

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 October 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

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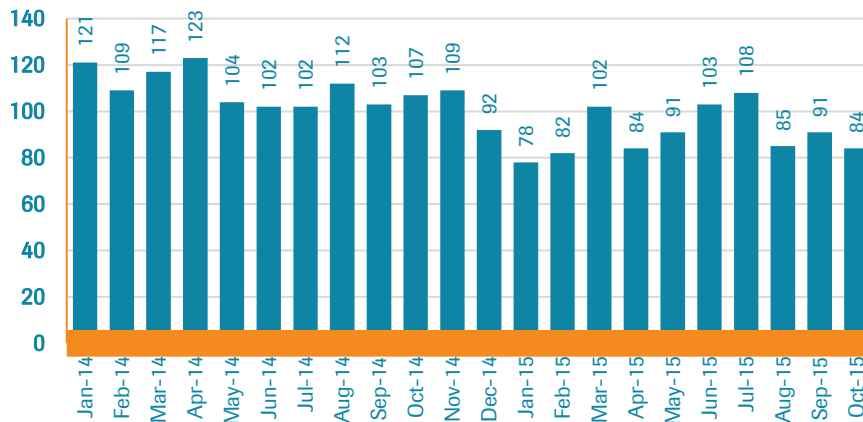


Projects This Month: October 2015

Overview

AcuComm reported on 84 new or updated waste projects in October 2015. This takes the annual number (since November 2014) to 1,109, and the total overall since January 2014 to 2,209.

Number of Projects by Month

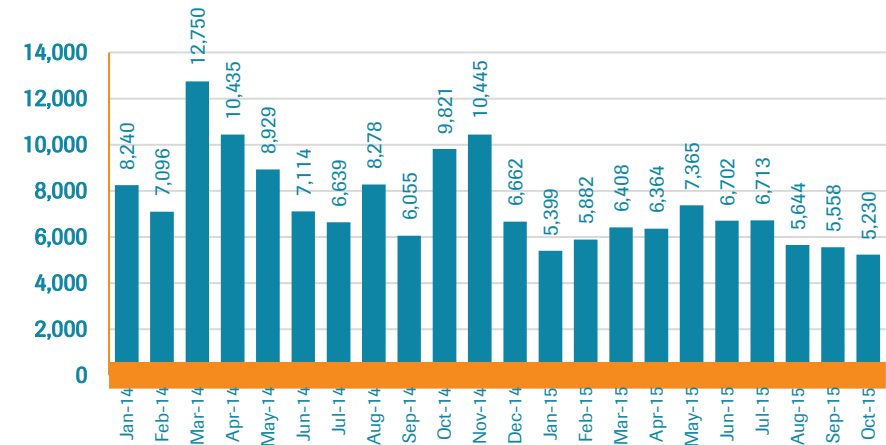


The total estimated value of these projects is US\$5,230 million. This takes the total estimated value of projects reported since November 2014 to US\$78,372 million. The average estimated value of a waste project over this period is US\$70 million.



Each new waste project represents on-going investment of an average of around US\$70 million.

Estimated Total Value of Projects (US\$m)



Incineration with energy recovery projects form the largest number in October 2015, accounting for 25, or 29.8% of the total. This was followed by anaerobic digestion (AD) projects (14 projects, or 16.7%) and recycling (12 projects, or 14.3% each).



Incineration with energy recovery is also the leading facility type by estimated value, at US\$1,768 million, or 33.8% of the total. This was followed by waste processing with US\$765 million, or 14.6% of the total, and AD with US\$751 million, or 14.4%.

Quarterly Project Data Comparison

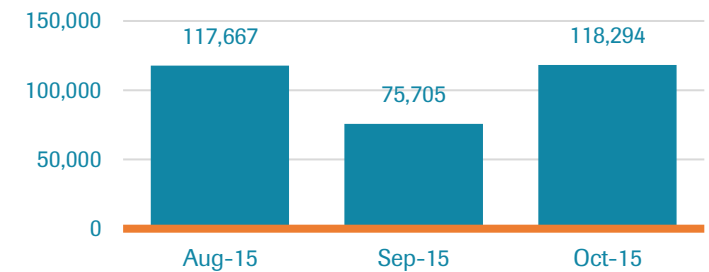
Key Indicators for August 2015 to October 2015

	Aug-15	Sep-15	Oct-15	Quarterly Total
Number of projects	85	91	84	260
Total estimated value (US\$ millions)	5,644	5,558	5,230	16,432
Average value (US\$ millions)	66	61	62	63
Reported waste capacity (tonnes)	4,706,673	2,725,395	4,968,332	12,400,400
Average annual capacity per project (tonnes)	117,667	75,705	118,294	105,088
Reported power generation (MW)	208	803	465	1,475
Average MW per project	11	22	22	19

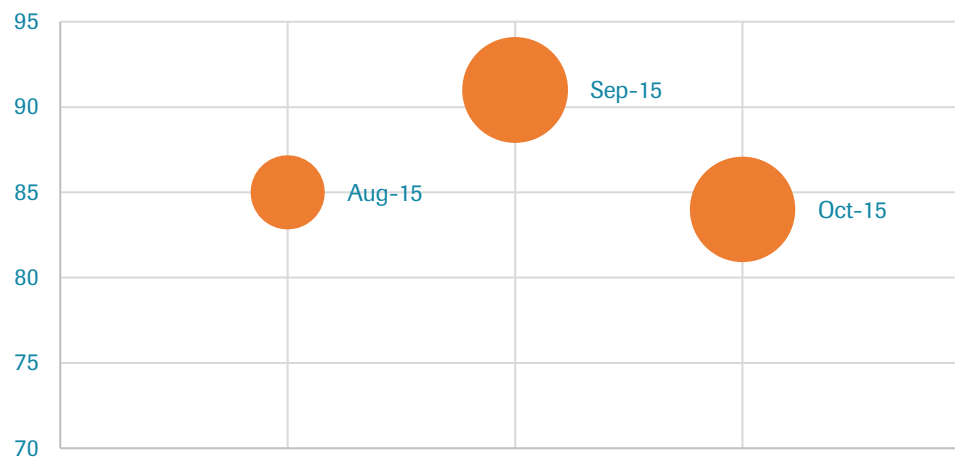
This page compares data on projects reported in the current month, compared with the previous two months. This provides a comparison of the most recent data, and also a quarterly total. The size of the circles in the bottom left graph represents the total estimated project values, as reported in the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

Average annual capacity per project

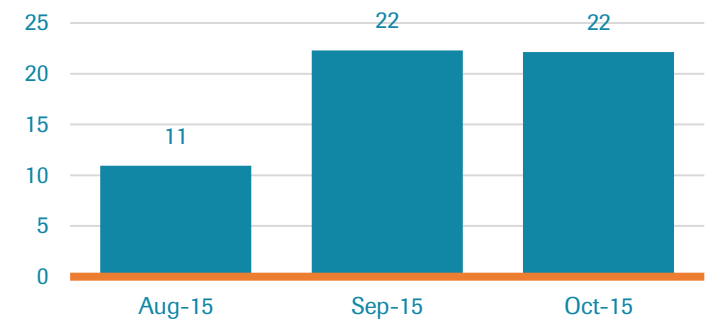
(tonnes)



Projects by Number and Estimated US\$ Value



Average MW per project



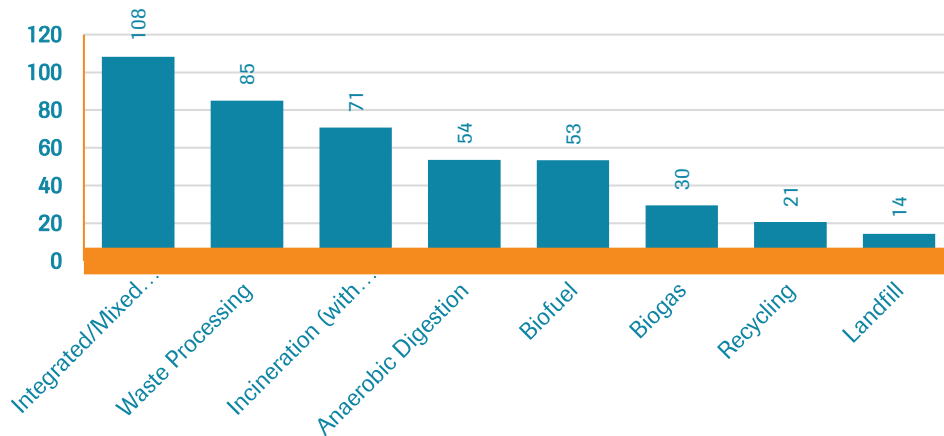
Latest Monthly Projects by Facility Type (October 2015)

Facility Type	Projects	With Value (US\$m)	Reported Value	Total Estimated Value	Average value
Anaerobic Digestion	14	3	477	751	54
Biofuel	3	1	60	160	53
Biogas	3	1	35	89	30
Gasification	0	0	0	0	-
Incineration (energy recovery)	25	18	1,026	1,768	71
Incineration (no energy recovery)	0	0	0	0	-
Integrated Facilities (IWMF)	5	3	164	542	108
Landfill	8	4	23	115	14
MBT	0	0	0	0	-
Recycling	12	6	103	248	21
Waste Processing	9	2	7	765	85
Others	5	4	145	793	159
Total	84	42	2,039	5,230	62

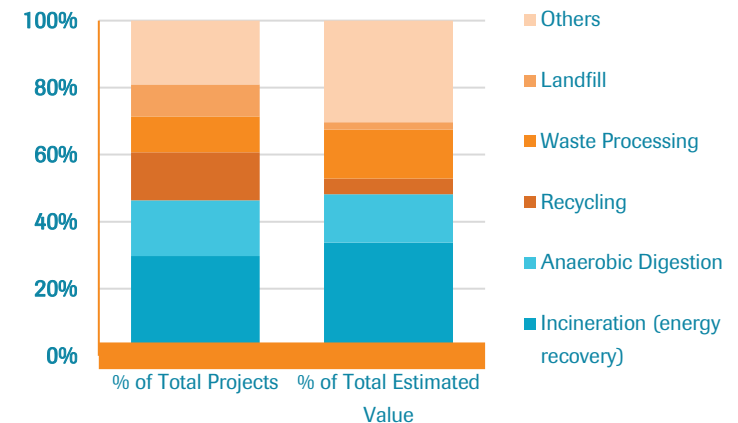
Latest Monthly Projects by Facility Type % of Total (October 2015)

Facility Type	% of Total Projects	% of Total Estimated Value
Anaerobic Digestion	16.7	14.4
Biofuel	3.6	3.1
Biogas	3.6	1.7
Gasification	0.0	0.0
Incineration (energy recovery)	29.8	33.8
Incineration (no energy recovery)	0.0	0.0
Integrated Facilities (IWMF)	6.0	10.4
Landfill	9.5	2.2
MBT	0.0	0.0
Recycling	14.3	4.7
Waste Processing	10.7	14.6
Others	6.0	15.2
Total	100.0	100.0

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



Projects By Facility Type, Oct 2015



In terms of waste feedstock type, MSW was the leading category in October 2015. MSW accounted for 25 projects (29.8% of the total) with an estimated value of US\$1,275 million (24.4% of the total).



Wood was the other principal feedstocks in October 2015. This accounted for 11 projects, equal to US\$843million or 16.1% of the estimated value.



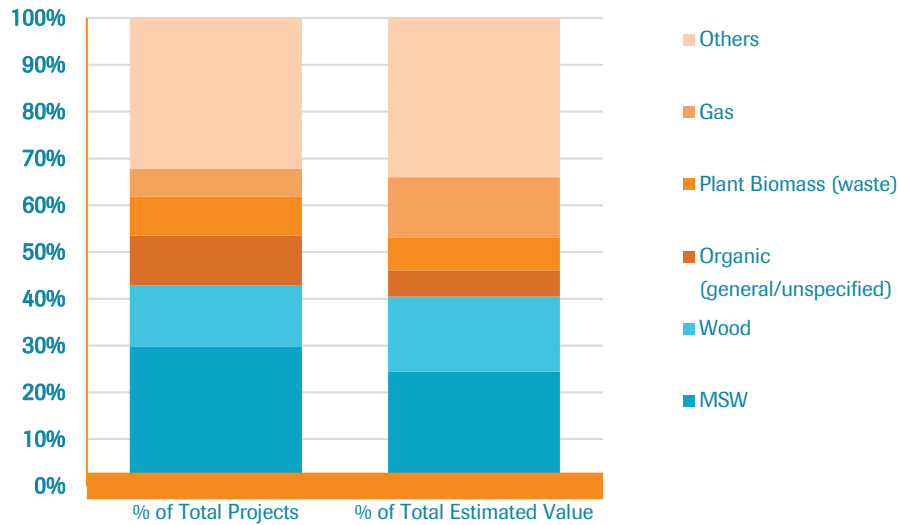
Latest Monthly Projects by Feedstock Type (October 2015)

	Projects	With Value (US\$m)	Reported Value (US\$m)	Total Estimated Value	Average value (US\$m)
Animal	3	1	20	49	16
Clinical	0	0	0	0	-
Construction/Demolition	2	0	0	51	25
e-Waste	2	0	0	114	57
Food	1	0	0	188	188
Gas	5	4	29	677	135
Glass	0	0	0	0	-
Hazardous	0	0	0	0	-
Heat	2	2	48	48	24
Industrial	1	0	0	25	25
Metals	2	1	31	73	37
MSW	25	15	530	1,275	51
Oil	2	0	0	100	50
Organic (general/unspecified)	9	2	44	291	32
Paper	0	0	0	0	-
Plant Biomass (non-waste)	1	0	0	22	22
Plant Biomass (waste)	7	5	263	366	52
Plastics	3	1	15	49	16
Radioactive	1	0	0	460	460
Rubber	1	0	0	28	28
Sewage/wastewater	5	3	477	568	114
Wood	11	7	578	843	77
Other	1	1	4	4	4
Total	84	42	2,039	5,230	62

Latest Monthly Projects by Feedstock Type (% of Total)

	% of Total Projects	% of Total Estimated Value
Animal	3.6	0.9
Clinical	0.0	0.0
Construction/Demolition	2.4	1.0
e-Waste	2.4	2.2
Food	1.2	3.6
Gas	6.0	13.0
Glass	0.0	0.0
Hazardous	0.0	0.0
Heat	2.4	0.9
Industrial	1.2	0.5
Metals	2.4	1.4
MSW	29.8	24.4
Oil	2.4	1.9
Organic (general/unspecified)	10.7	5.6
Paper	0.0	0.0
Plant Biomass (non-waste)	1.2	0.4
Plant Biomass (waste)	8.3	7.0
Plastics	3.6	0.9
Radioactive	1.2	8.8
Rubber	1.2	0.5
Sewage/wastewater	6.0	10.9
Wood	13.1	16.1
Other	1.2	0.1
Total	100.0	100.0

Projects By Feedstock Type, October 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 84 projects listed in October 2015, 26 also reported an annual waste capacity. This amounted to just under 5.0 million tonnes, equal to an average of 191,090 tonnes per project, and an average of 597 tonnes per day per project.

Recycling was the largest facility type in terms of capacity, amounting to 1.9 million tonnes, or 38.0% of the total. This was followed by WtE incineration with 1.6 million tonnes (31.7%) and waste processing with just under 0.8 million tonnes (15.9%).



Recycling represented 38% of reported capacity in October 2015. The largest investment is an expansion of a metals recycling plant in Belgium.

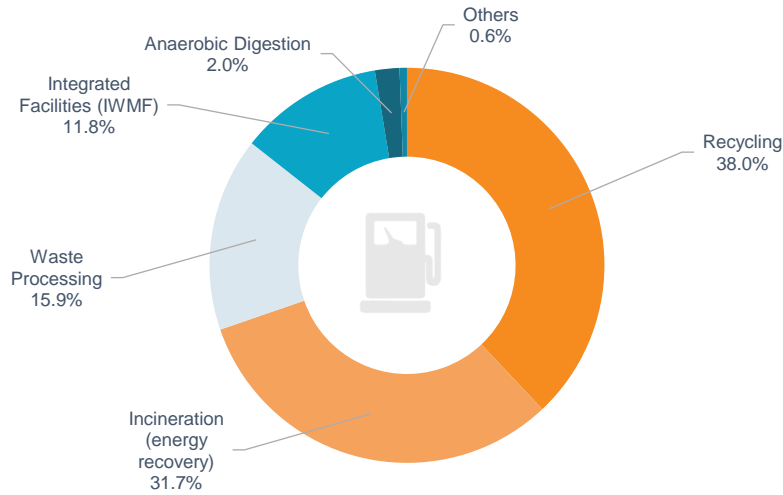
Reported Waste Capacity of Projects Listed by Facility Type (October 2015)

	Projects	With Reported Capacity	Reported Annual Capacity (tonnes)	Average Annual Capacity (tonnes)	Average Tonnes Per Day
Anaerobic Digestion	14	3	99,500	33,167	104
Biofuel	3	0	0	-	-
Biogas	3	0	0	-	-
Gasification	0	0	0	-	-
Incineration (energy recovery)	25	8	1,577,259	197,157	616
Incineration (no energy recovery)	0	0	0	-	-
Integrated Facilities (IWMF)	5	4	586,005	146,501	458
Landfill	8	0	0	-	-
MBT	0	0	0	-	-
Recycling	12	7	1,886,893	269,556	842
Waste Processing	9	3	788,675	262,892	822
Others	5	1	30,000	30,000	94
Total	84	26	4,968,332	191,090	597

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

	% of Total Reported Capacity
Anaerobic Digestion	2.0
Biofuel	0.0
Biogas	0.0
Gasification	0.0
Incineration (energy recovery)	31.7
Incineration (no energy recovery)	0.0
Integrated Facilities (IWMF)	11.8
Landfill	0.0
MBT	0.0
Recycling	38.0
Waste Processing	15.9
Others	0.6
Total	100.0

% Capacity by Facility Type, October 2015



A US\$125 million expansion to Umicore's metal recycling plant in Hoboken, Belgium, is currently nearing completion.



MSW accounted for just over 3.8 million tonnes of capacity in October 2015, equal to 77.0% of the total, and an average of 854 tonnes per day. The other major feedstock categories were plant biomass and wood.



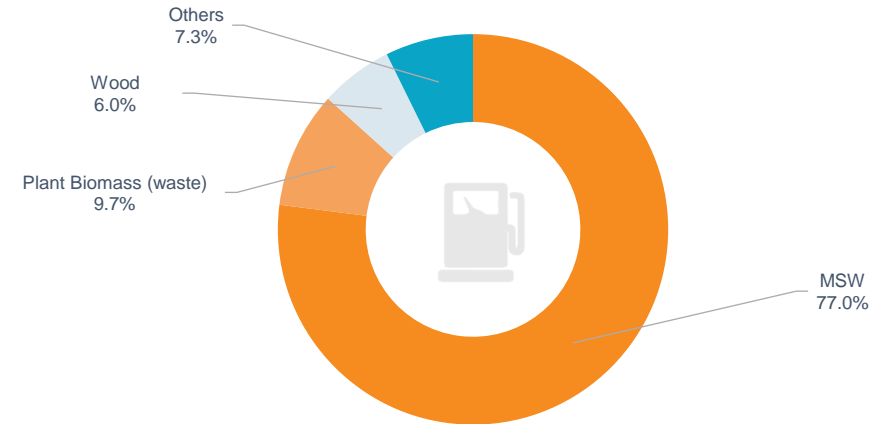
Latest Monthly Projects by Feedstock Type (October 2015)

	Projects	With Reported Capacity	Annual Capacity (tonnes)	Average Annual Capacity (tonnes)	Average Tonnes Per Day
Animal	3	2	95,359	47,680	149
Clinical	0	0	0	-	-
Construction/Demolition	2	0	0	-	-
e-Waste	2	0	0	-	-
Food	1	1	1,095	1,095	3
Gas	5	0	0	-	-
Glass	0	0	0	-	-
Hazardous	0	0	0	-	-
Heat	2	0	0	-	-
Industrial	1	0	0	-	-
Metals	2	1	130,635	130,635	408
MSW	25	14	3,826,384	273,313	854
Oil	2	0	0	-	-
Organic (general/unspecified)	9	2	49,500	24,750	77
Paper	0	0	0	-	-
Plant Biomass (non-waste)	1	0	0	-	-
Plant Biomass (waste)	7	2	480,000	240,000	750
Plastics	3	2	55,359	27,680	86
Radioactive	1	0	0	-	-
Rubber	1	0	0	-	-
Sewage/wastewater	5	0	0	-	-
Wood	11	1	300,000	300,000	938
Other	1	1	30,000	30,000	94
Total	84	26	4,968,332	191,090	597

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

	Capacity as % of Total
Animal	1.9
Clinical	-
Construction/Demolition	-
e-Waste	-
Food	0.0
Gas	-
Glass	-
Hazardous	-
Heat	-
Industrial	-
Metals	2.6
MSW	77.0
Oil	-
Organic (general/unspecified)	1.0
Paper	-
Plant Biomass (non-waste)	-
Plant Biomass (waste)	9.7
Plastics	1.1
Radioactive	-
Rubber	-
Sewage/wastewater	-
Wood	6.0
Other	0.6
Total	100.0

% Capacity by Feedstock, October 2015



Municipal Solid Waste accounted for 77.0% of waste capacity in projects covered in the Business Finder database in October 2015.



Latest Power Generation

In October 2015, an estimate of annual power generation was available for 21 projects. This amounted to 465 MW in total. 86.8% of this was from WtE incineration with the remainder coming from biofuel, AD/biogas and landfill gas.

Incineration amounted to 13 projects with total reported generation of 403 MW, equal to 31 MW per plant. The most significant projects were new biomass plants in Sweden and Belgium.



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

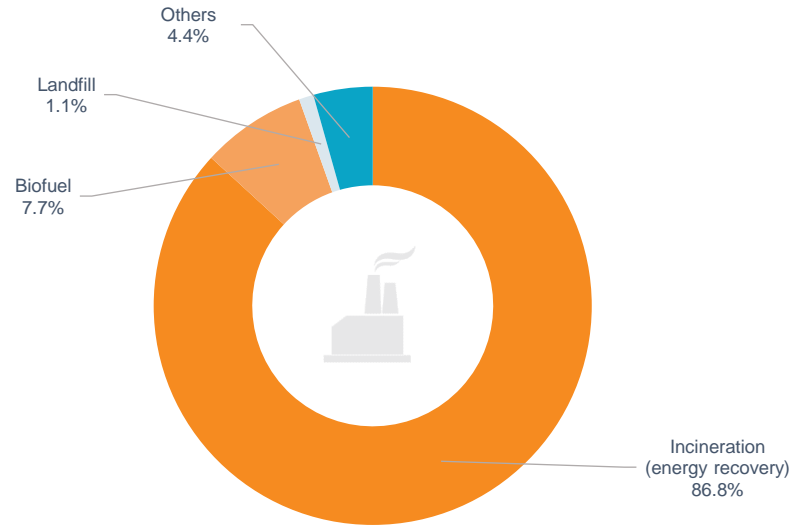
Reported Power Generation of Projects Listed by Facility Type (October 2015)

	Projects	With Reported MW Generation	Reported Annual MW Generation	Average MW Generation
Anaerobic Digestion	14	4	14	3
Biofuel	3	1	36	36
Biogas	3	0	0	-
Gasification	0	0	0	-
Incineration (energy recovery)	25	13	403	31
Incineration (no energy recovery)	0	0	0	-
Integrated Facilities (IWMF)	5	0	0	-
Landfill	8	1	5	5
MBT	0	0	0	-
Recycling	12	0	0	-
Waste Processing	9	0	0	-
Others	5	2	7	3
Total	84	21	465	22

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

	% of Total Projects
Anaerobic Digestion	3.0
Biofuel	7.7
Biogas	-
Gasification	-
Incineration (energy recovery)	86.8
Incineration (no energy recovery)	-
Integrated Facilities (IWMF)	-
Landfill	1.1
MBT	-
Recycling	-
Waste Processing	-
Others	1.4
Total	100.0

% MW Generation by Facility Type, Oct 2015



In October 2015, 86.8% of proposed power generation was through incineration, principally using wood biomass as a feedstock.



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

	Projects	With Reported MW Generation	Reported Annual MW Generation	Average MW Generation
Animal	3	2	2	1
Clinical	0	0	0	-
Construction/Demolition	2	0	0	-
e-Waste	2	0	0	-
Food	1	0	0	-
Gas	5	3	12	4
Glass	0	0	0	-
Hazardous	0	0	0	-
Heat	2	1	5	5
Industrial	1	0	0	-
Metals	2	0	0	-
MSW	25	1	3	3
Oil	2	0	0	-
Organic (general/unspecified)	9	2	20	10
Paper	0	0	0	-
Plant Biomass (non-waste)	1	1	3	3
Plant Biomass (waste)	7	4	88	22
Plastics	3	0	0	-
Radioactive	1	0	0	-
Rubber	1	0	0	-
Sewage/wastewater	5	1	10	10
Wood	11	6	323	54
Other	1	0	0	-
Total	84	21	465	22

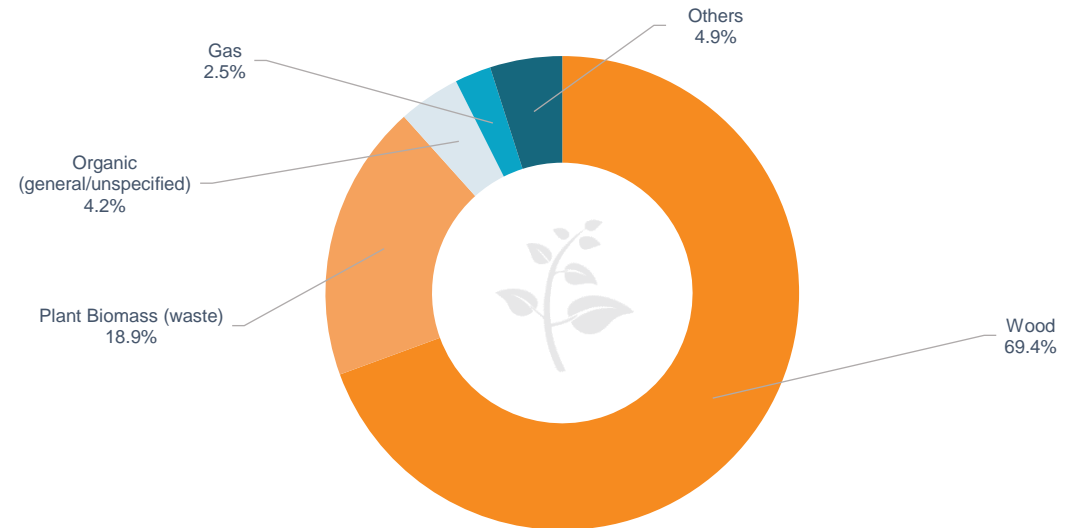
Latest Reported Power Generation by Feedstock Type, % of Total (October 2015)

	MW Generation as % of Total
Animal	0.5
Clinical	-
Construction/Demolition	-
e-Waste	-
Food	-
Gas	2.5
Glass	-
Hazardous	-
Heat	1.1
Industrial	-
Metals	-
MSW	0.6
Oil	-
Organic (general/unspecified)	4.2
Paper	-
Plant Biomass (non-waste)	0.6
Plant Biomass (waste)	18.9
Plastics	-
Radioactive	-
Rubber	-
Sewage/wastewater	2.2
Wood	69.4
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, October 2015



Latest Country Focus

The USA was the leading country in October 2015 in terms of projects reported, with 20 in total. This was followed by the UK with 11, and China with six.

In terms of estimated value, the USA was the leader, with US\$2,102 million or 40.2% of the total. This was followed by the UK with US\$1,076 million or 20.6%, and Finland with US\$405 million or 7.7%.



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

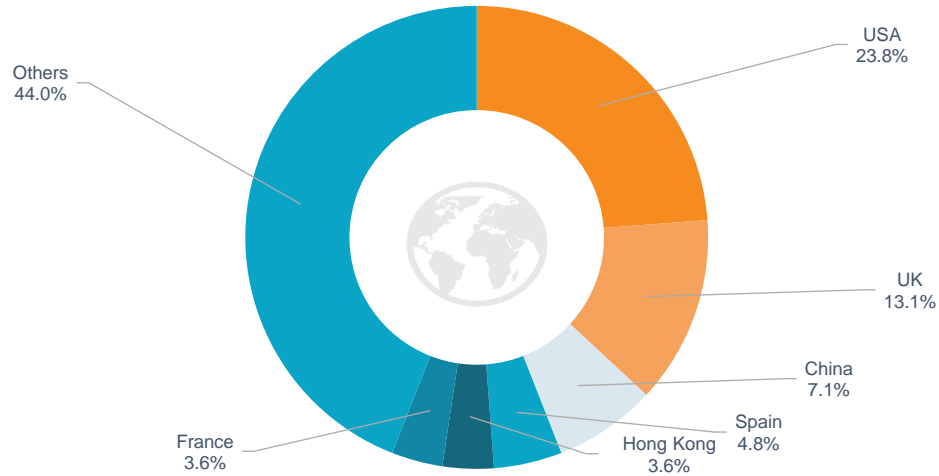
Top Ten Countries (number of projects listed), October 2015

	Projects	% of Total
USA	20	23.8
UK	11	13.1
China	6	7.1
Spain	4	4.8
Hong Kong	3	3.6
France	3	3.6
Canada	3	3.6
Brazil	3	3.6
Poland	2	2.4
India	2	2.4
Subtotal	57	67.9
Others	27	32.1
Total	84	100.0

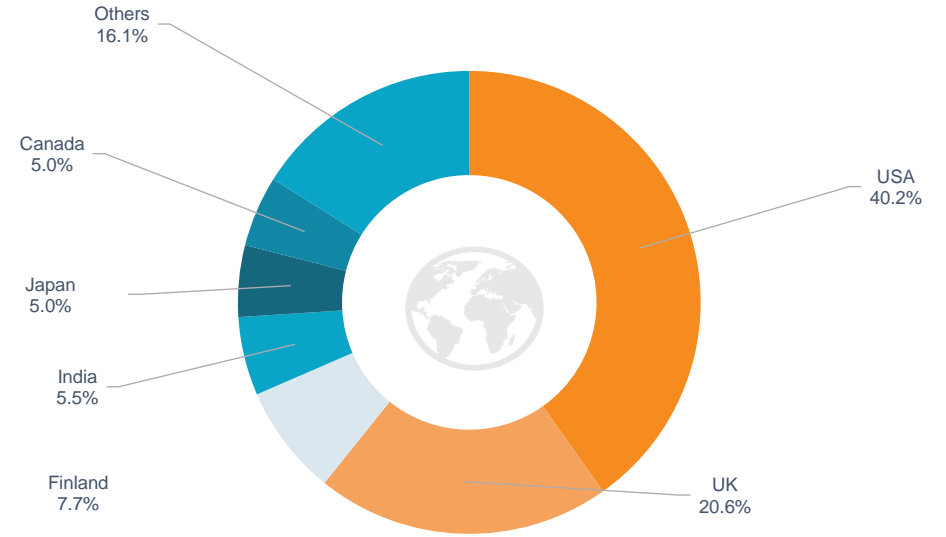
Top Ten Countries (value of projects listed), October 2015

	US\$ millions	% of Total
USA	2,102	40.2
UK	1,076	20.6
Finland	405	7.7
India	287	5.5
Japan	261	5.0
Canada	259	5.0
China	240	4.6
Brazil	225	4.3
Hong Kong	214	4.1
Belgium	138	2.6
Subtotal	5,206	99.5
Others	24	0.5
Total	5,230	100.0

Leading Countries, Number of Projects, October 2015



Leading Countries, Value of Projects, October 2015



Operational Date Focus

Of the 84 projects reported on in October 2015, 42 give an indication of their likely completion date. There are 26 projects due to become operational by the end of 2015, with a combined estimated value of US\$1,217 million. A further eight projects are due to complete during 2016, and a further ten in 2017 or beyond.

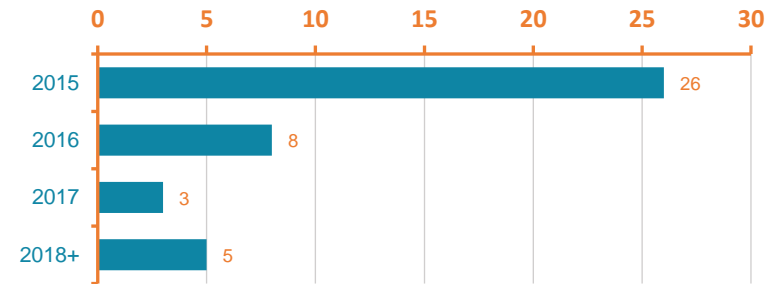


Once work starts, the average project takes around 18 months to become operational. Most, however have on-going operational requirements for much longer.

Projects by Reported Operational Date (October 2015)

	Number of Projects	Value (US\$ millions)
Q1 2015	0	-
Q2 2015	2	37.6
Q3 2015	10	384.3
Q4 2015	14	795.3
Q1 2016	1	20.0
Q2 2016	4	208.6
Q3 2016	1	20.7
Q4 2016	2	106.0
Q1 2017	1	20.0
Q2 2017	0	-
Q3 2017	1	10.0
Q4 2017	1	60.0
2018+	5	321.4

Projects By Reported Year of Completion



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

