

## Zeon Group Environmental Data

Zeon Corporation only		FY 2014	FY 2015	FY2016	FY2017	FY2018
Toxic substances	Butadiene consumption (tons)	334,962	355,326	298,397	308,069	289,912
	Butadiene emissions (tons)	3.7	2.7	3.6	3.1	3.4
	Acrylonitrile consumption (tons)	25,784	27,729	24,483	29,840	29,205
	Acrylonitrile emissions (tons)	11.9	5.5	4.1	4.0	4.0
Substances subject to the PRTR Act	Consumption (tons)	921,688	942,613	800,074	885,176	878,072
	Emissions (tons)	36.7	30.1	27.4	25.2	23.7
Industrial waste	Amount generated before compacting (tons)	156,502	145,482	135,996	125,018	143,129
	Amount generated after compacting (tons)	16,530	14,020	15,074	14,574	15,932
	Amount sent to landfills (tons)	6.5	3.5	1.7	1.9	0.0
Atmospheric emissions	CO <sub>2</sub> emissions (tons)	506,348	552,940	480,631	575,573	544,747
	SO <sub>x</sub> emissions (tons)	509	624	605	796	689
	NO <sub>x</sub> emissions (tons)	240	253	274	324	298
	Soot emissions (tons)	2.8	11.4	4.8	7.9	4.4
Water resources (Industrial water + Ground water + Waterworks) consumption(1,000 m <sup>3</sup> )		18,703	18,454	18,593	18,234	18,098
Wastewater	Total wastewater discharge (1,000 m <sup>3</sup> )	15,894	15,940	15,919	15,928	15,399
	COD emissions (tons)	119	119	119	137	124
	Total phosphorus discharge (tons)	1.6	1.6	1.7	1.7	1.8
	Total nitrogen discharge (tons)	167	142	124	153	160
Energy	Total consumption (crude oil equivalent, kL)	192,930	214,921	193,757	222,348	211,128
	Per-unit energy consumption (kL/t-PDR)	0.1277	0.1367	0.1252	0.1330	0.1225
	Energy efficiency indicator (FY 1990=100)	61%	65%	60%	64%	59%
Production equivalent (tons)		1,519,947	1,572,613	1,547,789	1,671,352	1,723,677
Per-unit CO <sub>2</sub> emissions indicator (FY 1990=100)		62%	66%	58%	64%	59%

### Zeon Corporation each worksites

("0.0" indicates less than 0.05)

Takaoka Plant		FY 2014	FY 2015	FY2016	FY2017	FY2018
Substances subject to the PRTR Act	Consumption (tons)	21	17	22	44	51
	Emissions (tons)	0.0	0.0	0.0	0.0	0.0
Industrial waste	Amount generated before compacting (tons)	8,794	7,959	6,751	8,046	8,726
	Amount generated after compacting (tons)	437	396	336	400	434
	Amount sent to landfills (tons)	0.0	0.0	0.0	0.0	0.0
Atmospheric emissions	CO <sub>2</sub> emissions (tons)	20,825	20,964	20,654	21,167	18,134
	SO <sub>x</sub> emissions (tons)	0.0	0.0	0.0	0.0	0.0
	NO <sub>x</sub> emissions (tons)	2	2.5	0.2	0.3	0.2
	Soot emissions (tons)	0.0	0.0	0.0	0.0	0.0
Water resources (Industrial water + Ground water + Waterworks) consumption(1,000 m <sup>3</sup> )		3,848	3,804	4,079	4,086	4,054
Wastewater	Total wastewater discharge (1,000 m <sup>3</sup> )	3,322	3,213	3,428	3,605	3,335
	COD emissions (tons)	12.7	12.6	16.1	15.9	12.7
	Total phosphorus discharge (tons)	0.3	0.3	0.3	0.3	0.6
	Total nitrogen discharge (tons)	14	14	15	12	19
Energy	Total consumption (crude oil equivalent, kL)	8,290	9,380	9,605	9,473	8,572
	Energy efficiency indicator (FY 1990=100)	83%	85%	90%	81%	81%
Production equivalent (tons)		56,609	54,616	52,844	57,863	52,368

Kawasaki Plant		FY 2014	FY 2015	FY2016	FY2017	FY2018
Toxic substances	Butadiene consumption (tons)	23,534	21,758	23,040	21,940	25,121
	Butadiene emissions (tons)	2.6	2.0	1.9	2.1	2.5
	Acrylonitrile consumption (tons)	11,405	10,746	11,007	10,780	12,551
	Acrylonitrile emissions (tons)	11	5	4	3	3
Substances subject to the PRTR Act	Consumption (tons)	45,847	43,954	43,954	44,012	50,368
	Emissions (tons)	28	21.4	19.0	17.5	17.2
Industrial waste	Amount generated before compacting (tons)	52,900	44,380	56,330	42,734	51,836
	Amount generated after compacting (tons)	4,401	3,412	4,704	3,293	4,198
	Amount sent to landfills (tons)	0.0	0.0	0.0	0.0	0.0
Atmospheric emissions	CO <sub>2</sub> emissions (tons)	25,778	23,443	21,409	23,610	27,501
	SO <sub>x</sub> emissions (tons)	0.1	0.3	0.1	0.0	0.0
	NO <sub>x</sub> emissions (tons)	5.7	5.6	5.9	7.7	8.5
	Soot emissions (tons)	0.6	0.5	0.5	0.6	0.6
Water resources (Industrial water + Ground water + Waterworks) consumption(1,000 m <sup>3</sup> )		3,657	3,241	3,244	3,143	3,467
Wastewater	Total wastewater discharge (1,000 m <sup>3</sup> )	2,185	2,265	2,030	2,029	2,272
	COD emissions (tons)	44	35	42	56	52
	Total phosphorus discharge (tons)	0.2	0.2	0.2	0.2	0.2
	Total nitrogen discharge (tons)	115	89	72	103	110
Energy	Total consumption (crude oil equivalent, kL)	14,700	13,355	12,857	10,957	13,296
	Energy efficiency indicator (FY 1990=100)	84%	65%	77%	66%	66%
Production equivalent (tons)		85,441	80,229	82,271	79,883	91,394

Tokuyama Plant		FY 2014	FY 2015	FY2016	FY2017	FY2018
Toxic substances	Butadiene consumption (tons)	170,327	195,538	152,247	179,158	142,574
	Butadiene emissions (tons)	1.1	0.7	1.6	0.8	0.8
	Acrylonitrile consumption (tons)	14,379	16,983	13,476	19,060	16,654
	Acrylonitrile emissions (tons)	0.7	0.6	0.6	0.6	0.6
Substances subject to the PRTR Act	Consumption (tons)	397,637	422,439	347,496	412,431	342,547
	Emissions (tons)	2.7	2.1	2.9	3.0	1.9
Industrial waste	Amount generated before compacting (tons)	24,063	23,163	24,738	28,898	25,496
	Amount generated after compacting (tons)	4,674	4,737	5,208	4,932	5,222
	Amount sent to landfills (tons)	0.0	0.0	0.0	0.0	0.0
Atmospheric emissions	CO <sub>2</sub> emissions (tons)	237,362	263,215	228,574	261,456	231,443
	SO <sub>x</sub> emissions (tons)	507	622	603	796	689
	NO <sub>x</sub> emissions (tons)	179	191	200	256	216
	Soot emissions (tons)	2.2	10.9	4.3	7.3	3.8
Water resources (Industrial water + Ground water + Waterworks) consumption(1,000 m <sup>3</sup> )		8,393	8,812	8,703	8,705	7,852
Wastewater	Total wastewater discharge (1,000 m <sup>3</sup> )	7,785	8,051	8,148	8,206	7,457
	COD emissions (tons)	42	57	49	52	47
	Total phosphorus discharge (tons)	0.6	0.8	0.7	0.6	0.5
	Total nitrogen discharge (tons)	27	28	25	26	22
Energy	Total consumption (crude oil equivalent, kL)	92,423	104,326	93,669	105,323	93,430
	Energy efficiency indicator (FY 1990=100)	94%	95%	96%	92%	97%
Production equivalent (tons)		537,497	603,368	532,374	626,406	527,914

Mizushima Plant		FY 2014	FY 2015	FY2016	FY2017	FY2018
Toxic substances	Butadiene consumption (tons)	141,100	138,029	123,109	106,970	122,217
	Butadiene emissions (tons)	0.0	0.0	0.0	0.0	0.0
Substances subject to the PRTR Act	Consumption (tons)	478,178	476,200	408,600	428,684	485,100
	Emissions (tons)	6.0	6.5	5.4	4.4	4.4
Industrial waste	Amount generated before compacting (tons)	70,584	69,824	47,980	45,177	56,927
	Amount generated after compacting (tons)	6,956	5,418	4,717	5,869	5,974
	Amount sent to landfills (tons)	6.5	3.5	1.7	1.9	0.0
Atmospheric emissions	CO <sub>2</sub> emissions (tons)	211,420	235,360	201,700	259,000	255,800
	SO <sub>x</sub> emissions (tons)	1.4	1.1	2.2	0.1	0.4
	NO <sub>x</sub> emissions (tons)	54	54	68	60	73
	Soot emissions (tons)	0.0	0.0	0.0	0.0	0.0
Water resources (Industrial water + Ground water + Waterworks) consumption(1,000 m <sup>3</sup> )		2,713	2,510	2,487	2,250	2,629
Wastewater	Total wastewater discharge (1,000 m <sup>3</sup> )	2,602	2,411	2,313	2,088	2,335
	COD emissions (tons)	20	15	12	13	12
	Total phosphorus discharge (tons)	0.5	0.4	0.5	0.5	0.5
	Total nitrogen discharge (tons)	12	12	12	12	9
Energy	Total consumption (crude oil equivalent, kL)	77,517	87,860	77,626	96,576	95,830
	Energy efficiency indicator (FY 1990=100)	40%	45%	38%	46%	39%
Production equivalent (tons)		840,400	834,400	880,300	907,200	1,052,001

R&D Center		FY 2014	FY 2015	FY2016	FY2017	FY2018
Toxic substances	Butadiene consumption (tons)	0.80	0.72	0.90	0.61	0.36
	Butadiene emissions (tons)	0.03	0.03	0.10	0.23	0.14
	Acrylonitrile consumption (tons)	0.24	0.26	0.28	0.27	0.11
	Acrylonitrile emissions (tons)	0.0	0.0	0.0	0.0	0.0
Substances subject to the PRTR Act	Consumption (tons)	5.4	3.9	2.1	4.3	6.2
	Emissions (tons)	0.1	0.1	0.1	0.2	0.2
Industrial waste	Amount generated before compacting (tons)	160	157	197	163	143
	Amount generated after compacting (tons)	62	57	109	81	105
	Amount sent to landfills (tons)	0.0	0.0	0.0	0.0	0.0
Atmospheric emissions	CO <sub>2</sub> emissions (tons)	10,963	9,958	8,294	11,300	11,869
Water resources (Industrial water + Ground water + Waterworks) consumption(1,000 m <sup>3</sup> )		92	88	80	80	94
Energy	Total consumption (crude oil equivalent, kL)	5,720	5,236	5,810	5,870	6,082

Head Office		FY 2014	FY 2015	FY2016	FY2017	FY2018
Atmospheric emissions	CO <sub>2</sub> emissions (tons)	287	285	293	284	171
Water resources ( Waterworks) consumption (1,000 m <sup>3</sup> )		1.31	1.18	1.50	1.55	1.02
Energy	Total consumption (crude oil equivalent, kL)	182	180	186	179	108

Zeon Group companies in Japan

("0" indicates less than 0.5, and "0.0" indicates less than 0.05)

Zeon Group companies in Japan		FY 2014	FY 2015	FY2016	FY2017	FY2018
Substances subject to the PRTR Act	No. of substances (total)	62	59	61	63	63
	Consumption (tons)	1,924	1,710	1,712	4,669	3,976
	Emissions (tons)	2.1	2.4	2.4	4.1	3.5
Industrial waste	Amount generated before compacting (tons)	6,235	2,358	3,237	4,896	2,746
	Amount sent to landfills (tons)	10.6	5.9	2.9	0.2	1.3
Water resources (Industrial water + Ground water + Waterworks) consumption(1,000 m <sup>3</sup> )		163	163	284	319	328
CO <sub>2</sub> emissions (tons)		44,552	48,474	46,195	56,021	52,343
Energy consumption (crude oil equivalent, kL)		18,454	19,696	19,345	22,771	22,949
Electric energy consumption (1000 kWh)		67,294	72,785	71,557	81,582	82,861

Zeon Kasei Co., Ltd. Ibaraki Factory		FY 2014	FY 2015	FY2016	FY2017	FY2018
Substances subject to the PRTR Act	No. of substances (total)	6	6	5	4	5
	Consumption (tons)	49	15	18	14	20
	Emissions (tons)	0.0	0.0	0.1	0.1	0.1
Industrial waste	Amount generated before compacting (tons)	389	258	284	248	213
	Amount sent to landfills (tons)	0.0	0.0	0.0	0.0	0.0
Water resources (Industrial water + Ground water + Waterworks) consumption(1,000 m <sup>3</sup> )		19	18	163	156	155
CO <sub>2</sub> emissions (tons)		3,468	2,768	2,475	2,332	1,963
Energy consumption (crude oil equivalent, kL)		1,545	1,265	1,145	1,075	937
Electric energy consumption (1000 kWh)		3,869	2,906	2,667	2,479	2,190

Zeon Kasei Co., Ltd. Yamaguchi Factory		FY 2014	FY 2015	FY2016	FY2017	FY2018
Substances subject to the PRTR Act	No. of substances (total)	3	3	3	3	3
	Consumption (tons)	0.0	0.2	0.0	0.1	0.1
	Emissions (tons)	0.0	0.2	0.0	0.1	0.1
Industrial waste	Amount generated before compacting (tons)	151	63	48	89	29
	Amount sent to landfills (tons)	0.0	0.0	0.0	0.0	0.0
Water resources (Industrial water + Ground water + Waterworks) consumption(1,000 m <sup>3</sup> )		0.0	0.0	0.0	0.0	0.0
CO <sub>2</sub> emissions (tons)		460	367	334	302	302
Energy consumption (crude oil equivalent, kL)		166	134	124	111	112
Electric energy consumption (1000 kWh)		591	482	437	387	399

Zeon Polymix Inc. Otsu Plant		FY 2014	FY 2015	FY2016	FY2017	FY2018
Substances subject to the PRTR Act	No. of substances (total)	5	4	6	7	6
	Consumption (tons)	113	125	115	106	72
	Emissions (tons)	0.0	0.0	0.0	0.0	0.0
Industrial waste	Amount generated before compacting (tons)	160	184	197	182	213
	Amount sent to landfills (tons)	0.0	0.0	0.0	0.0	0.0
Water resources (Industrial water + Ground water + Waterworks) consumption(1,000 m <sup>3</sup> )		48	48	28	32	36
CO <sub>2</sub> emissions (tons)		2,860	3,159	3,346	3,181	3,882
Energy consumption (crude oil equivalent, kL)		1,388	1,495	1,603	1,635	1,681
Electric energy consumption (1000 kWh)		5,321	5,877	6,326	6,450	6,646

Zeon Medical Inc.		FY 2014	FY 2015	FY2016	FY2017	FY2018
Substances subject to the PRTR Act	No. of substances (total)	1	1	1	1	1
	Consumption (tons)	1.6	1.6	1.6	1.8	1.6
	Emissions (tons)	1.6	1.6	1.6	1.8	1.6
Industrial waste	Amount generated before compacting (tons)	10	8	7	8	10
	Amount sent to landfills (tons)	4.5	0.4	0.0	0.0	0.0
Water resources (Industrial water + Ground water + Waterworks) consumption(1,000 m <sup>3</sup> )		21.9	13.5	10.3	11.1	11.2
CO <sub>2</sub> emissions (tons)		1,003	920	945	1,010	905
Energy consumption (crude oil equivalent, kL)		401	364	380	400	379
Electric energy consumption (1000 kWh)		0	0	0	0	0

Zeon North Co., Ltd.		FY 2014	FY 2015	FY2016	FY2017	FY2018
Substances subject to the PRTR Act	No. of substances (total)	0	0	0	0	0
	Consumption (tons)	0.0	0.0	0.0	0.0	0.0
	Emissions (tons)	0.0	0.0	0.0	0.0	0.0
Industrial waste	Amount generated before compacting (tons)	17	14	19	17	24
	Amount sent to landfills (tons)	4.2	2.5	0.5	0.2	0.1
Water resources (Industrial water + Ground water + Waterworks) consumption(1,000 m <sup>3</sup> )		1.6	1.5	1.6	2.3	2.3
CO <sub>2</sub> emissions (tons)		161	159	273	320	363
Energy consumption (crude oil equivalent, kL)		92	103	119	133	155
Electric energy consumption (1000 kWh)		384	366	426	458	507

RIMTEC Corporation		FY 2014	FY 2015	FY2016	FY2017	FY2018
Substances subject to the PRTR Act	No. of substances (total)	0	0	0	0	0
	Consumption (tons)	0.0	0.0	0.0	0.0	0.0
	Emissions (tons)	0.0	0.0	0.0	0.0	0.0
Industrial waste	Amount generated before compacting (tons)	23	31	39	7	54
	Amount sent to landfills (tons)	1.3	0.0	0.3	0.0	1.2
Water resources (Industrial water + Ground water + Waterworks) consumption(1,000 m <sup>3</sup> )		1.5	1.5	1.4	1.9	1.4
CO <sub>2</sub> emissions (tons)		110	103	152	136	149
Energy consumption (crude oil equivalent, kL)		90	89	78	68	77
Electric energy consumption (1000 kWh)		—	—	—	0	0

Zeon Yamaguchi Co., Ltd.		FY 2014	FY 2015	FY2016	FY2017	FY2018
Substances subject to the PRTR Act	No. of substances (total)	40	40	40	40	40
	Consumption (tons)	0.0	0.0	0.0	0.0	0.0
	Emissions (tons)	0.0	0.0	0.0	0.0	0.0
Industrial waste	Amount generated before compacting (tons)	4,018	171	482	172	327
	Amount sent to landfills (tons)	0.0	0.0	0.0	0.0	0.0
Water resources (Industrial water + Ground water + Waterworks) consumption(1,000 m <sup>3</sup> )		0.2	0.2	0.2	0.2	0.2
CO <sub>2</sub> emissions (tons)		11	12	11	6	11
Energy consumption (crude oil equivalent, kL)		5	6	5	3	5
Electric energy consumption (1000 kWh)		21	23	21	13	21

Zeon Chemicals Yonezawa Co., Ltd.		FY 2014	FY 2015	FY2016	FY2017	FY2018
Substances subject to the PRTR Act	No. of substances (total)	5	3	4	5	5
	Consumption (tons)	1,759	1,567	1,576	4,544	3,880
	Emissions (tons)	0.5	0.6	0.6	1.5	1.4
Industrial waste	Amount generated before compacting (tons)	206	182	180	232	215
	Amount sent to landfills (tons)	0.0	0.0	0.0	0.0	0.0
Water resources (Industrial water + Ground water + Waterworks) consumption(1,000 m <sup>3</sup> )		14	12	14	18	16
CO <sub>2</sub> emissions (tons)		1,421	1,815	1,716	2,089	1,927
Energy consumption (crude oil equivalent, kL)		591	762	720	876	864
Electric energy consumption (1000 kWh)		1,458	2,050	1,820	2,001	1,811

Zeon Opto Bio Lab Co., Ltd. (Until 2018 Optes Inc. Sano Plant)		FY 2014	FY 2015	FY2016	FY2017	FY2018
Substances subject to the PRTR Act	No. of substances (total)	1	1	1	1	1
	Consumption (tons)	0.0	0.0	0.0	0.0	0.0
	Emissions (tons)	0.0	0.0	0.0	0.0	0.0
Industrial waste	Amount generated before compacting (tons)	8	6	9	6	2
	Amount sent to landfills (tons)	0.4	0.0	0.0	0.0	0.0
Water resources (Industrial water + Ground water + Waterworks) consumption(1,000 m <sup>3</sup> )		6	4	3	3	3
CO <sub>2</sub> emissions (tons)		862	673	664	816	750
Energy consumption (crude oil equivalent, kL)		564	439	431	408	386
Electric energy consumption (1000 kWh)		2,274	1,767	1,735	1,631	1,543

Optes Inc. Hokuriku Plant		FY 2014	FY 2015	FY2016	FY2017	FY2018
Substances subject to the PRTR Act	No. of substances (total)	1	1	1	1	1
	Consumption (tons)	1	1	1	1.5	1.6
	Emissions (tons)	0.0	0.0	0.0	0.0	0.0
Industrial waste	Amount generated before compacting (tons)	1,254	1,443	1,973	3,860	1,573
	Amount sent to landfills (tons)	0.3	0.1	0.0	0.0	0.0
Water resources (Industrial water + Ground water + Waterworks) consumption(1,000 m <sup>3</sup> )		52	66	64	90	97
CO <sub>2</sub> emissions (tons)		34,196	38,498	36,279	39,252	36,465
Energy consumption (crude oil equivalent, kL)		13,612	15,039	14,740	15,333	15,692
Electric energy consumption (1000 kWh)		53,376	59,314	58,125	60,399	62,103

TFC Inc.		FY 2014	FY 2015	FY2016	FY2017	FY2018
Substances subject to the PRTR Act	No. of substances (total)	1	1	1	1	1
	Consumption (tons)	1	1	1	2.1	0.5
	Emissions (tons)	1	1	1	0.7	0.3
Industrial waste	Amount generated before compacting (tons)	94	83	66	75	86
	Amount sent to landfills (tons)	3.1	2.9	2.1	0.0	0.0
Water resources (Industrial water + Ground water + Waterworks) consumption(1,000 m <sup>3</sup> )		4	5	31	5	6
CO <sub>2</sub> emissions (tons)		6,761	6,282	6,854	6,577	5,626
Energy consumption (crude oil equivalent, kL)		2,660	2,513	2,802	2,729	2,661
Electric energy consumption (1000 kWh)		7,449	7,106	8,029	7,765	7,642

Zeon Group companies outside Japan  
("0" indicates less than 0.5, and "0.0" indicates less than 0.05)

Zeon Group companies outside Japan		FY 2014	FY 2015	FY2016	FY2017	FY2018
Substances subject to the PRTR Act	No. of substances (total)	15	10	10	10	10
	Consumption (tons)	51,496	19,674	18,123	24,531	23,905
	Emissions (tons)	91	82	67	83	83
Industrial waste	Amount generated before compacting (tons)	4,601	3,705	3,617	3,608	3,495
	Amount sent to landfills (tons)	2,916	2,429	2,365	2,388	2,438
Water resources (Industrial water + Ground water + Waterworks) consumption(1,000 m <sup>3</sup> )		2,380	1,780	1,811	1,951	1,986
CO <sub>2</sub> emissions (tons)		125,438	121,819	128,317	142,838	139,984
Energy consumption (crude oil equivalent, kL)		50,388	47,310	50,374	56,741	55,181

Zeon Chemicals L.P. (ZCLP) : Kentucky Plant		FY 2014	FY 2015	FY2016	FY2017	FY2018
Substances subject to the PRTR Act	No. of substances (total)	7	7	7	7	7
	Consumption (tons)	16,202	15,376	13,757	19,796	19,151
	Emissions (tons)	10	21	8	14	14
Industrial waste	Amount generated before compacting (tons)	344	532	551	587	671
	Amount sent to landfills (tons)	332	526	539	568	655
Water resources (Industrial water + Ground water + Waterworks) consumption(1,000 m <sup>3</sup> )		1,014	685	722	779	829
CO <sub>2</sub> emissions (tons)		33,570	32,329	31,368	32,107	30,877
Energy consumption (crude oil equivalent, kL)		11,017	10,323	9,755	10,219	9,723

Zeon Chemicals L.P. (ZCLP) : Texas Plant		FY 2014	FY 2015	FY2016	FY2017	FY2018
Substances subject to the PRTR Act	No. of substances (total)	0	0	0	0	0
	Consumption (tons)	0	0	0	0	0
	Emissions (tons)	0	0	0	0	0
Industrial waste	Amount generated before compacting (tons)	36	41	42	38	72
	Amount sent to landfills (tons)	3.0	2.0	1.0	0.8	33.0
Water resources (Industrial water + Ground water + Waterworks) consumption(1,000 m <sup>3</sup> )		252	188	228	261	258
CO <sub>2</sub> emissions (tons)		10,712	10,520	9,651	11,165	11,494
Energy consumption (crude oil equivalent, kL)		3,150	3,099	2,837	3,306	3,398

Zeon Chemicals L.P. (ZCLP) : Mississippi Plant		FY 2014	FY 2015	FY2016	FY2017	FY2018
Substances subject to the PRTR Act	No. of substances (total)	3	3	3	3	3
	Consumption (tons)	5,125	4,298	4,367	4,735	4,754
	Emissions (tons)	71	61	58	68	69
Industrial waste	Amount generated before compacting (tons)	42	97	128	93	20
	Amount sent to landfills (tons)	42	97	128	93	20
Water resources (Industrial water + Ground water + Waterworks) consumption(1,000 m <sup>3</sup> )		132	166	124	157	116
CO <sub>2</sub> emissions (tons)		16,045	14,777	13,923	14,853	15,938
Energy consumption (crude oil equivalent, kL)		6,452	5,999	5,624	6,087	6,536

Zeon Chemicals Europe Ltd. (ZCEL)		FY 2014	FY 2015	FY2016	FY2017	FY2018
Substances subject to the PRTR Act	No. of substances (total)	2	–	–	–	–
	Consumption (tons)	9,272	–	–	–	–
	Emissions (tons)	7.6	–	–	–	–
Industrial waste	Amount generated before compacting (tons)	995	–	–	–	–
	Amount sent to landfills (tons)	991	–	–	–	–
Water resources (Industrial water + Ground water + Waterworks) consumption(1,000 m <sup>3</sup> )		245	–	–	–	–
CO <sub>2</sub> emissions (tons)		11,352	–	–	–	–
Energy consumption (crude oil equivalent, kL)		5,869	–	–	–	–

Zeon Advanced Polymix Co., Ltd. (ZAP)		FY 2014	FY 2015	FY2016	FY2017	FY2018
Industrial waste	Amount generated before compacting (tons)	262	212	295	272	228
	Amount sent to landfills (tons)	0	0	0	0	0
Water resources (Industrial water + Ground water + Waterworks) consumption(1,000 m <sup>3</sup> )		31	35	27	27	26
CO <sub>2</sub> emissions (tons)		6,090	5,690	6,360	6,240	6,980
Energy consumption (crude oil equivalent, kL)		2,948	2,705	3,023	2,971	3,094

Zeon Chemicals (Thailand) Co., Ltd. (ZCT)		FY 2014	FY 2015	FY2016	FY2017	FY2018
Industrial waste	Amount generated before compacting (tons)	2,552	2,823	2,601	2,619	2,504
	Amount sent to landfills (tons)	1,548	1,804	1,697	1,727	1,730
Water resources (Industrial water + Ground water + Waterworks) consumption(1,000 m <sup>3</sup> )		316	304	293	269	287
CO <sub>2</sub> emissions (tons)		8,488	14,970	10,616	11,253	12,299
Energy consumption (crude oil equivalent, kL)		3,377	5,957	4,224	4,477	4,894

Zeon Chemicals Singapore Pte. Ltd. (ZCS)		FY 2014	FY 2015	FY2016	FY2017	FY2018
Industrial waste	Amount generated before compacting (tons)	370	0	0	0	0
	Amount sent to landfills (tons)	0	0	0	0	0
Water resources (Industrial water + Ground water + Waterworks) consumption(1,000 m <sup>3</sup> )		390	402	417	458	471
CO <sub>2</sub> emissions (tons)		39,181	43,533	56,400	67,221	62,396
Energy consumption (crude oil equivalent, kL)		17,575	19,227	24,911	29,680	27,536