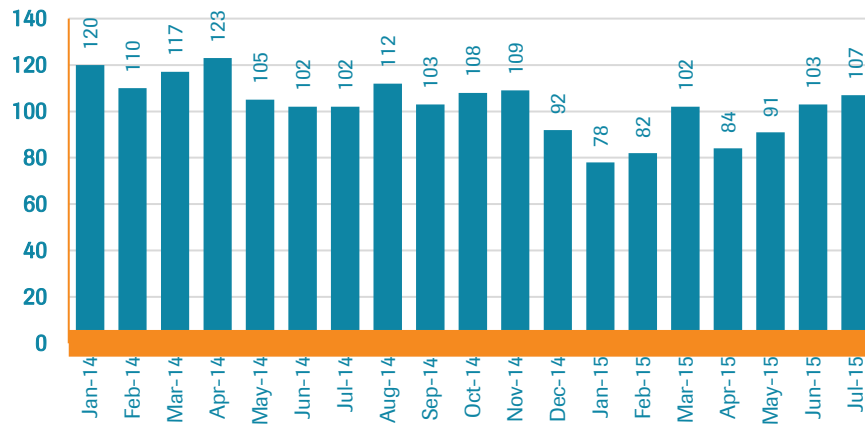


Projects This Month: July 2015

Overview

AcuComm reported on 107 new waste projects in July 2015. This takes the annual number (since August 2014) to 1,171, and the total overall since January 2014 to 1,950.

Number of Projects by Month

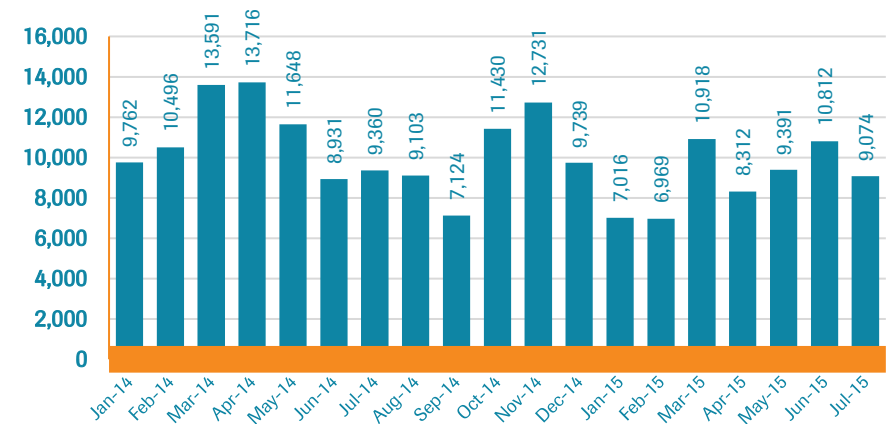


The total estimated value of these projects is US\$9,074 million. This takes the total estimated value of projects reported since August 2014 to US\$112,620 million. The average estimated value of a waste project over this period is US\$96 million.



Each new waste project represents on-going investment of an average of around **US\$100 million**.

Estimated Total Value of Projects (US\$m)



Incineration with energy recovery projects form the largest number in July 2015, accounting for 38, or 35.5% of the total each. This was followed by waste processing projects (14 projects, or 13.1%) and recycling (12 projects, or 11.2%).



Incineration with energy recovery is also the leading facility type by estimated value, at US\$2,964 million, or 32.7% of the total. This was followed by waste processing with US\$1,536 million, or 16.9% of the total, and landfill with US\$1,242 million, or 13.7%.

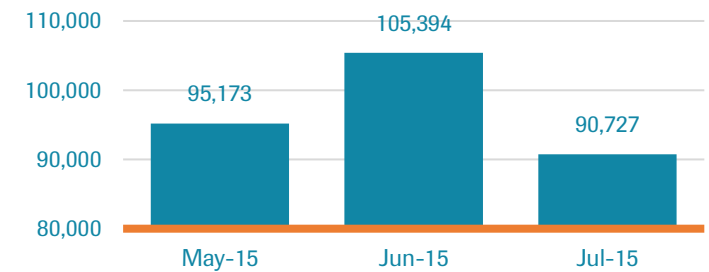
Quarterly Project Data Comparison

Key Indicators for May 2015 to July 2015

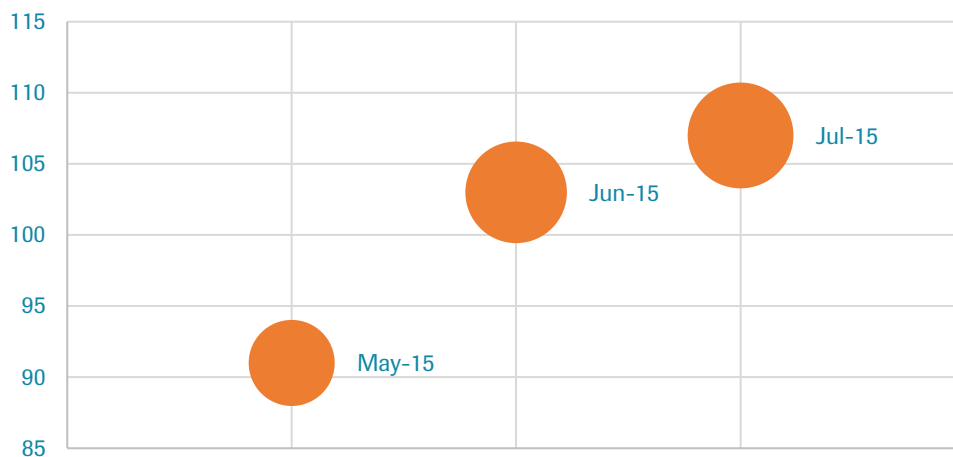
	May-15	Jun-15	Jul-15	Quarterly Total
Number of projects	91	103	107	301
Total estimated value (US\$ millions)	9,391	10,812	9,074	29,277
Average value (US\$ millions)	103	105	85	97
Reported waste capacity (tonnes)	3,521,416	4,848,109	4,899,269	13,268,794
Average annual capacity per project (tonnes)	95,173	105,394	90,727	96,853
Reported power generation (MW)	392	546	526	1,463
Average MW per project	15	20	22	19

This page compares data on projects reported in the current month, compared with the previous two months. This provides a comparison of the most recent data, and also a quarterly total. The size of the circles in the bottom left graph represents the total estimated project values, as reported in the table on this page.

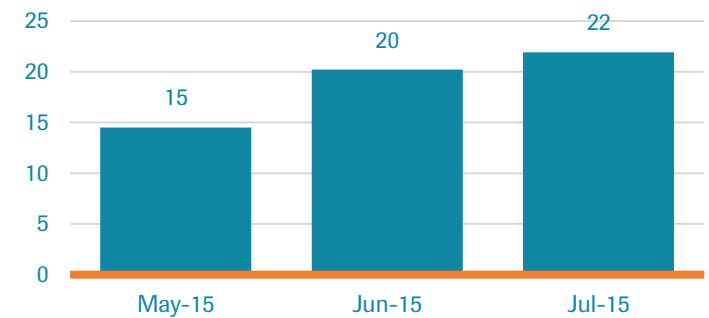
Average annual capacity per project (tonnes)



Projects by Number and Estimated US\$ Value



Average MW per project



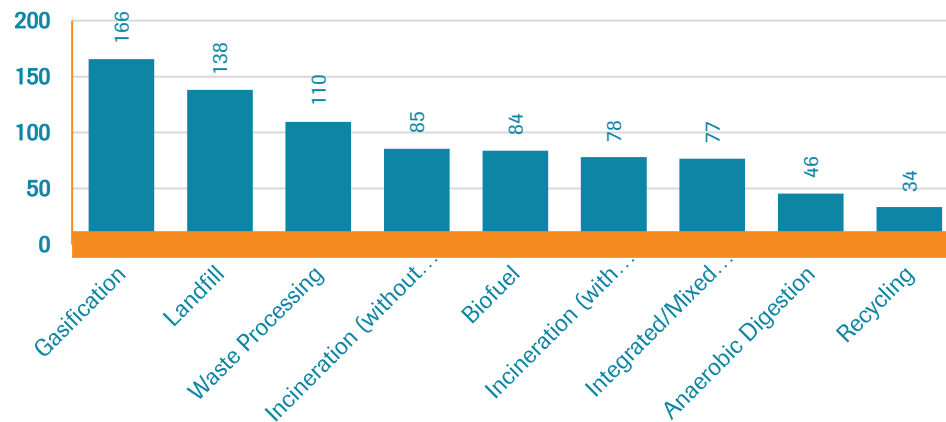
Latest Monthly Projects by Facility Type (July 2015)

	Projects	With Value (US\$m)	Reported Value	Total Estimated Value	Average value
Anaerobic Digestion	11	3	156	501	46
Biofuel	6	3	141	504	84
Biogas	8	4	35	262	33
Gasification	2	1	160	331	166
Incineration (energy recovery)	38	23	1,324	2,964	78
Incineration (no energy recovery)	1	0	0	85	85
Integrated Facilities (IWMF)	5	3	129	384	77
Landfill	9	2	29	1,242	138
MBT	0	0	0	0	-
Recycling	12	8	148	402	34
Waste Processing	14	7	138	1,536	110
Others	1	0	0	864	864
Total	107	54	2,260	9,074	85

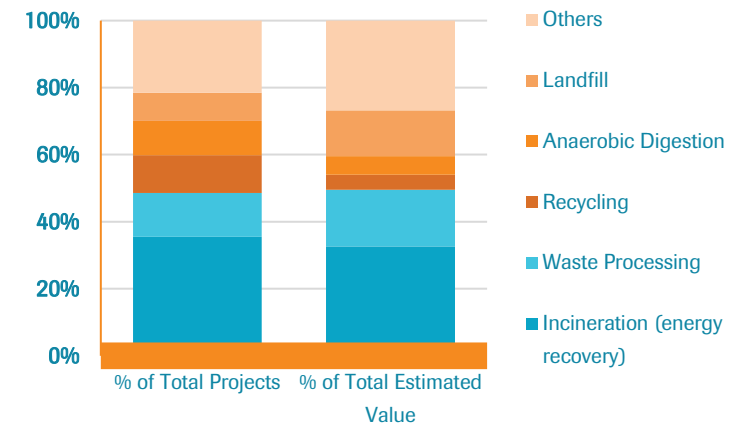
Latest Monthly Projects by Facility Type % of Total (July 2015)

	% of Total Projects	% of Total Estimated Value
Anaerobic Digestion	10.3	5.5
Biofuel	5.6	5.5
Biogas	7.5	2.9
Gasification	1.9	3.7
Incineration (energy recovery)	35.5	32.7
Incineration (no energy recovery)	0.9	0.9
Integrated Facilities (IWMF)	4.7	4.2
Landfill	8.4	13.7
MBT	0.0	0.0
Recycling	11.2	4.4
Waste Processing	13.1	16.9
Others	0.9	9.5
Total	100.0	100.0

Average Value of Projects, Jul 2015 (US\$m)



Projects By Facility Type, Jul 2015



In terms of waste feedstock type, municipal solid waste (MSW) was the leading category in July 2015. MSW accounted for 33 projects (30.8% of the total) with an estimated value of US\$2,443 million (26.9% of the total).



Wood and sewage/wastewater were the other principal feedstocks in July 2015. Wood accounted for 18 projects, with an estimated value of US\$990 million, while sewage/wastewater accounted for 11 projects, equal to US\$643 million.



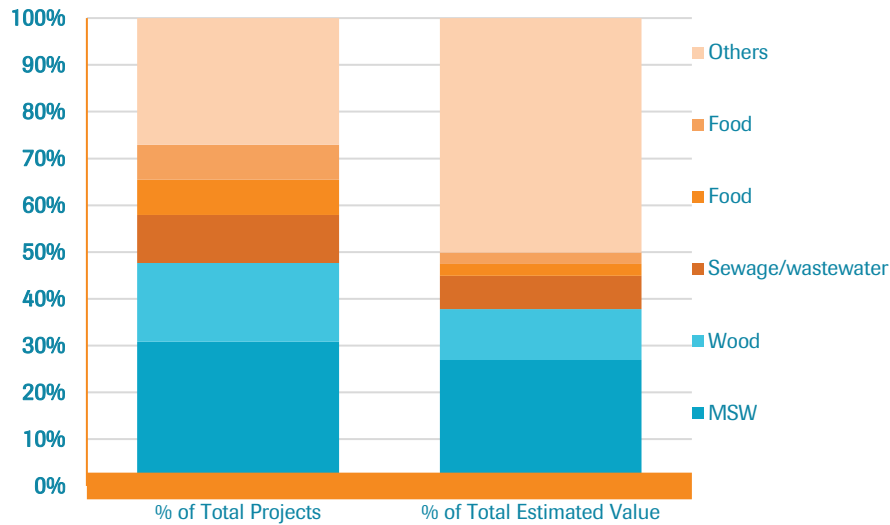
Latest Monthly Projects by Feedstock Type (July 2015)

	Projects	With Value (US\$m)	Reported Value (US\$m)	Total Estimated Value	Average value (US\$m)
Animal	7	3	43	178	25
Clinical	0	0	0	0	-
Construction/Demolition	2	1	5	36	18
e-Waste	0	0	0	0	-
Food	8	2	9	227	28
Gas	4	2	116	868	217
Glass	0	0	0	0	-
Hazardous	1	0	0	127	127
Heat	1	0	0	31	31
Industrial	2	0	0	262	131
Metals	0	0	0	0	-
MSW	33	17	764	2,443	74
Oil	0	0	0	0	-
Organic (general/unspecified)	8	5	606	920	115
Paper	0	0	0	0	-
Plant Biomass (non-waste)	1	1	0	0	0
Plant Biomass (waste)	6	2	159	587	98
Plastics	3	3	36	36	12
Radioactive	2	0	0	1,727	864
Rubber	0	0	0	0	-
Sewage/wastewater	11	7	285	643	58
Wood	18	11	236	990	55
Other	0	0	0	0	-
Total	107	54	2,260	9,074	85

Latest Monthly Projects by Feedstock Type (% of Total)

	% of Total Projects	% of Total Estimated Value
Animal	6.5	2.0
Clinical	0.0	0.0
Construction/Demolition	1.9	0.4
e-Waste	0.0	0.0
Food	7.5	2.5
Gas	3.7	9.6
Glass	0.0	0.0
Hazardous	0.9	1.4
Heat	0.9	0.3
Industrial	1.9	2.9
Metals	0.0	0.0
MSW	30.8	26.9
Oil	0.0	0.0
Organic (general/unspecified)	7.5	10.1
Paper	0.0	0.0
Plant Biomass (non-waste)	0.9	0.0
Plant Biomass (waste)	5.6	6.5
Plastics	2.8	0.4
Radioactive	1.9	19.0
Rubber	0.0	0.0
Sewage/wastewater	10.3	7.1
Wood	16.8	10.9
Other	0.0	0.0
Total	100.0	100.0

Projects By Feedstock Type, July 2015



Wood and other biomass-based feedstocks account for around one third of all new investment in waste technologies, reflecting a move away from traditional power generation in many countries.



Latest Monthly Capacity

Of the 107 projects listed in July 2015, 37 also reported an annual waste capacity. This amounted to 4.9 million tonnes, equal to an average of 132,413 tonnes per project, and an average of 414 tonnes per day per project.

WtE incineration was the largest facility type in terms of capacity, amounting to 2.4 million tonnes, or 48.6% of the total. This was followed by waste processing with 1.1 million tonnes (21.3%) and recycling with just over 0.5 million tonnes (10.4%).



WtE incineration projects represented 49% of reported new or planned waste project capacity in July 2015.

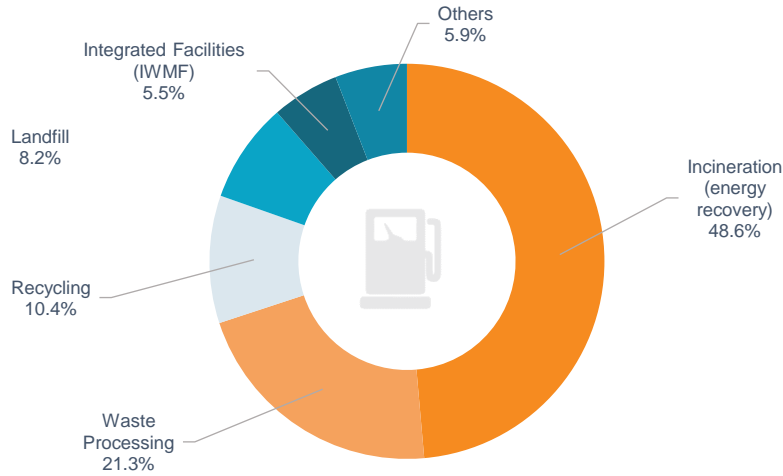
Reported Waste Capacity of Projects Listed by Facility Type (July 2015)

	Projects	With Reported Capacity	Reported Annual Capacity (tonnes)	Average Annual Capacity (tonnes)	Average Tonnes Per Day
Anaerobic Digestion	11	4	69,616	17,404	54
Biofuel	6	0	0	-	-
Biogas	8	0	0	-	-
Gasification	2	0	0	-	-
Incineration (energy recovery)	38	17	2,381,264	140,074	438
Incineration (no energy recovery)	1	1	219,000	219,000	684
Integrated Facilities (IWMF)	5	3	270,900	90,300	282
Landfill	9	1	401,500	401,500	1,255
MBT	0	0	0	-	-
Recycling	12	6	511,540	85,257	266
Waste Processing	14	5	1,045,449	209,090	653
Others	1	0	0	-	-
Total	107	37	4,899,269	132,413	414

Reported Capacity by Facility Type, % of Total (July 2015)

	% of Total Reported Capacity
Anaerobic Digestion	1.4
Biofuel	0.0
Biogas	0.0
Gasification	0.0
Incineration (energy recovery)	48.6
Incineration (no energy recovery)	4.5
Integrated Facilities (IWMF)	5.5
Landfill	8.2
MBT	0.0
Recycling	10.4
Waste Processing	21.3
Others	0.0
Total	100.0

% Capacity by Facility Type, July 2015



The Philippines is the location for a major project announced in July 2015. Over the next five years, the country is to build 16 new biomass plants, at a cost of US\$480 million.



Municipal solid waste accounted for just under 3.7 million tonnes of capacity in July 2015, equal to 74.8% of the total, and an average of 673 tonnes per project per day. The other major feedstock categories were wood and other unspecified organic materials.



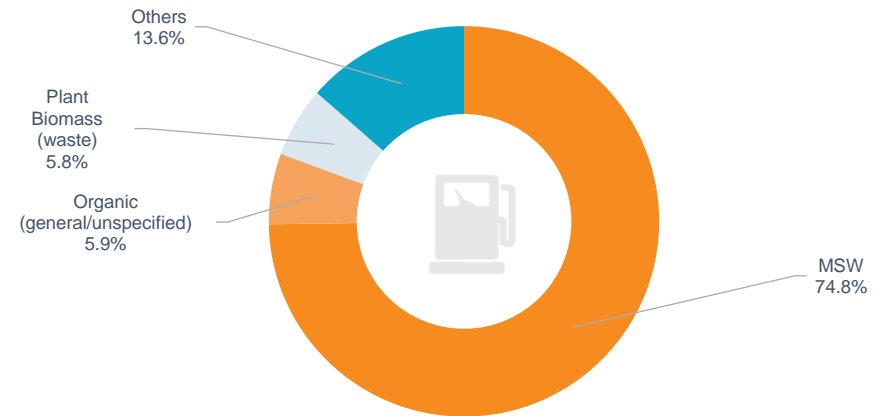
Latest Monthly Projects by Feedstock Type (July 2015)

	Projects	With Reported Capacity	Annual Capacity (tonnes)	Average Annual Capacity (tonnes)	Average Tonnes Per Day
Animal	7	0	0	-	-
Clinical	0	0	0	-	-
Construction/Demolition	2	1	36,287	36,287	113
e-Waste	0	0	0	-	-
Food	8	5	102,335	20,467	64
Gas	4	0	0	-	-
Glass	0	0	0	-	-
Hazardous	1	1	30,000	30,000	94
Heat	1	0	0	-	-
Industrial	2	1	40,020	40,020	125
Metals	0	0	0	-	-
MSW	33	17	3,662,670	215,451	673
Oil	0	0	0	-	-
Organic (general/unspecified)	8	2	287,500	143,750	449
Paper	0	0	0	-	-
Plant Biomass (non-waste)	1	0	0	-	-
Plant Biomass (waste)	6	2	284,000	142,000	444
Plastics	3	2	38,287	19,144	60
Radioactive	2	0	0	-	-
Rubber	0	0	0	-	-
Sewage/wastewater	11	1	219,000	219,000	684
Wood	18	5	199,170	39,834	124
Other	0	0	0	-	-
Total	107	37	4,899,269	132,413	414

Reported Capacity by Feedstock, % of Total (July 2015)

	Capacity as % of Total
Animal	-
Clinical	-
Construction/Demolition	0.7
e-Waste	-
Food	2.1
Gas	-
Glass	-
Hazardous	0.6
Heat	-
Industrial	0.8
Metals	-
MSW	74.8
Oil	-
Organic (general/unspecified)	5.9
Paper	-
Plant Biomass (non-waste)	-
Plant Biomass (waste)	5.8
Plastics	0.8
Radioactive	-
Rubber	-
Sewage/wastewater	4.5
Wood	4.1
Other	-
Total	100.0

% Capacity by Feedstock, July 2015



Municipal Solid Waste accounted for 74.8% of waste capacity in projects covered in the Business Finder database in July 2015.



Latest Power Generation

In July 2015, an estimate of annual power generation was available for 24 projects. This amounted to 526 MW in total. 95.3% of this was from WtE incineration with the remainder coming from gasification and AD/biogas.

Incineration amounted to 38 projects with total reported generation of 502 MW, equal to 25 MW per plant. The most significant projects were a range of biomass plants announced in China and the Philippines, and a 50 MW WtE plant in Korea.



WtE incineration, whether standalone or as part of an integrated facility, continued to dominate the reported power generation of projects in July 2015.

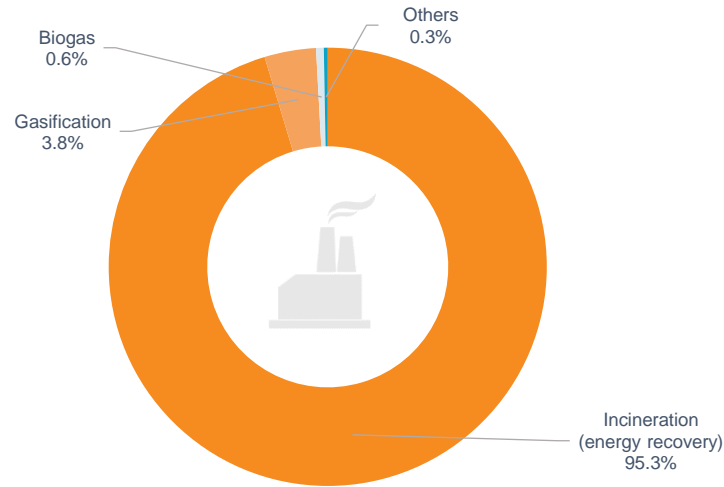
Reported Power Generation of Projects Listed by Facility Type (July 2015)

	Projects	With Reported MW Generation	Reported Annual MW Generation	Average MW Generation
Anaerobic Digestion	11	1	2	2
Biofuel	6	0	0	-
Biogas	8	2	3	2
Gasification	2	1	20	20
Incineration (energy recovery)	38	20	502	25
Incineration (no energy recovery)	1	0	0	-
Integrated Facilities (IWMF)	5	0	0	-
Landfill	9	0	0	-
MBT	0	0	0	-
Recycling	12	0	0	-
Waste Processing	14	0	0	-
Others	1	0	0	-
Total	107	24	526	22

Latest Reported Power Generation by Facility Type, % of Total (July 2015)

	% of Total Projects
Anaerobic Digestion	0.3
Biofuel	-
Biogas	0.6
Gasification	3.8
Incineration (energy recovery)	95.3
Incineration (no energy recovery)	-
Integrated Facilities (IWMF)	-
Landfill	-
MBT	-
Recycling	-
Waste Processing	-
Others	-
Total	100.0

% MW Generation by Facility Type, Jul 2015



In July 2015, 68.8% of power generation was through wood-fuelled or other organic material facilities. Municipal solid waste accounted for 18.6% of the total.



Latest Reported Power Generation of Projects Listed by Feedstock Type (July 2015)

	Projects	With Reported MW Generation	Reported Annual MW Generation	Average MW Generation
Animal	7	1	1	1
Clinical	0	0	0	-
Construction/Demolition	2	0	0	-
e-Waste	0	0	0	-
Food	8	0	0	-
Gas	4	0	0	-
Glass	0	0	0	-
Hazardous	1	0	0	-
Heat	1	0	0	-
Industrial	2	0	0	-
Metals	0	0	0	-
MSW	33	6	98	16
Oil	0	0	0	-
Organic (general/unspecified)	8	3	202	67
Paper	0	0	0	-
Plant Biomass (non-waste)	1	1	32	32
Plant Biomass (waste)	6	3	34	11
Plastics	3	0	0	-
Radioactive	2	0	0	-
Rubber	0	0	0	-
Sewage/wastewater	11	0	0	-
Wood	18	10	160	16
Other	0	0	0	-
Total	107	24	526	22

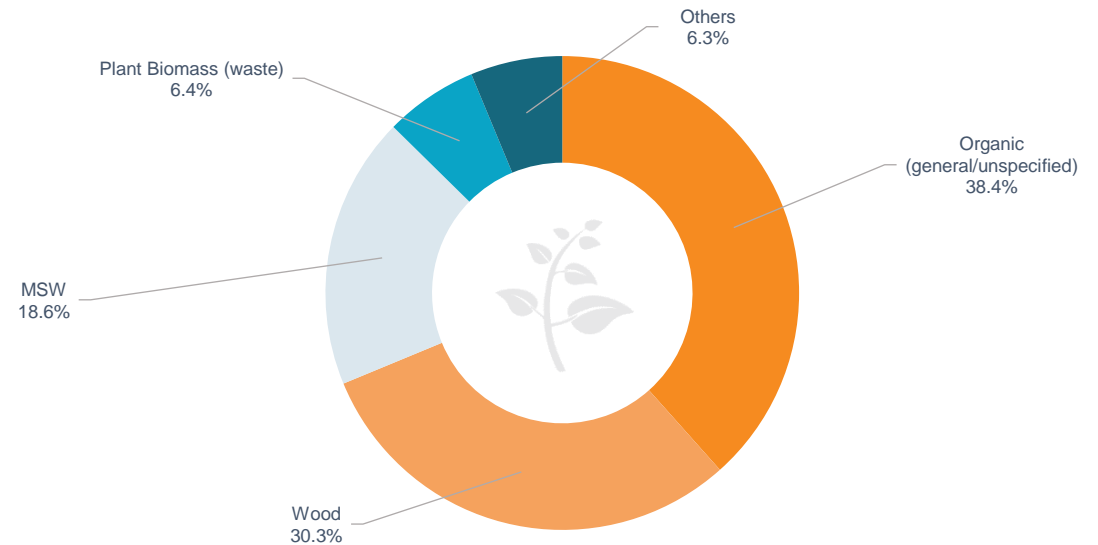
Latest Reported Power Generation by Feedstock Type, % of Total (July 2015)

	MW Generation as % of Total
Animal	0.2
Clinical	-
Construction/Demolition	-
e-Waste	-
Food	-
Gas	-
Glass	-
Hazardous	-
Heat	-
Industrial	-
Metals	-
MSW	18.6
Oil	-
Organic (general/unspecified)	38.4
Paper	-
Plant Biomass (non-waste)	6.1
Plant Biomass (waste)	6.4
Plastics	-
Radioactive	-
Rubber	-
Sewage/wastewater	-
Wood	30.3
Other	-
Total	100.0

Wood-based materials - whether waste products or grown specially - are increasingly being used as a fuel for providing domestic power for heat and light.



% MW Generation by Feedstock Type, July 2015



Latest Country Focus

The USA and China were the leading countries in July 2015 in terms of projects reported, with 13 each. These were followed by the UK with ten and Japan with eight.

In terms of reported value, the Philippines was the leader, with US\$480 million or 21.2% of the total. This was followed by Japan with US\$377 million or 16.7%, and China with US\$223 million or 9.9%.



Significant waste investments occur not only in developed markets, but across the developing world.

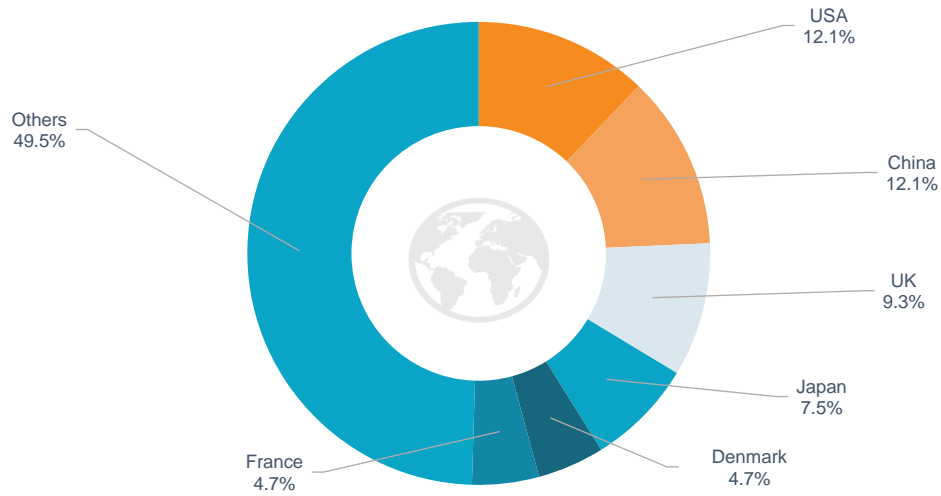
Top Ten Countries (number of projects listed), July 2015

	Projects	% of Total
USA	13	12.1
China	13	12.1
UK	10	9.3
Japan	8	7.5
Denmark	5	4.7
France	5	4.7
India	5	4.7
Thailand	4	3.7
Philippines	3	2.8
Sweden	3	2.8
Subtotal	69	64.5
Others	38	35.5
Total	107	100.0

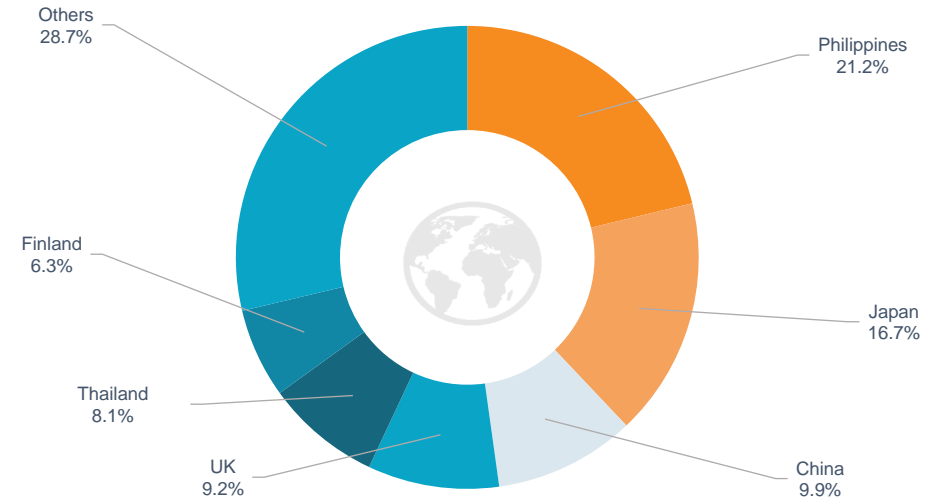
Top Ten Countries (value of projects listed), July 2015

	US\$ millions	% of Total
Philippines	480	21.2
Japan	377	16.7
China	223	9.9
UK	208	9.2
Thailand	182	8.1
Finland	141	6.3
France	123	5.5
Belgium	110	4.9
USA	65	2.9
India	59	2.6
Subtotal	1,968	87.1
Others	292	12.9
Total	2,260	100.0

Leading Countries, Number of Projects, July 2015



Leading Countries, Value of Projects, July 2015



Completion Date Focus

Of the 107 projects reported on in June 2015, 52 give an indication of their likely completion date. There are 25 projects due to complete by the end of 2015, with a combined reported value of US\$66.1 million. A further 12 projects are due to complete during 2016, and a further 15 in 2017 or beyond.

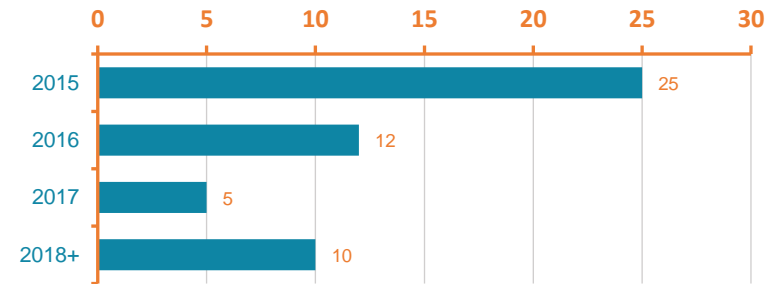


Once work starts, the average project takes around 18 months to become operational. Most, however have on-going operational requirements for much longer.

Projects by Reported Completion Date (July 2015)

	Number of Projects	Value (US\$ millions)
Q1 2014	0	-
Q2 2014	0	-
Q3 2014	0	-
Q4 2014	0	-
Q1 2015	0	-
Q2 2015	11	33.3
Q3 2015	8	11.3
Q4 2015	6	21.4
Q1 2016	3	6.5
Q2 2016	3	0.1
Q3 2016	2	60.1
Q4 2016	4	122.2
Q1 2017	2	47.9
Q2 2017	1	108.6
Q3 2017	1	12.7
Q4 2017	1	13.3
2018+	10	989.5

Projects By Reported Year of Completion



Values By Reported Year of Completion (US\$m)

