

SEIREN GROUP ENVIRONMENTAL DATA 2025

June 23, 2025

1. Climate change countermeasures

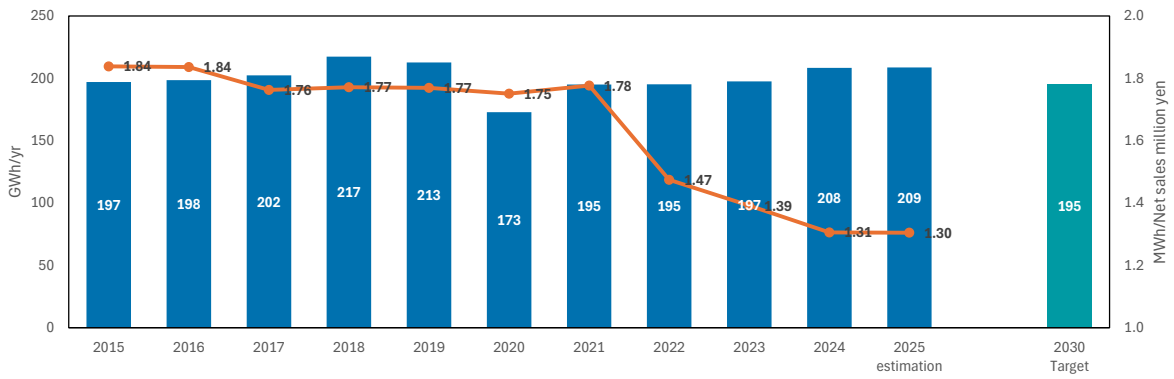
Power Consumption

(GWh/yr)

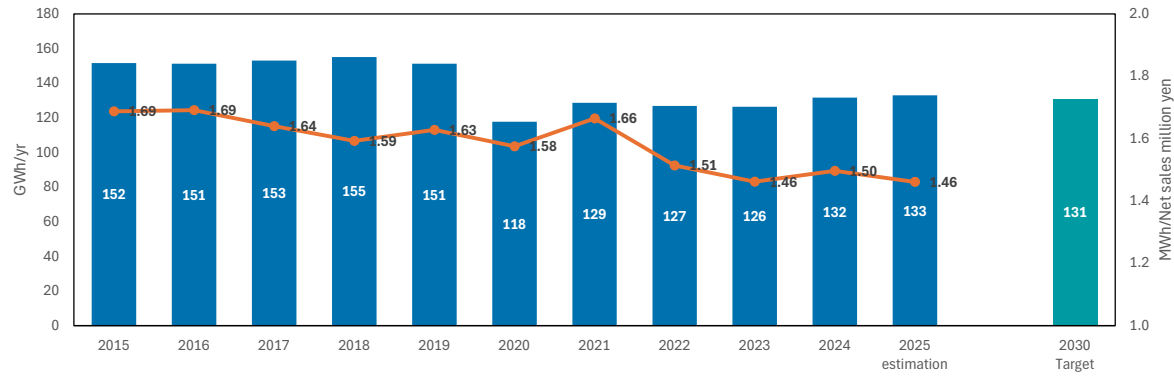
	Aggregation range	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025 estimation	2030 Target
Power Consumption	Seiren Group	197	198	202	217	213	173	195	195	197	208	209	195
	Domestic	152	151	153	155	151	118	129	127	126	132	133	131
	Overseas	46	47	49	62	62	55	66	68	71	77	76	64
Intensity (MWh/Net sales million yen)	Seiren Group	1.84	1.84	1.76	1.77	1.77	1.75	1.78	1.47	1.39	1.31	1.30	
	Domestic	1.69	1.69	1.64	1.59	1.63	1.58	1.66	1.51	1.46	1.50	1.46	
	Overseas	1.02	0.99	0.89	0.96	0.98	1.00	0.97	0.75	0.73	0.64	0.67	

2030 Target
195
131
64

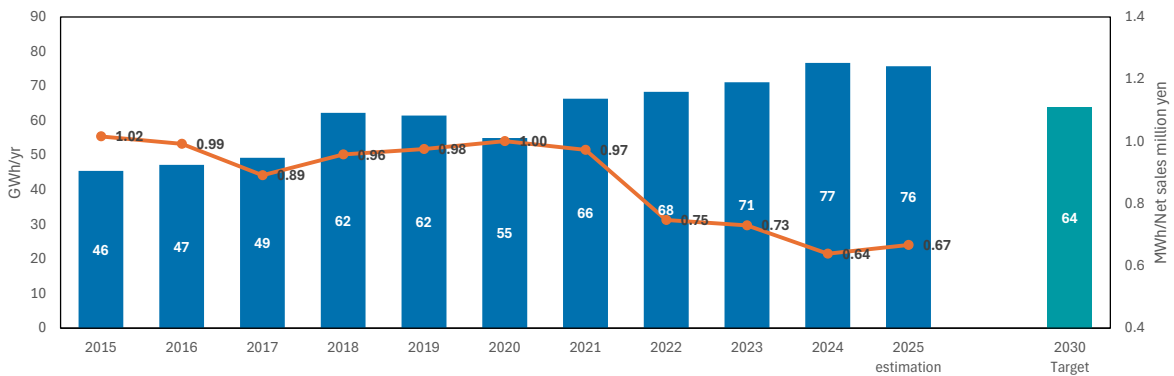
Power Consumption at Seiren Group



Power Consumption at Domestic



Power Consumption at Overseas



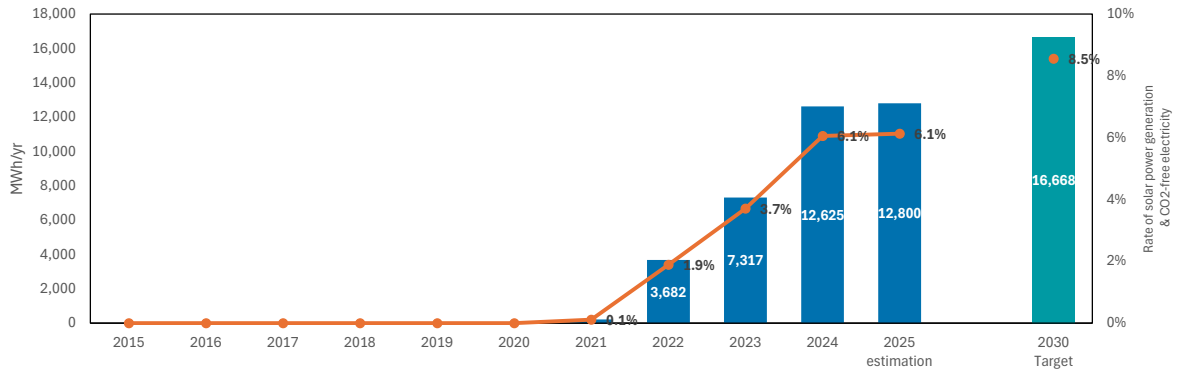
1. Climate change countermeasures

■ Solar power generation & CO2-free electricity

(MWh/yr)

	Aggregation range	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025 estimation	2030 Target
Power Consumption	Seiren Group	-	-	-	-	-	-	217	3,682	7,317	12,625	12,800	16,668
	Domestic	-	-	-	-	-	-	217	2,515	2,400	5,757	5,700	5,600
	Overseas	-	-	-	-	-	-	1,849	1,167	4,917	6,868	7,100	11,068
Ratio of solar power generation	Seiren Group	-	-	-	-	-	-	0.1%	1.9%	3.7%	6.1%	6.1%	8.5%
	Domestic	-	-	-	-	-	-	0.2%	2.0%	1.9%	4.4%	4.3%	4.3%
	Overseas	-	-	-	-	-	-	2.8%	1.7%	6.9%	8.9%	9.4%	17.3%

Solar power generation & CO2-free electricity at Seiren Group



1. Climate change countermeasures

CO2 emissions

(thousand ton-CO2/yr)

		Aggregation range	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025 estimation	2030 Target
Scope1, 2	Scope1	Seiren Group	145	139	122	123	114	89	99	98	103	104	103	97
	Scope2		109	108	137	137	129	102	112	113	111	112	115	109
	Scope1+2		254	247	259	259	242	192	211	211	215	215	218	206
	Scope1	Domestic	118	111	94	89	83	65	70	68	70	67	68	60
	Scope2		70	66	95	88	81	59	60	59	59	62	63	52
	Scope1+2		188	177	190	177	164	124	130	127	129	129	131	112
	Scope1	Overseas	27	28	27	34	30	24	29	30	33	36	35	37
	Scope2		40	42	42	49	48	43	52	54	52	50	52	57
	Scope1+2		66	70	69	83	79	68	81	84	85	86	87	94
Intensity (t-CO2/Net sales million yen)	Seiren Group		2.37	2.29	2.25	2.11	2.02	1.94	1.93	1.59	1.51	1.35	1.36	-
	Domestic		2.09	1.98	2.03	1.81	1.76	1.66	1.68	1.51	1.50	1.47	1.44	-
	Overseas		1.48	1.47	1.25	1.27	1.25	1.23	1.19	0.92	0.88	0.72	0.77	-

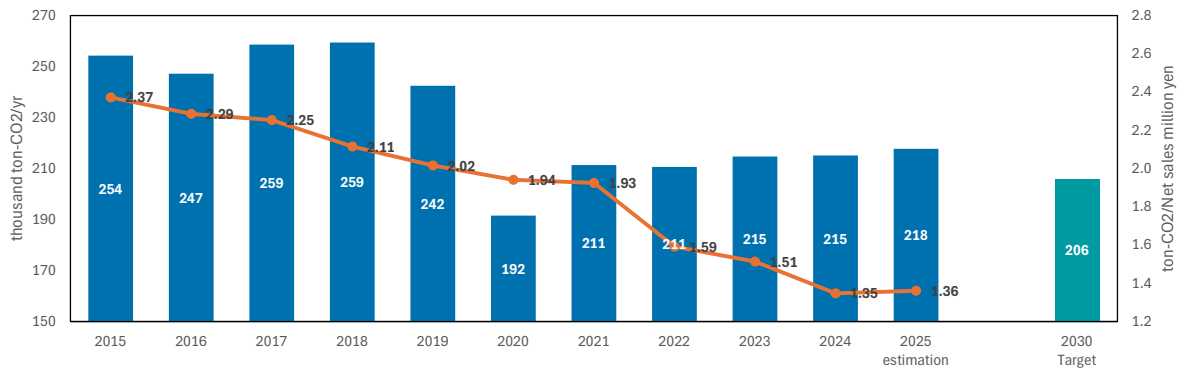
※June 2021 : 2030 target for CO2 emissions at Seiren's domestic sites changed to 46% reduction from the 2013 level (168 → 112 thousand ton)

※December 2024 : 2030 target for CO2 emissions at Seiren Group changed to 23% reduction from the 2013 level (269 → 206 thousand ton)

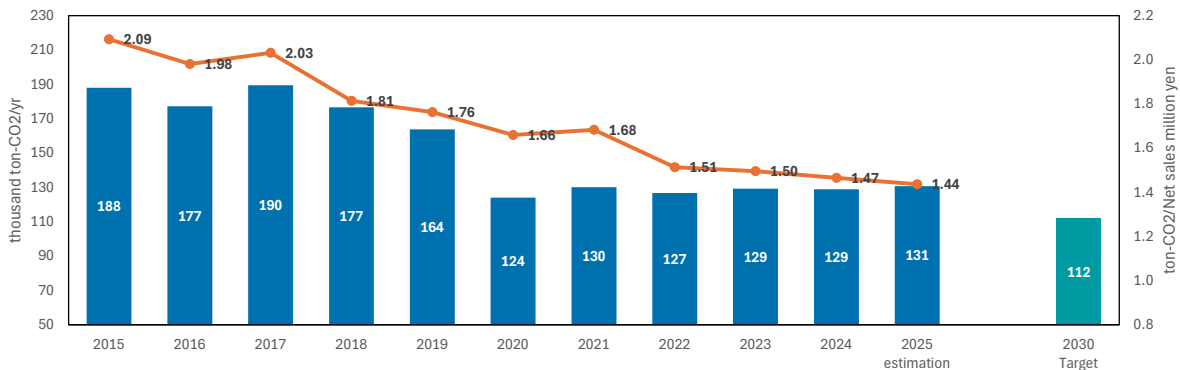
*1: From fiscal 2024, emissions from our sub-subsidiary KB Seiren DTY Co., Ltd. have been added, resulting in an additional 2,500 tons of emissions.

*2: From FY2024, the performance of SEIREN Hungary Kft. (Hungary), which started operation, was added, resulting in an additional 1,700 tons of emissions.

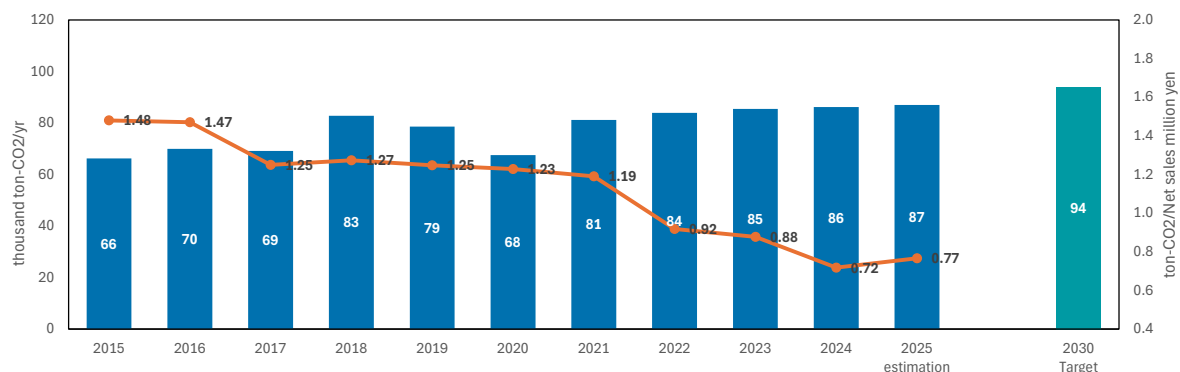
CO2 emissions at Seiren Group



CO2 emissions at Domestic



CO2 emissions at Overseas



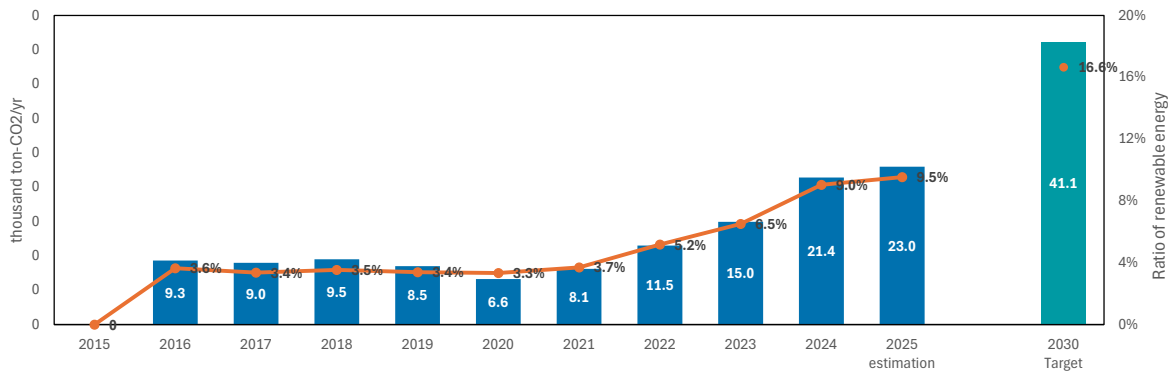
1. Climate change countermeasures

■ Reduction of CO2 emissions from the introduction of renewable energy

(thousand ton-CO2/yr)

	Aggregation range	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025 estimation	2030 Target
Biomass boiler	Domestic	-	9.3	9.0	9.5	8.5	6.6	7.5	9.8	11.8	15.9	17.2	28.8
Solar power generation & CO2-free electricity	Seiren Group	-	-	-	-	-	-	0.6	1.7	3.2	5.5	5.8	12.3
	Domestic	-	-	-	-	-	-	0.1	1.2	1.2	2.8	3.0	2.7
	Overseas	-	-	-	-	-	-	0.5	0.5	2.0	2.7	2.8	9.6
Biomass boiler + Solar power generation & CO2-free electricity	Seiren Group	-	9.3	9.0	9.5	8.5	6.6	8.1	11.5	15.0	21.4	23.0	41.1
	Domestic	-	-	-	-	-	-	7.6	11.0	13.0	18.7	20.2	31.5
	Overseas	-	-	-	-	-	-	0.5	0.5	2.0	2.7	2.8	9.6
Ratio of renewable energy	Seiren Group	-	3.6%	3.4%	3.5%	3.4%	3.3%	3.7%	5.2%	6.5%	9.0%	9.5%	16.6%
	Domestic	-	-	-	-	-	-	5.5%	8.0%	9.1%	12.7%	13.4%	22.0%
	Overseas	-	-	-	-	-	-	0.6%	0.6%	2.3%	3.0%	3.1%	9.3%

Reduction of CO2 emissions from the introduction of renewable energy at Seiren Group

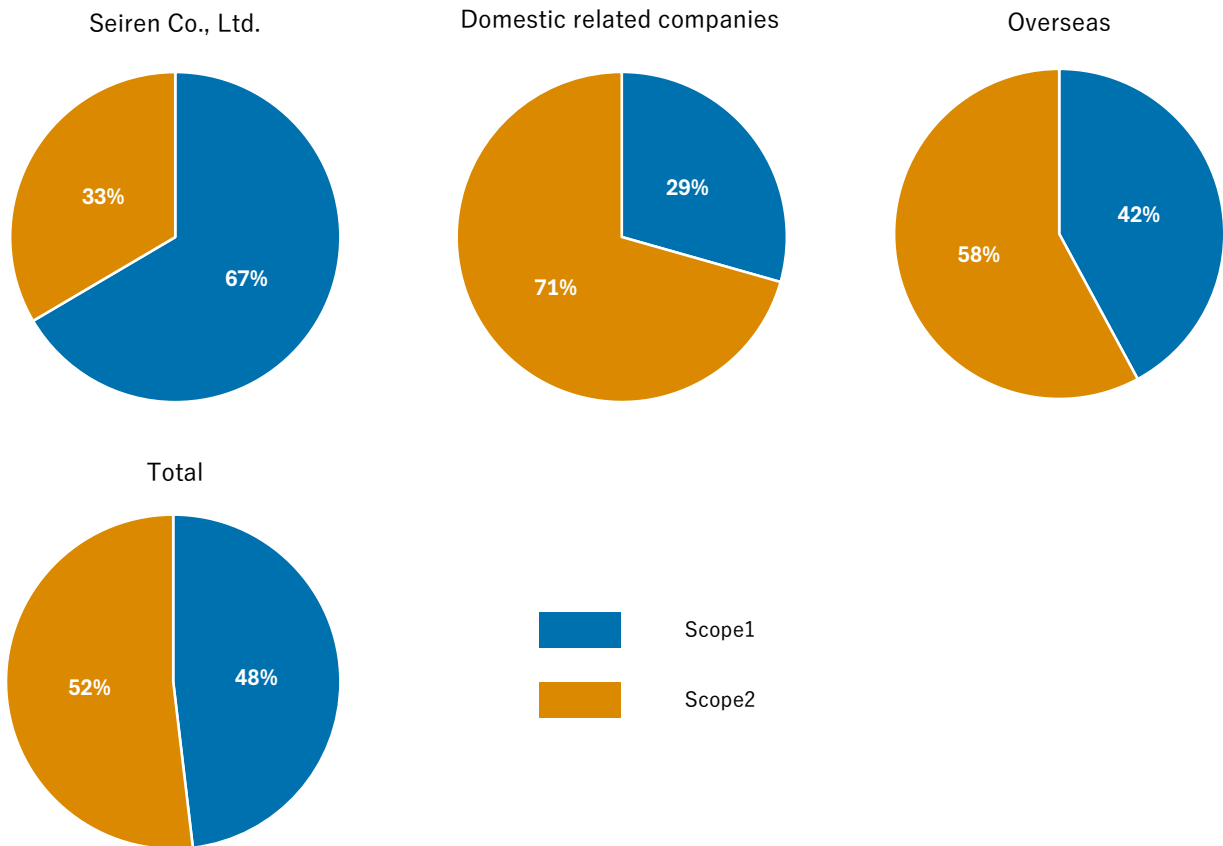


1. Climate change countermeasures

■CO2 emission inventories in 2024

(ton/yr)

Emission inventories	Seiren Co., Ltd.	Occupancy	Domestic Related Companies	Occupancy	Overseas	Occupancy	Total	Occupancy
Scope1	52,530	67%	14,685	29%	36,300	42%	103,515	48%
Scope2	26,431	33%	35,264	71%	49,897	58%	111,592	52%
Scope1 + 2	78,961		49,949		86,197		215,107	



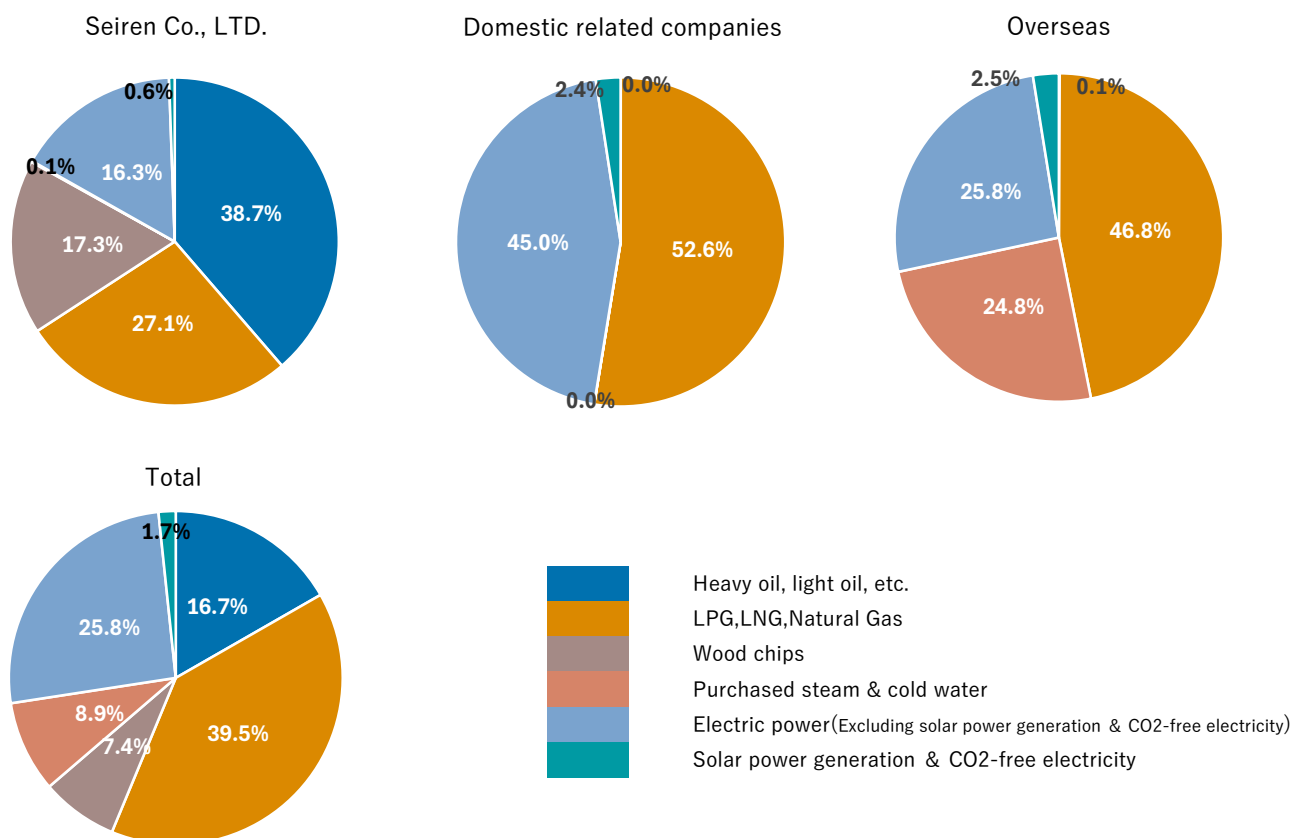
1. Climate change countermeasures

■ Energy use by source in 2024

(GW h /yr)

Energy	Seiren Co., Ltd.	Occupancy	Domestic Related Companies	Occupancy	Overseas	Occupancy	Total	Occupancy
Heavy oil, light oil, etc.	127	38.7%	0	0.0%	0	0.1%	127	16.7%
LPG,LNG,Natural Gas	89	27.1%	85	52.6%	127	46.8%	301	39.5%
Wood chips	57	17.3%					57	7.4%
Purchased steam & cold water	0	0.1%	0	0.0%	67	24.8%	67	8.9%
Electric power* ¹	53	16.3%	73	45.0%	70	25.8%	196	25.8%
Solar power generation & CO2-free electricity	2	0.6%	4	2.4%	7	2.5%	13	1.7%
Total	328		162		271		760	

*3: Excluding solar power generation & CO2-free electricity



1. Climate change countermeasures

■Supply Chain CO2 Emissions 2024

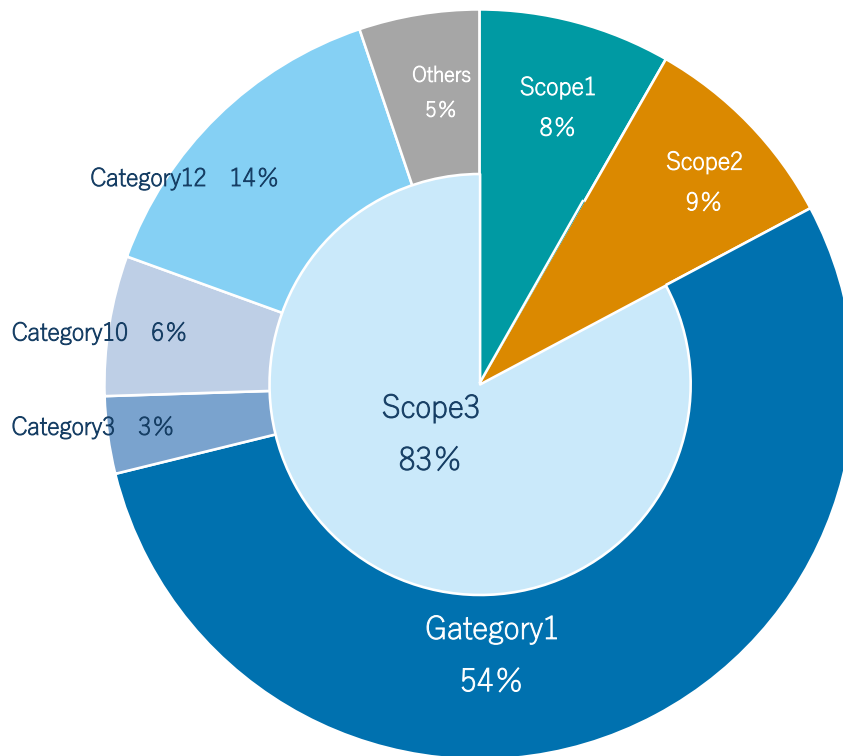
(thousand ton-CO2/yr)

	Scope1	Scope2	Scope3											計
				Category1	Category2	Category3	Category4	Category5	Category6	Category7	Category9	Category10	Category12	
Seiren Group	104	112	1,034	674	12	42	17	11	1	3	21	75	178	1,250
Occupancy	8%	9%	83%	54%	1%	3%	1%	1%	0%	0%	2%	6%	14%	

- Category 8, 11, 13, 14, and 15 are excluded because there are no applicable business activities
- Emission intensity was calculated using the fuel and electricity coefficients from the INVENTORY database IDEA V3
- For items there is no appropriate emission unit in IDEA, we set the unit based on our company's performance and calculated it
- Seiren Co., LTD., KB Seiren Co., LTD., and six major overseas bases*4 accounted for 85% of the Group's sales, and from there, emissions. we offset internal transactions and converted Scope 3 into sales to calculate the Group's overall supply chain CO2

*4 : SNA,SVMX,Suzhou, SAHA, Hebei, Shanghai

Supply Chain CO2 Emissions Ratio at Seiren Group



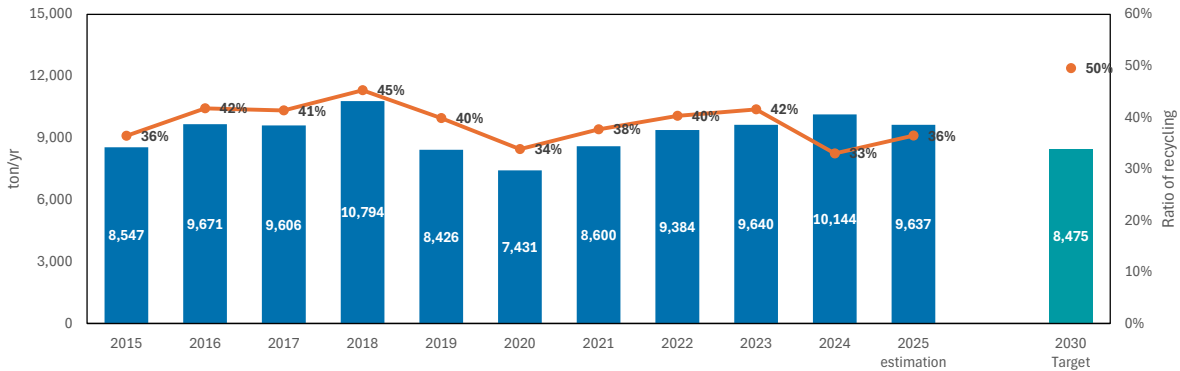
2. Promoting a circular economy

■Waste and Recycling

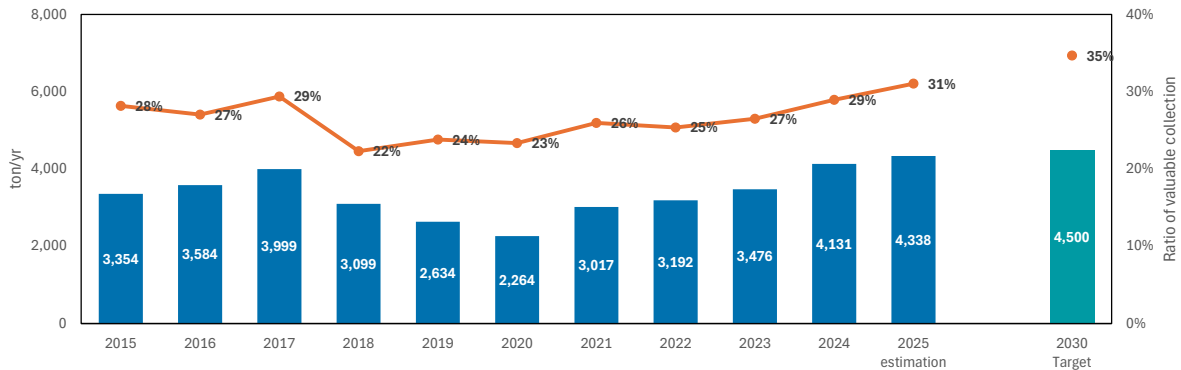
(ton/yr)

集計範囲		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025 estimation	2030 Target
Amount of waste	Seiren Group	8,547	9,671	9,606	10,794	8,426	7,431	8,600	9,384	9,640	10,144	9,637	8,475
	Domestic	4,403	5,467	5,445	6,106	4,621	3,643	4,245	4,905	4,970	4,544	4,317	4,975
	Overseas	4,143	4,204	4,161	4,688	3,805	3,788	4,356	4,480	4,670	5,600	5,320	3,500
Recycling Solid Fuel & Metal	Seiren Group	3,113	4,040	3,970	4,886	3,357	2,513	3,239	3,782	4,007	3,348	3,515	4,200
	Domestic	2,285	3,199	3,180	3,948	2,672	1,831	2,498	3,066	3,271	3,226	3,387	4,000
	Overseas	829	841	791	938	685	682	740	717	735	122	128	200
Incineration & Landfill	Seiren Group	5,433	5,631	5,635	5,908	5,069	4,918	5,361	5,602	5,633	6,796	6,121	3,975
	Domestic	2,118	2,268	2,265	2,158	1,949	1,812	1,746	1,839	1,699	1,318	1,100	975
	Overseas	3,315	3,363	3,371	3,750	3,120	3,107	3,615	3,763	3,935	5,478	5,192	3,000
Recycling ratio	Seiren Group	36%	42%	41%	45%	40%	34%	38%	40%	42%	33%	36%	50%
	Domestic	52%	59%	58%	65%	58%	50%	59%	63%	66%	71%	78%	80%
	Overseas	20%	20%	19%	20%	18%	18%	17%	16%	16%	2%	2%	6%
Valuable collection	Seiren Group	3,354	3,584	3,999	3,099	2,634	2,264	3,017	3,192	3,476	4,131	4,338	4,500
	Domestic	1,898	1,949	2,130	1,090	925	398	459	446	599	585	614	1,200
	Overseas	1,456	1,635	1,870	2,009	1,710	1,866	2,558	2,746	2,877	3,546	3,723	3,300
Valuable collection ratio	Seiren Group	28%	27%	29%	22%	24%	23%	26%	25%	27%	29%	31%	35%
	Domestic	30%	26%	28%	15%	17%	10%	10%	8%	11%	11%	12%	19%
	Overseas	26%	28%	31%	30%	31%	33%	37%	38%	38%	39%	41%	49%

Amount of waste and recycling rate at Seiren Group



Amount of Valuable collection at Seiren Group



2. Promoting a circular economy

■ Organic Solvent Recovery Volume from Waste Resin

(ton/yr)

	Aggregation range	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025 estimation
Organic Solvent Recovery Volume	Domestic	596	567	439	504	459	208	275	206	193	182	182

※Recovery volume is decreasing due to the expansion of solvent-free processing

■ Usage of Regenerated Organic Solvents (3 Types)

(ton/yr)

	Aggregation range	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025 estimation
Regenerated Organic Solvents	Seiren Co., Ltd.	333	284	384	333	305	220	364	415	518	625	600

※3 types of regenerated organic solvents referred to above: acetic acid, MEK and DMF

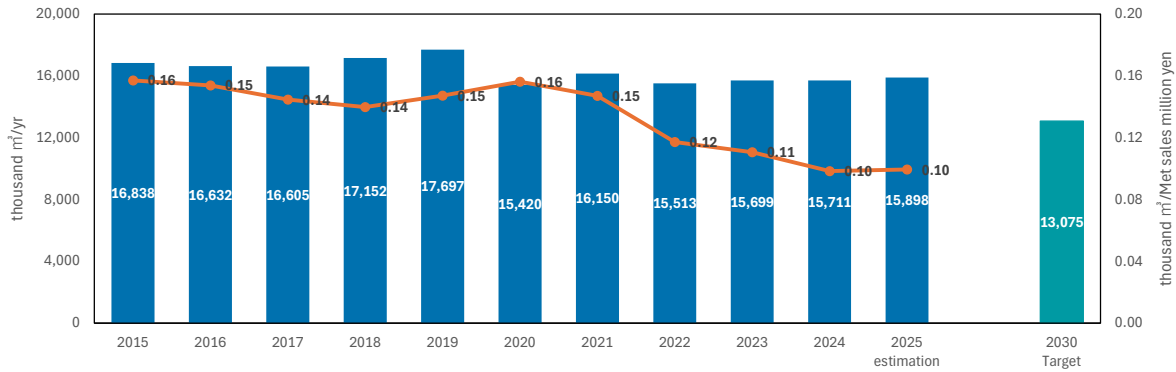
3. Pollution and biodiversity measures

Water Footprint of Production

(thousand m³/yr)

	Aggregation range	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025 estimation	2030 Target
Water Resource Inputs	Seiren Group	16,838	16,632	16,605	17,152	17,697	15,420	16,150	15,513	15,699	15,711	15,898	13,075
	Domestic	14,865	14,697	14,629	14,505	15,250	13,469	13,687	13,476	13,659	13,784	14,016	11,026
	Overseas	1,974	1,935	1,976	2,647	2,447	1,950	2,463	2,037	2,040	1,927	1,882	2,048
Intensity (thousand m ³ /Net sales million yen)	Seiren Group	0.16	0.15	0.14	0.14	0.15	0.16	0.15	0.12	0.11	0.10	0.10	—
	Domestic	0.17	0.16	0.16	0.15	0.16	0.18	0.18	0.16	0.16	0.16	0.15	—
	Overseas	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.02	0.02	0.02	0.02	—

Water Resource Inputs at Seiren Group

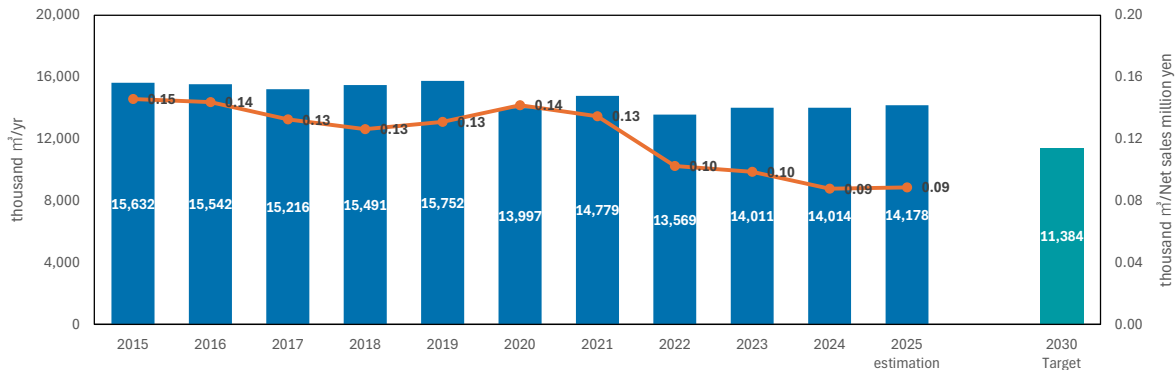


Volume of wastewater

(thousand m³/yr)

	Aggregation range	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025 estimation	2030 Target
Volume of wastewater	Seiren Group	15,632	15,542	15,216	15,491	15,752	13,997	14,779	13,569	14,011	14,014	14,178	11,384
	Domestic	14,079	14,009	13,651	13,251	13,649	12,195	12,664	11,904	12,338	12,440	12,630	9,780
	Overseas	1,554	1,533	1,565	2,240	2,104	1,802	2,114	1,665	1,673	1,575	1,548	1,604
Intensity (thousand m ³ /Net sales million yen)	Seiren Group	0.15	0.14	0.13	0.13	0.13	0.14	0.13	0.10	0.10	0.09	0.09	—
	Domestic	0.16	0.16	0.15	0.14	0.15	0.16	0.16	0.14	0.14	0.14	0.14	—
	Overseas	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.01	0.01	—

Volume of wastewater at Seiren Group



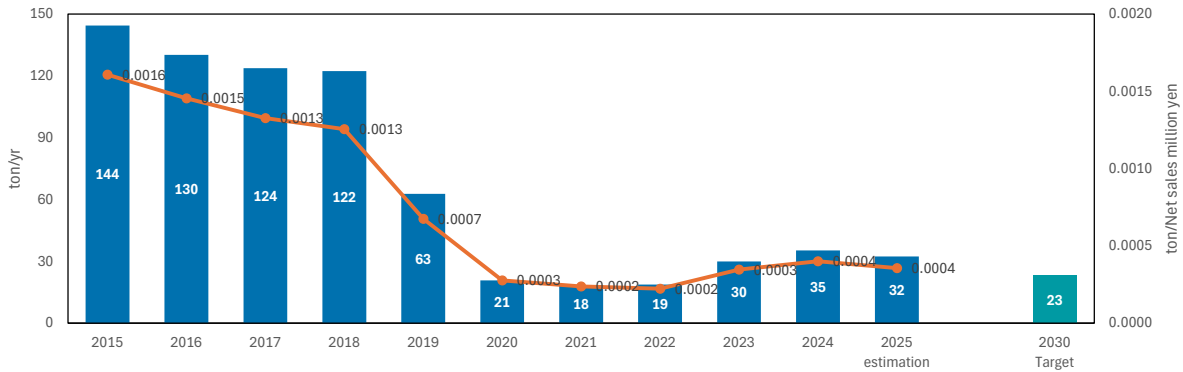
3. Pollution and biodiversity measures

■ Emissions and Transfers of PRTR Substances

(ton/yr)

	Aggregation range	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025 estimation	2030 Target
Emissions and Transfers of PRTR Substances	Domestic	144	130	124	122	63	21	18	19	30	35	32	23
	Seiren Co., Ltd.	124	113	106	106	47	7	8	7	18	22	20	15
	Domestic affiliates	20	17	18	17	16	14	10	11	12	13	12	8
Intensity (ton/Net sales million yen)	Domestic	0.0016	0.0015	0.0013	0.0013	0.0007	0.0003	0.0002	0.0002	0.0003	0.0004	0.0004	—
	Seiren Co., Ltd.	0.0021	0.0019	0.0017	0.0016	0.0008	0.0001	0.0002	0.0001	0.0003	0.0004	0.0003	—
	Domestic affiliates	0.0007	0.0006	0.0006	0.0005	0.0005	0.0005	0.0004	0.0004	0.0004	0.0004	0.0004	—

Emissions and Transfers of PRTR Substances at Domestic

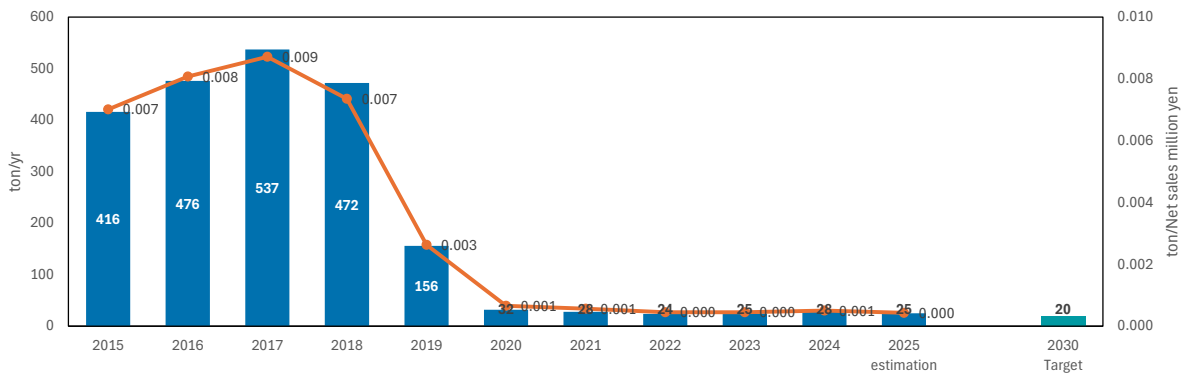


■ VOC emissions to the atmosphere

(ton/yr)

	Aggregation range	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025 estimation	2030 Target
VOC emissions to the atmosphere	Seiren Co., Ltd.	416	476	537	472	156	32	28	24	25	28	25	20
Intensity (ton/Net sales million yen)	Seiren Co., Ltd.	0.007	0.008	0.009	0.007	0.003	0.001	0.001	0.000	0.000	0.001	0.000	—

VOC emissions to the atmosphere at Seiren Co., LTD.



3. Pollution and biodiversity measures

■ Water resource risk assessment

For the Group's major production sites (19 sites) that are highly dependent on and have a large impact on water, we assessed water resource risks using the Water Risk Filter developed by the World Wide Fund for Nature (WWF) and identified risks to "water availability," "flooding," and "water quality" that are likely to pose risks to our operations.

We take appropriate measures at bases with high risks for water availability, flooding, and water quality, and strive to reduce these risks.

To address water availability risks, we are reducing water usage in production processes and reusing water that has been used once.

To address flood risks, we are working to ensure that business can continue even in the event of a large-scale disaster or unforeseen incident.

To address water quality risks, we are working to reduce emissions of hazardous substances and BOD and COD.

country	Company	Location	Water availability	Flooding	Water quality
Japan	Seiren Co., Ltd.	Katsuyama, Fukui			
	Seiren Co., Ltd.	Sabae, Fukui			
	Seiren Co., Ltd.	Nittazuka, Fukui			
	Seiren Co., Ltd.	Futsukaichi, Fukui			
	Seiren Co., Ltd.	Sakai, Fukui			
	KB SEIREN, LTD.	Sabae, Fukui			
	KB SEIREN, LTD.	Nagahama, Shiga			
	GUNSEN. CO, LTD.	Isesaki, Gunma			
U.S.A.	Seiren North America, LLC	Morganton, North Carolina			
Mexico	Seiren Viscotec Mexico S.A. de C.V.	Abasolo, Guanajuato			
Brazil	Seiren Produtos Automotivos Ltda.	Votorantim, Sao Paulo			
China	Seiren Suzhou Co., Ltd.	Suzhou, Jiangsu			
	Seiren Hebei Co., Ltd.	Shijiazhuang, Hebei			
	Seiren Guangdong Co., Ltd.	Guangzhou, Guangdong			
Thailand	Saha Seiren Co., Ltd.	Sriracha, Chonburi			
	Saha Seiren Co., Ltd.	Kabinburi, Prachinburi			
India	SEIREN INDIA PRIVATE LIMITED	Mysore, Karnataka			
Indonesia	PT.SEIREN INDONESIA	Bekasi, West Java			
Hungary	SEIREN Hungary Kft.	Pecs, Baranya			

Very Low - Middle	High	Very High
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3. Pollution and biodiversity measures

■ Biodiversity Risk Assessment

For our major production sites (19 sites) that have a large impact on biodiversity, we assessed biodiversity risks using the Biodiversity Risk Filter developed by the World Wide Fund for Nature (WWF), and confirmed risks in "water availability," "pollution," and "environmental factors" that are likely to pose a risk to our operations.

At sites with high risks in terms of "water availability," "pollution," and "environmental factors," we take appropriate measures to reduce these risks.

To address the risk of "water availability," we are reducing the amount of water used in the production process and reusing water that has already been used.

To address the risks of "pollution" and "environmental factors," we are working to reduce the emission of harmful substances into the atmosphere and rivers and strive to preserve the ecosystems in each region.

country	Company	Location	Water availability	Pollution	Environmental factors
Japan	Seiren Co., Ltd.	Katsuyama, Fukui			
	Seiren Co., Ltd.	Sabae, Fukui			
	Seiren Co., Ltd.	Nittazuka, Fukui			
	Seiren Co., Ltd.	Futsukaichi, Fukui			
	Seiren Co., Ltd.	Sakai, Fukui			
	KB SEIREN, LTD.	Sabae, Fukui			
	KB SEIREN, LTD.	Nagahama, Shiga			
	GUNSEN. CO, LTD.	Isesaki, Gunma			
U.S.A.	Seiren North America, LLC	Morganton, North Carolina			
Mexico	Seiren Viscotec Mexico S.A. de C.V.	Abasolo, Guanajuato			
Brazil	Seiren Produtos Automotivos Ltda.	Votorantim, Sao Paulo			
China	Seiren Suzhou Co., Ltd.	Suzhou, Jiangsu			
	Seiren Hebei Co., Ltd.	Shijiazhuang, Hebei			
	Seiren Guangdong Co., Ltd.	Guangzhou, Guangdong			
Thailand	Saha Seiren Co., Ltd.	Sriracha, Chonburi			
	Saha Seiren Co., Ltd.	Kabinburi, Prachinburi			
India	SEIREN INDIA PRIVATE LIMITED	Mysore, Karnataka			
Indonesia	PT.SEIREN INDONESIA	Bekasi, West Java			
Hungary	SEIREN Hungary Kft.	Pecs, Baranya			

Very Low - Middle	High	Very High
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