

Table 16. Renewable Energy Generating Capacity and Generation for TAM, INC.
(Gigawatts, unless noted)

Category	2006	2007	2008	2009	2010	2011	2012	2013
Electric Power Sector 1/ Net Summer Capacity								
Conventional Hydropower	76.72	76.72	76.73	76.73	76.73	76.73	76.89	76.89
Geothermal 2/	2.29	2.36	2.37	2.40	2.53	2.60	2.60	2.60
Municipal Waste 3/	3.39	3.43	3.44	3.44	4.04	4.04	4.04	4.04
Wood and Other Biomass 4/, 5/	2.01	2.18	2.20	2.20	2.20	2.20	2.20	2.20
Solar Thermal	0.40	0.53	0.53	0.54	0.54	0.54	0.62	0.71
Solar Photovoltaic 6/	0.03	0.04	0.04	0.05	0.06	0.07	0.08	0.10
Wind	11.29	16.19	24.89	29.18	29.46	29.46	30.59	30.59
Offshore Wind	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	96.13	101.46	110.20	114.53	115.57	115.66	117.04	117.14
Generation (billion kilowatthours)								
Conventional Hydropower	286.11	245.86	259.75	257.65	268.05	277.11	282.44	286.73
Geothermal 2/	14.57	14.84	16.70	16.84	17.78	18.41	18.62	18.62
Biogenic Municipal Waste 7/	13.71	14.42	14.50	14.50	19.30	19.30	19.30	19.30
Wood and Other Biomass 5/ Dedicated Plants	10.33	10.38	14.92	14.52	28.07	31.17	33.56	39.90
Cofiring	8.42	8.41	12.97	12.59	12.85	13.05	13.25	13.52
Solar Thermal	1.91	1.97	1.95	1.93	15.22	18.12	20.31	26.38
Solar Photovoltaic 6/	0.49	0.60	0.98	0.98	0.99	1.00	1.26	1.53
Wind	0.01	0.01	0.09	0.11	0.14	0.17	0.19	0.23
Offshore Wind	26.59	32.14	53.05	78.56	80.50	81.03	84.18	84.18
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	351.82	318.25	359.99	383.16	414.82	428.19	439.56	450.49
End-Use Generators 8/ Net Summer Capacity								
Conventional Hydropower 9/	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Geothermal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Municipal Solid Waste 10/	0.33	0.34	0.34	0.34	0.34	0.34	0.34	0.34

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Biomass	4.64	4.64	4.64	4.64	4.65	4.74	4.98	5.13
Solar Photovoltaic 6/	0.28	0.43	0.61	1.06	1.73	2.29	2.87	3.75
Wind	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Total	5.99	6.15	6.33	6.77	7.45	8.11	8.92	9.95
Generation (billion kilowatthours)								
Conventional Hydropower 9/	2.99	2.45	2.45	2.45	2.45	2.45	2.45	2.45
Geothermal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Municipal Solid Waste 10/	1.98	2.01	2.75	2.75	2.75	2.75	2.75	2.75
Biomass	28.32	28.13	28.13	28.13	28.20	28.79	30.30	31.23
Solar Photovoltaic 6/	0.44	0.68	0.97	1.69	2.78	3.70	4.63	6.08
Wind	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Total	33.78	33.33	34.37	35.08	36.24	37.75	40.19	42.57
Total, All Sectors								
Net Summer Capacity								
Conventional Hydropower	77.42	77.42	77.43	77.43	77.43	77.43	77.59	77.59
Geothermal	2.29	2.36	2.37	2.40	2.53	2.60	2.60	2.60
Municipal Solid Waste	3.72	3.77	3.77	3.77	4.38	4.38	4.38	4.38
Wood and Other Biomass 4/, 5/	6.65	6.82	6.84	6.84	6.85	6.94	7.18	7.33
Solar 6/	0.71	1.00	1.19	1.64	2.33	2.91	3.57	4.56
Wind	11.33	16.23	24.93	29.22	29.50	29.50	30.63	30.63
Total	102.12	107.60	116.53	121.31	123.02	123.76	125.96	127.09
Generation (billion kilowatthours)								
Conventional Hydropower	289.11	248.31	262.20	260.10	270.50	279.56	284.89	289.18
Geothermal	14.57	14.84	16.70	16.84	17.78	18.41	18.62	18.62
Municipal Solid Waste	15.69	16.43	17.26	17.26	22.05	22.05	22.05	22.05
Wood and Other Biomass 5/	38.65	38.51	43.06	42.66	56.26	59.96	63.87	71.13
Solar 6/	0.95	1.29	2.04	2.78	3.91	4.86	6.09	7.84
Wind	26.64	32.20	53.10	78.61	80.55	81.09	84.24	84.24
Total	385.61	351.58	394.36	418.25	451.06	465.94	479.75	493.06

NOTES

1/ Includes electricity-only and combined heat and power plants whose primary business is to sell electricity, or electricity and heat, to the public.

2/ Includes hydrothermal resources only (hot water and steam).

3/ Includes municipal waste, landfill gas, and municipal sewage sludge. Incremental growth is assumed to be for landfill gas facilities. All municipal waste is included, although a portion of the municipal waste stream contains petroleum-derived plastics and other non-renewable sources.

4/ Facilities co-firing biomass and coal are classified as coal.

5/ Includes projections for energy crops after 2012.

6/ Does not include off-grid photovoltaics (PV). Based on annual PV shipments from 1989 through 2006, EIA estimates that as much as 210 megawatts of remote electricity generation PV applications (i.e., off-grid power systems) were in service in 2006, plus an additional 526 megawatts in communications, transportation, and assorted other non-grid-connected, specialized applications. See Energy Information Administration, Annual Energy Review 2007, DOE/EIA-0384(2007) (Washington, DC, June 2008), Table 10.8 (annual PV shipments, 1989-2006). The approach used to develop the estimate, based on shipment data, provides an upper estimate of the size of the PV stock, including both grid-based and off-grid PV. It will overestimate the size of the stock, because shipments include a substantial number of units that are exported, and each year some of the PV units installed earlier will be retired from service or abandoned.

7/ Includes biogenic municipal waste, landfill gas, and municipal sewage sludge. Incremental growth is assumed to be for landfill gas facilities. Only biogenic municipal waste is included. The Energy Information Administration estimates that in 2007 approximately 6 billion kilowatthours of electricity were generated from a municipal waste stream containing petroleum-derived plastics and other non-renewable sources. See Energy Information Administration, Methodology for Allocating Municipal Solid Waste to Biogenic and Non-Biogenic Energy (Washington, DC, May 2007).

8/ Includes combined heat and power plants and electricity-only plants in the commercial and industrial sectors; and small on-site generating systems in the residential, commercial, and industrial sectors used primarily for own-use generation, but which may also sell some power to the grid.

9/ Represents own-use industrial hydroelectric power.

10/ Includes municipal waste, landfill gas, and municipal sewage sludge. All municipal waste is included, although a portion of the municipal waste stream contains petroleum-derived plastics and other non-renewable sources. -- = Not applicable.

Note: Totals may not equal sum of components due to independent rounding. Data for 2006 and 2007 are model results and may differ slightly from official EIA data reports.

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Table 16. Renewable Energy Generating Capacity and Generation for TAM, INC.
 (Gigawatts, unless noted)

2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
76.89	76.89	76.94	77.02	77.02	77.02	77.02	77.14	77.14	77.14	77.19
2.60	2.60	2.60	2.64	2.64	2.64	2.66	2.66	2.66	2.66	2.69
4.04	4.08	4.08	4.08	4.08	4.08	4.12	4.12	4.12	4.13	4.13
2.20	2.20	2.37	3.18	3.54	3.98	4.22	4.30	4.54	4.65	4.98
0.79	0.79	0.80	0.80	0.81	0.81	0.81	0.82	0.82	0.83	0.83
0.11	0.13	0.14	0.16	0.17	0.19	0.21	0.22	0.24	0.26	0.28
30.59	30.68	31.93	31.93	31.93	31.95	33.07	34.48	35.38	36.91	37.63
0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
117.44	117.58	119.05	120.01	120.38	120.87	122.32	123.95	125.12	126.78	127.93
290.99	295.33	295.64	296.25	296.27	296.28	296.29	297.02	297.04	297.05	297.36
18.62	18.62	18.62	18.90	18.90	18.91	19.11	19.11	19.11	19.11	19.35
19.30	19.61	19.61	19.61	19.61	19.62	19.95	19.95	19.95	19.95	20.00
51.66	56.22	69.65	82.19	98.11	108.81	117.82	121.10	123.40	128.16	132.16
13.47	13.11	15.41	21.07	24.04	27.39	28.74	28.99	30.85	31.96	34.43
38.20	43.11	54.25	61.12	74.06	81.42	89.08	92.11	92.55	96.20	97.72
1.80	1.81	1.83	1.84	1.85	1.86	1.88	1.89	1.91	1.92	1.94
0.26	0.30	0.33	0.37	0.41	0.45	0.49	0.54	0.58	0.63	0.67
84.18	84.48	88.62	88.63	88.63	88.71	92.45	97.18	100.08	105.07	107.48
0.25	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
467.06	477.12	495.06	508.54	524.53	535.40	548.75	557.54	562.81	572.65	579.71
0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34

Release Date: March 2009

(Gigawatts, unless noted)

5.29	5.44	5.64	5.90	6.26	6.70	7.28	8.11	9.17	9.73	10.41
4.68	7.05	9.54	9.58	9.62	9.66	9.72	9.79	9.85	9.93	10.02
0.04	0.04	0.05	0.05	0.06	0.07	0.09	0.10	0.12	0.13	0.15
11.05	13.57	16.26	16.57	16.97	17.47	18.12	19.03	20.18	20.83	21.61
2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75
32.33	33.41	34.77	36.58	39.19	42.56	47.17	53.72	62.12	66.11	71.03
7.61	11.55	15.72	15.78	15.85	15.92	16.02	16.12	16.23	16.35	16.50
0.06	0.06	0.07	0.07	0.09	0.10	0.12	0.15	0.17	0.19	0.22
45.20	50.23	55.76	57.64	60.32	63.79	68.51	75.18	83.73	87.86	92.96
77.59	77.59	77.63	77.72	77.72	77.72	77.72	77.84	77.84	77.84	77.89
2.60	2.60	2.60	2.64	2.64	2.64	2.66	2.66	2.66	2.66	2.69
4.38	4.42	4.42	4.42	4.42	4.42	4.46	4.46	4.46	4.46	4.47
7.49	7.64	8.01	9.08	9.79	10.68	11.50	12.41	13.71	14.38	15.38
5.58	7.97	10.48	10.53	10.59	10.66	10.74	10.83	10.92	11.02	11.13
30.83	30.92	32.17	32.18	32.19	32.22	33.35	34.78	35.70	37.24	37.98
128.48	131.15	135.32	136.57	137.35	138.35	140.44	142.98	145.30	147.61	149.54
293.44	297.78	298.09	298.70	298.72	298.73	298.75	299.47	299.49	299.50	299.81
18.62	18.62	18.62	18.90	18.90	18.91	19.11	19.11	19.11	19.11	19.35
22.05	22.37	22.37	22.37	22.37	22.38	22.70	22.70	22.70	22.71	22.75
83.99	89.63	104.42	118.76	137.29	151.37	164.99	174.81	185.52	194.27	203.19
9.67	13.66	17.88	17.99	18.11	18.24	18.39	18.55	18.72	18.90	19.11
84.49	85.29	89.44	89.45	89.47	89.57	93.32	98.08	101.00	106.02	108.45
512.26	527.36	550.82	566.18	584.86	599.19	617.26	632.72	646.54	660.51	672.67

Release Date: March 2009

(Gigawatts, unless noted)

11.03	11.60	12.11	12.53	12.89	13.23	4.7%
10.14	10.26	10.46	10.73	11.18	11.78	15.5%
0.17	0.19	0.21	0.24	0.27	0.31	9.2%
22.37	23.09	23.81	24.53	25.38	26.35	6.5%
2.45	2.45	2.45	2.45	2.45	2.45	0.0%
0.00	0.00	0.00	0.00	0.00	0.00	--
2.75	2.75	2.75	2.75	2.75	2.75	1.4%
75.54	79.63	83.20	86.14	88.58	90.81	5.2%
16.69	16.91	17.23	17.69	18.46	19.49	15.7%
0.25	0.28	0.31	0.35	0.39	0.45	9.5%
97.69	102.02	105.94	109.38	112.64	115.95	5.6%
78.01	78.01	78.01	78.01	78.25	78.28	0.0%
2.73	2.79	2.86	2.89	3.00	3.00	1.1%
4.48	4.48	4.48	4.49	4.49	4.49	0.8%
16.23	17.18	18.32	19.24	20.60	22.08	5.2%
11.27	11.42	11.63	11.92	12.40	13.02	11.8%
39.37	41.14	41.45	43.49	44.19	44.31	4.5%
152.08	155.02	156.76	160.04	162.93	165.18	1.9%
300.39	300.41	300.43	300.44	301.24	301.42	0.8%
19.63	20.14	20.66	20.90	21.79	21.80	1.7%
22.86	22.88	22.89	22.90	22.92	22.93	1.5%
209.04	215.17	221.35	226.48	226.33	231.25	8.1%
19.36	19.64	20.01	20.53	21.36	22.45	13.2%
113.12	119.09	120.14	128.04	130.29	130.57	6.3%
684.41	697.32	705.47	719.30	723.94	730.42	3.2%