

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 August 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
- Latest Country Focus Top Ten Countries with number and value of projects listed
- 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

Andy Crofts

Editor & Chief Analyst

andy.crofts@acucomm.net



Contents

Projects this month (August 2015)	1
Latest Monthly Capacity	6
Latest Power Generation	9
Latest Country Focus	12
Completion Date Focus	14

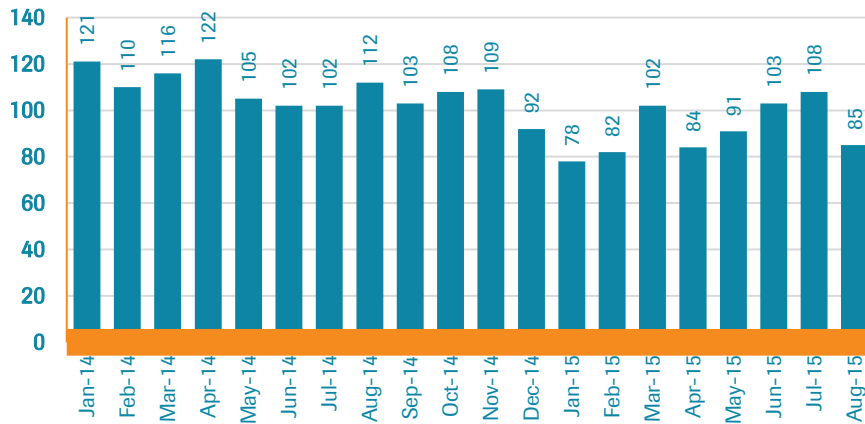


Projects This Month: August 2015

Overview

AcuComm reported on 85 new waste projects in August 2015. This takes the annual number (since September 2014) to 1,145, and the total overall since January 2014 to 2,035.

Number of Projects by Month

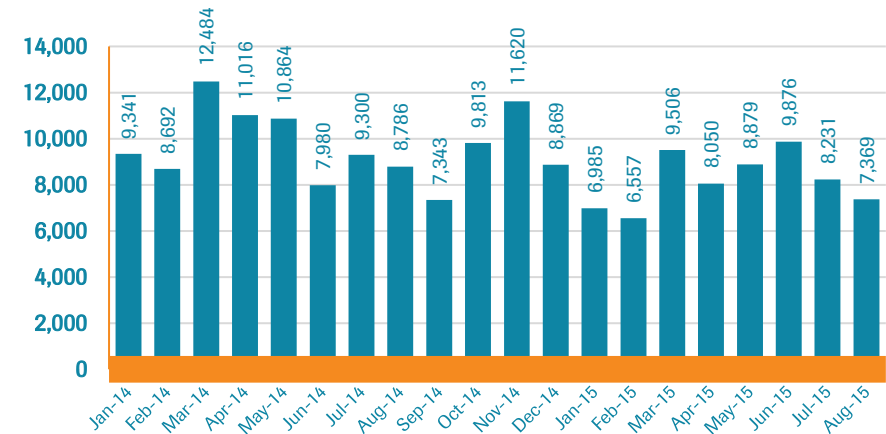


The total estimated value of these projects is US\$7,369 million. This takes the total estimated value of projects reported since September 2014 to US\$103,098 million. The average estimated value of a waste project over this period is US\$90 million.



Each new waste project represents on-going investment of an average of around US\$90 million.

Estimated Total Value of Projects (US\$m)



Incineration with energy recovery projects form the largest number in August 2015, accounting for 19, or 22.4% of the total each. This was followed by recycling projects (16 projects, or 18.8%) and landfill/waste processing (10 projects, or 11.8% each).



Incineration with energy recovery is also the leading facility type by estimated value, at US\$1,757 million, or 23.8% of the total. This was followed by biofuels with US\$744 million, or 10.1% of the total, and waste processing with US\$694 million, or 9.4%.

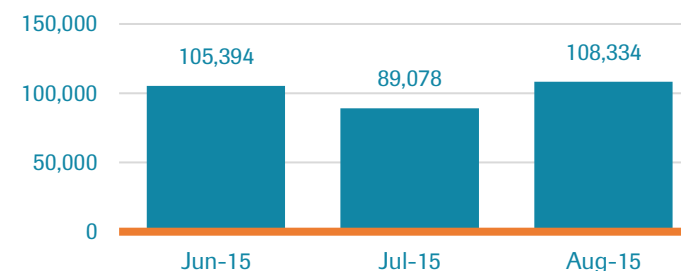
Quarterly Project Data Comparison

Key Indicators for June 2015 to August 2015

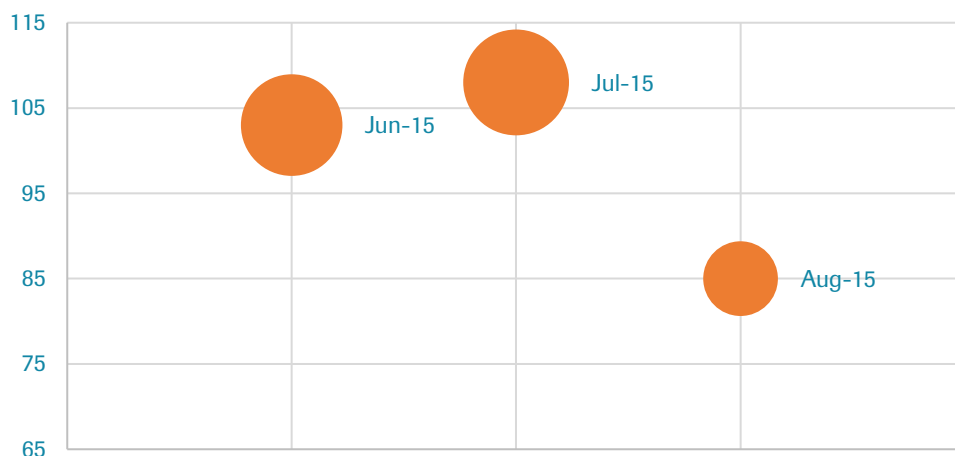
	Jun-15	Jul-15	Aug-15	Quarterly Total
Number of projects	103	108	85	296
Total estimated value (US\$ millions)	9,876	8,231	7,369	25,476
Average value (US\$ millions)	96	76	87	86
Reported waste capacity (tonnes)	4,848,109	4,899,269	4,333,355	14,080,733
Average annual capacity per project (tonnes)	105,394	89,078	108,334	99,863
Reported power generation (MW)	546	526	208	1,279
Average MW per project	20	22	11	18

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.

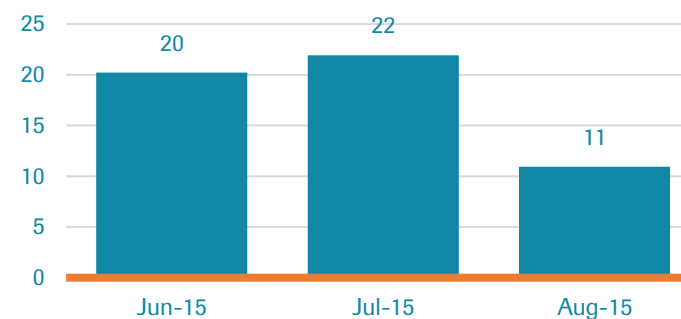
Average annual capacity per project (tonnes)



Projects by Number and Estimated US\$ Value



Average MW per project



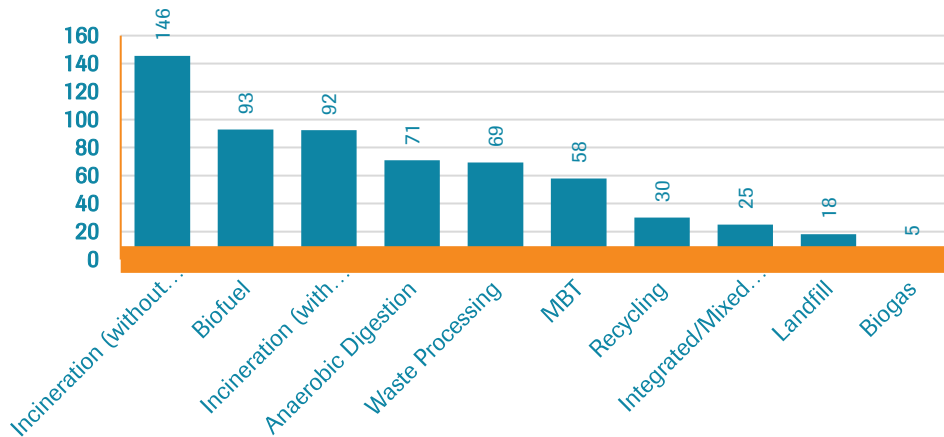
Latest Monthly Projects by Facility Type (August 2015)

	Projects	With Value (US\$m)	Reported Value	Total Estimated Value	Average value
Anaerobic Digestion	9	0	0	639	71
Biofuel	8	3	149	744	93
Biogas	2	2	11	11	5
Gasification	0	0	0	0	-
Incineration (energy recovery)	19	11	683	1,757	92
Incineration (no energy recovery)	3	1	22	437	146
Integrated Facilities (IWMF)	1	1	25	25	25
Landfill	10	7	101	181	18
MBT	2	1	12	116	58
Recycling	16	9	73	480	30
Waste Processing	10	5	263	694	69
Others	5	0	0	2,286	457
Total	85	40	1,340	7,369	87

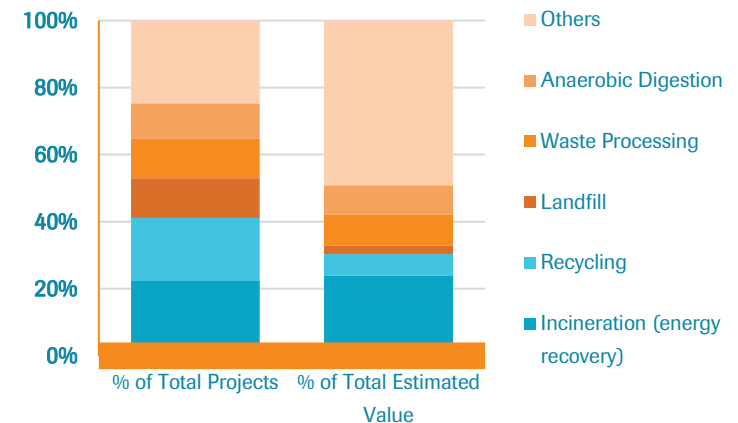
Latest Monthly Projects by Facility Type % of Total (August 2015)

	% of Total Projects	% of Total Estimated Value
Anaerobic Digestion	10.6	8.7
Biofuel	9.4	10.1
Biogas	2.4	0.1
Gasification	0.0	0.0
Incineration (energy recovery)	22.4	23.8
Incineration (no energy recovery)	3.5	5.9
Integrated Facilities (IWMF)	1.2	0.3
Landfill	11.8	2.5
MBT	2.4	1.6
Recycling	18.8	6.5
Waste Processing	11.8	9.4
Others	5.9	31.0
Total	100.0	100.0

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



Projects By Facility Type, Aug 2015



In terms of waste feedstock type, municipal solid waste (MSW) was the leading category in August 2015. MSW accounted for 27 projects (31.8% of the total) with an estimated value of US\$1,686 million (22.9% of the total).



Latest Monthly Projects by Feedstock Type (August 2015)

	Projects	With Value (US\$m)	Reported Value (US\$m)	Total Estimated Value	Average value (US\$m)
Animal	2	1	0	30	15
Clinical	0	0	0	0	-
Construction/Demolition	4	1	3	125	31
e-Waste	3	1	2	93	31
Food	2	0	0	46	23
Gas	8	2	10	2,031	254
Glass	0	0	0	0	-
Hazardous	2	1	9	118	59
Heat	0	0	0	0	-
Industrial	4	2	250	734	183
Metals	2	2	25	25	12
MSW	27	16	617	1,686	62
Oil	2	1	9	128	64
Organic (general/unspecified)	5	1	2	406	81
Paper	0	0	0	0	-
Plant Biomass (non-waste)	1	0	0	119	119
Plant Biomass (waste)	8	3	150	653	82
Plastics	2	2	26	26	13
Radioactive	0	0	0	0	-
Rubber	2	2	14	14	7
Sewage/wastewater	2	1	2	38	19
Wood	6	3	208	555	92
Other	3	1	13	542	181
Total	85	40	1,340	7,369	87

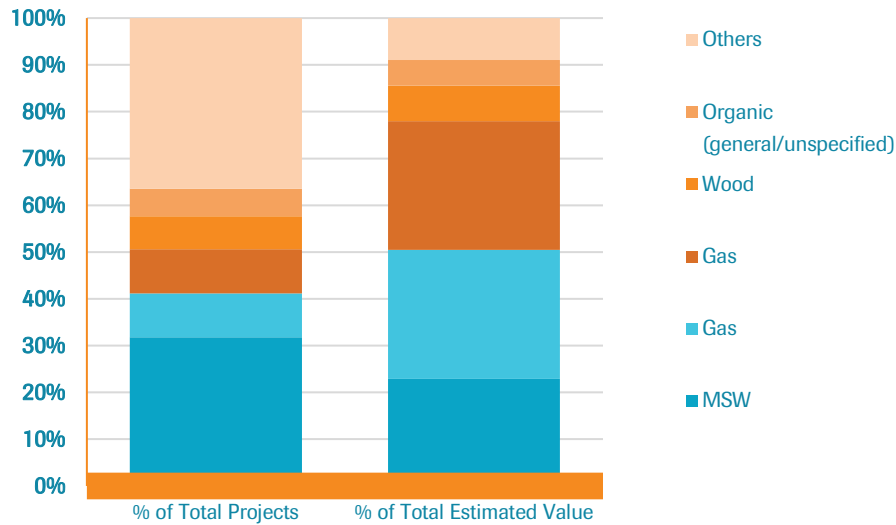
Gas and waste plant biomass were the other principal feedstocks in August 2015. Gas accounted for eight projects, with an estimated value of US\$2,031 million, and biomass also accounted for eight projects, equal to US\$653 million.



Latest Monthly Projects by Feedstock Type (% of Total)

	% of Total Projects	% of Total Estimated Value
Animal	2.4	0.4
Clinical	0.0	0.0
Construction/Demolition	4.7	1.7
e-Waste	3.5	1.3
Food	2.4	0.6
Gas	9.4	27.6
Glass	0.0	0.0
Hazardous	2.4	1.6
Heat	0.0	0.0
Industrial	4.7	10.0
Metals	2.4	0.3
MSW	31.8	22.9
Oil	2.4	1.7
Organic (general/unspecified)	5.9	5.5
Paper	0.0	0.0
Plant Biomass (non-waste)	1.2	1.6
Plant Biomass (waste)	9.4	8.9
Plastics	2.4	0.4
Radioactive	0.0	0.0
Rubber	2.4	0.2
Sewage/wastewater	2.4	0.5
Wood	7.1	7.5
Other	3.5	7.4
Total	100.0	100.0

Projects By Feedstock Type, August 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 85 projects listed in August 2015, 24 also reported an annual waste capacity. This amounted to 4.3 million tonnes, equal to an average of 180,556 tonnes per project, and an average of 564 tonnes per day per project.

Landfill was the largest facility type in terms of capacity, amounting to 2.7 million tonnes, or 62.8% of the total. This was followed by WtE incineration with 0.7 million tonnes (17.2%) and recycling with just under 0.5 million tonnes (11.2%).



Landfill represented 63% of reported new or planned waste capacity in August 2015, due to a major new industrial project in Joliet, IL, USA.

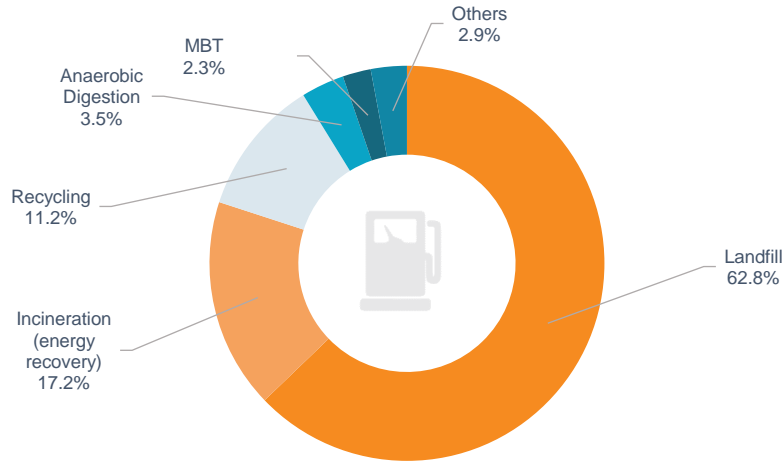
Reported Waste Capacity of Projects Listed by Facility Type (August 2015)

	Projects	With Reported Capacity	Reported Annual Capacity (tonnes)	Average Annual Capacity (tonnes)	Average Tonnes Per Day
Anaerobic Digestion	9	5	153,220	30,644	96
Biofuel	8	1	27,216	27,216	85
Biogas	2	0	0	-	-
Gasification	0	0	0	-	-
Incineration (energy recovery)	19	7	745,621	106,517	333
Incineration (no energy recovery)	3	2	44,530	22,265	70
Integrated Facilities (IWMF)	1	0	0	-	-
Landfill	10	1	2,721,555	2,721,555	8,505
MBT	2	1	100,000	100,000	313
Recycling	16	5	485,215	97,043	303
Waste Processing	10	2	55,998	27,999	87
Others	5	0	0	-	-
Total	85	24	4,333,355	180,556	564

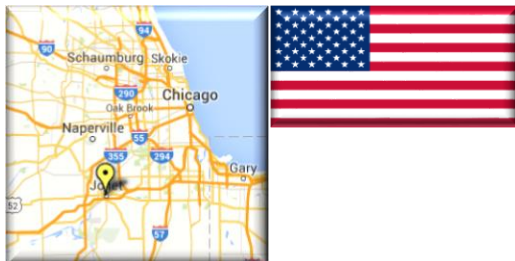
Reported Capacity by Facility Type, % of Total (August 2015)

	% of Total Reported Capacity
Anaerobic Digestion	3.5
Biofuel	0.6
Biogas	0.0
Gasification	0.0
Incineration (energy recovery)	17.2
Incineration (no energy recovery)	1.0
Integrated Facilities (IWMF)	0.0
Landfill	62.8
MBT	2.3
Recycling	11.2
Waste Processing	1.3
Others	0.0
Total	100.0

% Capacity by Facility Type, August 2015



Waste Management Inc's **Joliet landfill project** was approved in July 2015 and is due to open in 2018. It will accept soils, industrial waste and construction/demolition waste.



Industrial waste accounted for just over 2.7 million tonnes of capacity in August 2015, equal to 62.8% of the total, and an average of 8,505 tonnes per day. The other major feedstock categories were MSW and food waste.



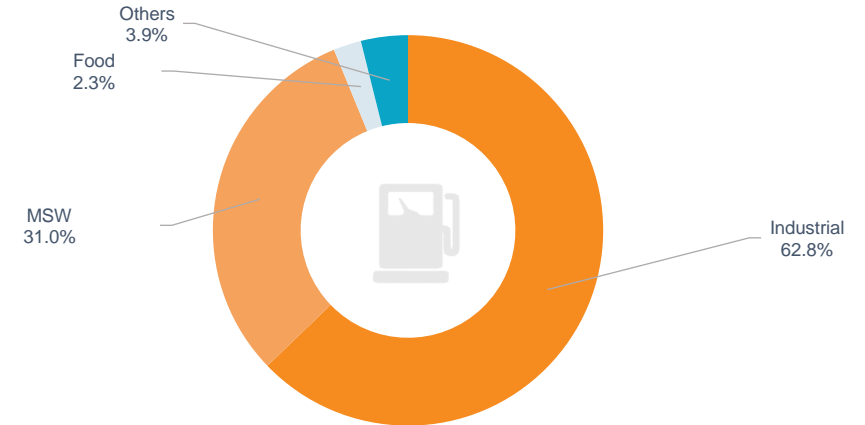
Latest Monthly Projects by Feedstock Type (August 2015)

	Projects	With Reported Capacity	Annual Capacity (tonnes)	Average Annual Capacity (tonnes)	Average Tonnes Per Day
Animal	2	0	0	-	-
Clinical	0	0	0	-	-
Construction/Demolition	4	1	30,000	30,000	94
e-Waste	3	0	0	-	-
Food	2	1	100,000	100,000	313
Gas	8	0	0	-	-
Glass	0	0	0	-	-
Hazardous	2	0	0	-	-
Heat	0	0	0	-	-
Industrial	4	1	2,721,555	2,721,555	8,505
Metals	2	0	0	-	-
MSW	27	13	1,343,364	103,336	323
Oil	2	0	0	-	-
Organic (general/unspecified)	5	2	37,000	18,500	58
Paper	0	0	0	-	-
Plant Biomass (non-waste)	1	0	0	-	-
Plant Biomass (waste)	8	2	16,220	8,110	25
Plastics	2	0	0	-	-
Radioactive	0	0	0	-	-
Rubber	2	2	38,000	19,000	59
Sewage/wastewater	2	0	0	-	-
Wood	6	2	47,216	23,608	74
Other	3	0	0	-	-
Total	85	24	4,333,355	180,556	564

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

	Capacity as % of Total
Animal	-
Clinical	-
Construction/Demolition	0.7
e-Waste	-
Food	2.3
Gas	-
Glass	-
Hazardous	-
Heat	-
Industrial	62.8
Metals	-
MSW	31.0
Oil	-
Organic (general/unspecified)	0.9
Paper	-
Plant Biomass (non-waste)	-
Plant Biomass (waste)	0.4
Plastics	-
Radioactive	-
Rubber	0.9
Sewage/wastewater	-
Wood	1.1
Other	-
Total	100.0

% Capacity by Feedstock, August 2015



Municipal Solid Waste accounted for 31.0% of waste capacity in projects covered in the Business Finder database in August 2015.



Latest Power Generation

In August 2015, an estimate of annual power generation was available for 19 projects. This amounted to 208 MW in total. 77.3% of this was from WtE incineration with the remainder coming from AD/biogas and landfill gas.

Incineration amounted to nine projects with total reported generation of 160 MW, equal to 18 MW per plant. The most significant projects were biomass plants announced in the USA (58 MW) and Poland (50 MW), and a 32.6 MW WtE plant in Italy.



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

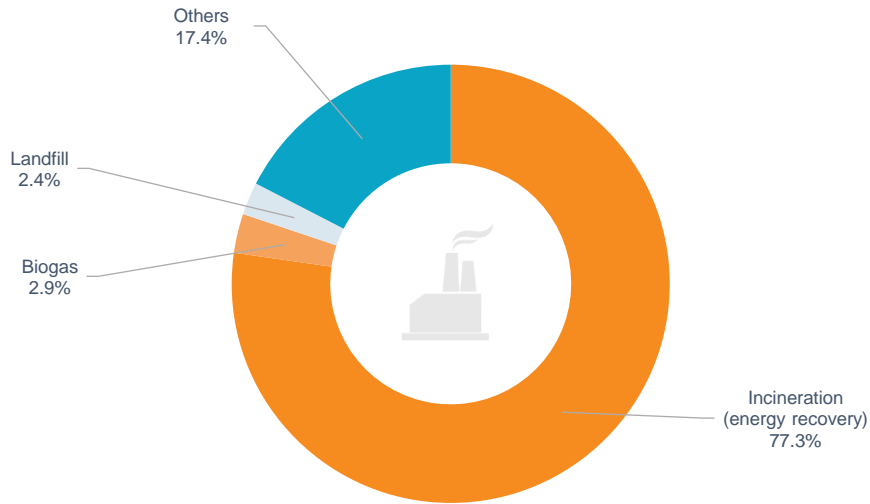
Reported Power Generation of Projects Listed by Facility Type (August 2015)

	Projects	With Reported MW Generation	Reported Annual MW Generation	Average MW Generation
Anaerobic Digestion	9	4	18	5
Biofuel	8	0	0	-
Biogas	2	1	6	6
Gasification	0	0	0	-
Incineration (energy recovery)	19	9	160	18
Incineration (no energy recovery)	3	0	0	-
Integrated Facilities (IWMF)	1	0	0	-
Landfill	10	1	5	5
MBT	2	0	0	-
Recycling	16	0	0	-
Waste Processing	10	0	0	-
Others	5	4	18	4
Total	85	19	208	11

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

	% of Total Projects
Anaerobic Digestion	8.8
Biofuel	-
Biogas	2.9
Gasification	-
Incineration (energy recovery)	77.3
Incineration (no energy recovery)	-
Integrated Facilities (IWMF)	-
Landfill	2.4
MBT	-
Recycling	-
Waste Processing	-
Others	8.6
Total	100.0

% MW Generation by Facility Type, Aug 2015



In August 2015, 77.3% of proposed power generation was through WtE incineration. This was followed by biogas and landfill.



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

	Projects	With Reported MW Generation	Reported Annual MW Generation	Average MW Generation
Animal	2	0	0	-
Clinical	0	0	0	-
Construction/Demolition	4	0	0	-
e-Waste	3	0	0	-
Food	2	2	11	6
Gas	8	5	28	6
Glass	0	0	0	-
Hazardous	2	0	0	-
Heat	0	0	0	-
Industrial	4	0	0	-
Metals	2	0	0	-
MSW	27	5	53	11
Oil	2	0	0	-
Organic (general/unspecified)	5	2	7	3
Paper	0	0	0	-
Plant Biomass (non-waste)	1	0	0	-
Plant Biomass (waste)	8	2	50	25
Plastics	2	0	0	-
Radioactive	0	0	0	-
Rubber	2	0	0	-
Sewage/wastewater	2	0	0	-
Wood	6	2	58	29
Other	3	1	1	1
Total	85	19	208	11

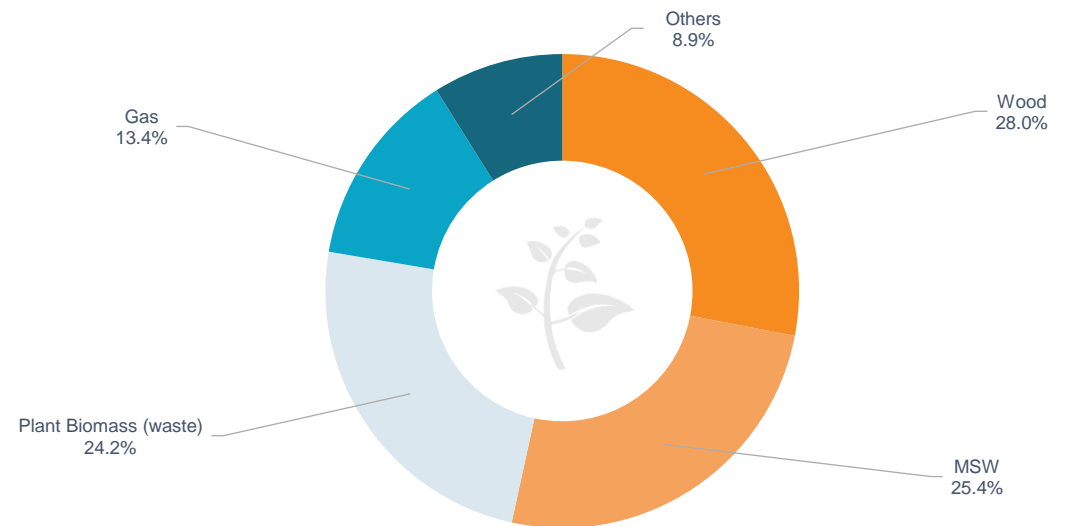
Latest Reported Power Generation by Feedstock Type, % of Total (August 2015)

	MW Generation as % of Total
Animal	-
Clinical	-
Construction/Demolition	-
e-Waste	-
Food	5.3
Gas	13.4
Glass	-
Hazardous	-
Heat	-
Industrial	-
Metals	-
MSW	25.4
Oil	-
Organic (general/unspecified)	3.1
Paper	-
Plant Biomass (non-waste)	-
Plant Biomass (waste)	24.2
Plastics	-
Radioactive	-
Rubber	-
Sewage/wastewater	-
Wood	28.0
Other	0.5
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, August 2015



Latest Country Focus

The USA and UK were the leading countries in August 2015 in terms of projects reported, with 18 and 12 respectively. These were followed by Australia with six and Japan, India and China with four apiece.

In terms of reported value, the USA was the leader, with US\$430 million or 32.0% of the total. This was followed by Japan with US\$404 million or 30.1%, and Ukraine/Poland with US\$100 million or 7.5%



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

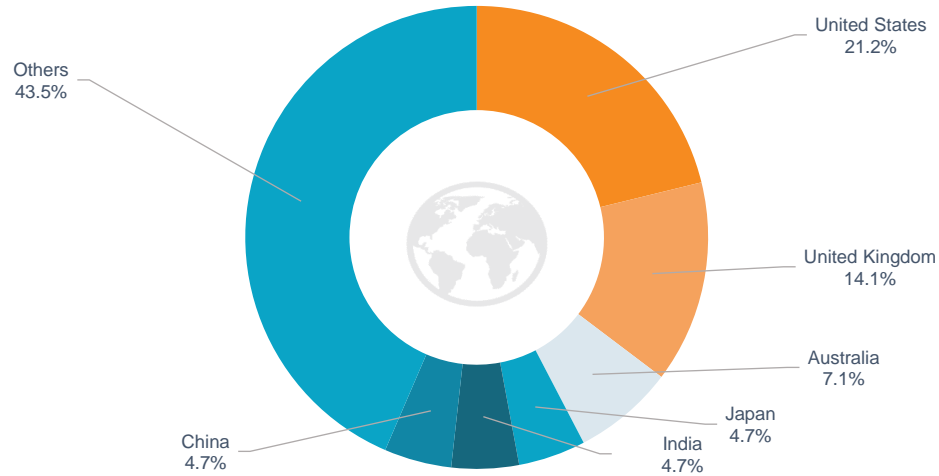
Top Ten Countries (number of projects listed), August 2015

	Projects	% of Total
United States	18	21.2
United Kingdom	12	14.1
Australia	6	7.1
Japan	4	4.7
India	4	4.7
China	4	4.7
Canada	3	3.5
France	3	3.5
Germany	3	3.5
New Zealand	2	2.4
Subtotal	59	69.4
Others	26	30.6
Total	85	100.0

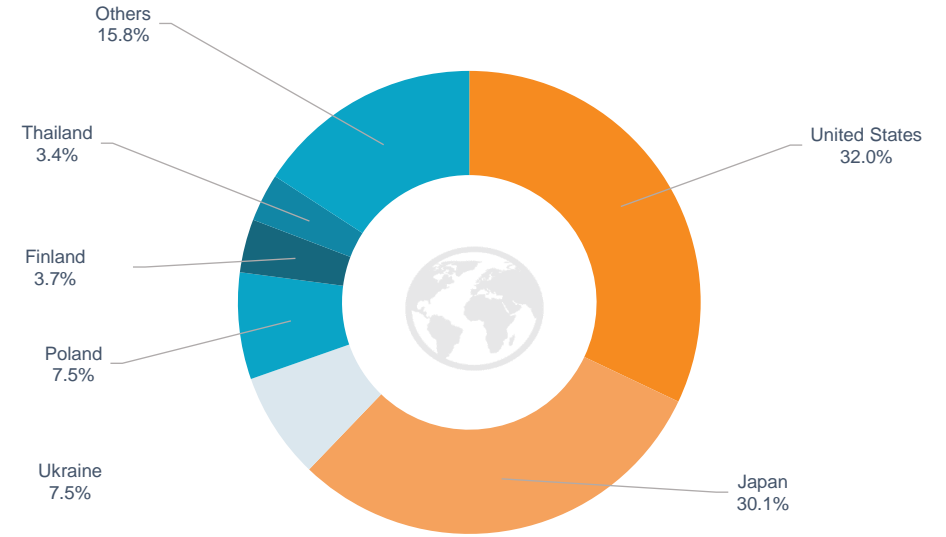
Top Ten Countries (value of projects listed), August 2015

	US\$ millions	% of Total
United States	430	32.0
Japan	404	30.1
Ukraine	100	7.5
Poland	100	7.5
Finland	50	3.7
Thailand	45	3.4
Brazil	41	3.0
China	34	2.6
Australia	34	2.5
Belarus	25	1.9
Subtotal	1,262	94.1
Others	78	5.9
Total	1,340	100.0

Leading Countries, Number of Projects, August 2015



Leading Countries, Value of Projects, August 2015



Completion Date Focus

Of the 85 projects reported on in August 2015, 45 give an indication of their likely completion date. There are 23 projects due to complete by the end of 2015, with a combined reported value of US\$36.4 million. A further seven projects are due to complete during 2016, and a further 15 in 2017 or beyond.

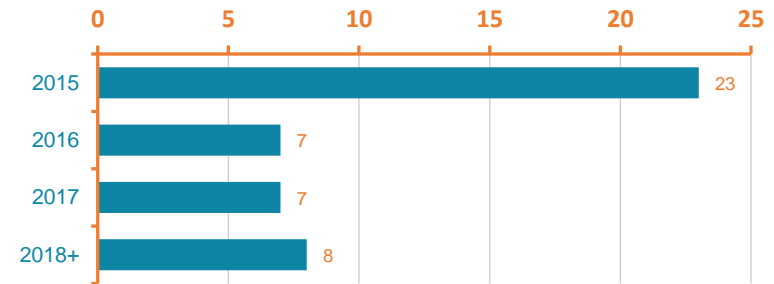


Once work starts, the average project takes around 18 months to become operational. Most, however have on-going operational requirements for much longer.

Projects by Reported Completion Date (August 2015)

	Number of Projects	Value (US\$ millions)
Q1 2014	0	-
Q2 2014	0	-
Q3 2014	0	-
Q4 2014	0	-
Q1 2015	0	-
Q2 2015	1	9.6
Q3 2015	16	22.3
Q4 2015	6	4.4
Q1 2016	3	-
Q2 2016	3	48.3
Q3 2016	1	7.4
Q4 2016	0	-
Q1 2017	2	17.8
Q2 2017	3	149.9
Q3 2017	0	-
Q4 2017	2	8.0
2018+	8	563.1

Projects By Reported Year of Completion



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

