

## Environmental Performance Data

Disclosure	Performance		Unit	2021	2022	2023	2024
GRI 302-1	Total energy consumption within organization <sup>1</sup>		MWh	2,074,139.55	2,112,045.00	2,108,270.85	2,115,423.22
	Total non-renewable energy consumed		MWh	3,545,132.72	3,536,148.18	3,559,657.37	3,554,865.62
	Total non-renewable energy consumed	Stationary combustion	MWh	3,543,780.28	3,533,725.50	3,556,936.80	3,552,285.88
		Natural gas <sup>2</sup>	MWh	3,543,749.63	3,533,666.28	3,556,899.17	3,552,240.66
			GJ	12,757,396.60	12,721,096.85	12,804,734.58	12,787,964.08
			MMBTU	12,091,778.54	12,057,372.73	12,136,646.65	12,120,751.16
			kg	ND	246,521,343.00	240,663,151.00	240,411,621.00
		Diesel	MWh	30.65	59.21	37.63	45.22
			GJ	110.33	213.17	135.48	162.78
			Liter	3,029.50	5,853.00	3,720.00	4,469.59
		Mobile combustion	MWh	1,352.44	2,422.69	2,720.57	2,579.74
		Diesel	MWh	1,274.33	2,084.46	2,041.27	1,963.15
			GJ	4,587.58	7,504.07	7,348.59	7,067.33
			Liter	125,963.21	206,042.53	201,773.39	194,050.66
		Diesel B7	MWh	ND	ND	337.89	231.68
			GJ	ND	ND	1,216.42	834.05
			Liter	ND	ND	33,399.69	22,900.98
		Gasoline	MWh	78.11	338.23	341.40	384.91
			GJ	281.21	1,217.61	1,229.03	1,385.69
			Liter	8,933.00	38,678.86	39,041.70	44,017.96

### Remarks

ND means No Data Available

<sup>1</sup> The Company increased the data coverage of energy indicators to include the Company's Headquarter and number of transmission loss for the first time 2022.

<sup>2</sup> The Company consumed natural gas only in the Bangpa-in Cogeneration power plant.

Disclosure	Performance		Unit	2021	2022	2023	2024	
GRI 302-1	Total non-renewable energy sold <sup>3</sup>		MWh	1,600,174.99	1,593,951.63	1,604,580.92	1,591,225.70	
	Total non-renewable energy sold	Non-renewable electricity sold	MWh	1,543,171.23	1,533,338.61	1,542,060.25	1,533,780.19	
			GJ	5,555,371.97	5,519,974.82	5,551,372.48	5,521,564.51	
		Steam sold	MWh	57,003.77	60,613.03	62,520.68	57,445.51	
			GJ	205,211.93	218,205.15	225,072.64	206,802.20	
			Metric ton	ND	78,036.00	80,492.00	73,958.00	
		Non-renewable electricity generated and consumed within the organization		MWh	ND	ND	ND	ND
	Total energy purchased and consumed within the organization		MWh	10,521.86	4,491.23	3,703.03	3,960.20	
	Energy purchased and consumed within the organization		MWh	10,521.86	4,491.23	3,703.03	3,960.20	
			GJ	37,878.71	16,168.31	13,330.82	14,256.59	
	Total renewable energy consumed		MWh	87,596.57	165,357.22	149,491.37	70,739.37	
	Total renewable energy consumed		Renewable electricity from solar energy consumed	MWh	ND	0	0	0
				GJ	ND	0	0	0
			Renewable electricity from hydropower consumed	MWh	87,596.57	165,357.22	149,491.37	70,739.37
				GJ	315,347.64	595,281.23	538,164.62	254,659.69
			Total renewable electricity consumption within organization	MWh	ND	52,598.25	51,667.90	53,135.08
				GJ	ND	189,352.18	186,002.94	191,284.46
			Total transmission loss	MWh	ND	112,758.97	97,823.47	94,688.03
				GJ	ND	405,929.04	352,161.68	340,874.18
	Total renewable energy sold		MWh	9,172,747.20	9,883,066.03	8,594,597.34	8,653,739.79	
	Renewable energy sold		Renewable electricity sold	MWh	9,172,747.20	9,883,066.03	8,594,597.34	8,653,739.79
				GJ	33,021,889.92	35,578,753.09	30,940,302.89	31,153,214.65
GRI 302-3	Energy intensity	Total energy consumption within the organization per total energy generated	MWh/MWh	0.19	0.18	0.20	0.20	
THSI		Total electricity consumption per total energy generated	MWh/MWh	ND	0.0004	0.0004	0.0004	

**Remarks**

ND means No Data Available

<sup>3</sup> The Company sold non-renewable-energy only from the Bangpa-in Cogeneration power plant.

Disclosure	Performance		Unit	2021	2022	2023	2024
GRI 305-1, GRI 305-2	Total GHG emissions scope 1 and 2		tCO <sub>2</sub> e	721,309.65	717,775.96	721,781.47	721,140.86
GRI 305-1	Total GHG emissions scope 1, 2 and 3 <sup>4</sup>	Total GHG emissions scope 1	tCO <sub>2</sub> e	716,049.77	715,530.79	719,930.32	719,161.16
		Stationary combustion	tCO <sub>2</sub> e	715,684.30	714,330.78	719,021.43	718,081.76
		Stationary combustion — Natural gas	tCO <sub>2</sub> e	715,676.10	714,314.93	719,011.36	718,069.66
		Stationary combustion — Diesel	tCO <sub>2</sub> e	8.20	15.85	10.07	12.02
		Mobile combustion	tCO <sub>2</sub> e	365.47	652.55	727.20	690.46
		Mobile combustion — Diesel	tCO <sub>2</sub> e	345.18	564.68	552.98	531.82
		Mobile combustion — Diesel B7	tCO <sub>2</sub> e	ND	ND	85.52	58.64
		Mobile combustion — Gasoline	tCO <sub>2</sub> e	20.29	87.87	88.70	100.00
		Sulfur hexafluoride: SF6	tCO <sub>2</sub> e	0	253.80	136.30	235.00
		Sulfur hexafluoride: SF6 — Weight of sulfur hexafluoride: SF6	kg	0	10.80	5.80	10.00
		Refrigerants	tCO <sub>2</sub> e	ND	293.66	45.39	153.94
		Refrigerants	Refrigerant R134a	tCO <sub>2</sub> e	ND	0	87.88
			Refrigerant R134a	kg	ND	0	67.60
			Refrigerant R32	tCO <sub>2</sub> e	ND	0	7.20
			Refrigerant R32	kg	ND	0	10.63
			Refrigerant R22 (Reported separately from Scope 1 emissions)	tCO <sub>2</sub> e	ND	23.41	12.14
			Refrigerant R22 (Reported separately from Scope 1 emissions)	kg	ND	13.30	6.90
			Refrigerant R410a	tCO <sub>2</sub> e	ND	0	21.35
			Refrigerant R410a	kg	ND	0	11.10
			Refrigerant R407C	tCO <sub>2</sub> e	ND	293.66	18.35
			Refrigerant R407C	kg	ND	180.80	11.30
GRI 305-1 (Non-Kyoto Protocol)		Direct CO <sub>2</sub> emission from extinguishers	tCO <sub>2</sub> e	ND	0	0	0.00454
GRI 305-1			kg	ND	0	0	4.54

**Remarks**

ND means No Data Available

4 GHG emissions are calculated in accordance with the Kyoto Protocol and the GHG Protocol, using emission factors and conversion factors from TGO, UK DEFRA, and IPCC to ensure accuracy, consistency, and compliance with GRI Standards



Disclosure	Performance			Unit	2021	2022	2023	2024
GRI 305-2		Total GHG emissions scope 2		tCO <sub>2</sub> e	5,259.88	2,245.17	1,851.15	1,979.70
		Total GHG emissions scope 2	Purchased electricity GHG emissions scope 2 [Location-based]	tCO <sub>2</sub> e	5,259.88	2,245.17	1,851.15	1,979.70
			Purchased electricity GHG emissions scope 2 [Market-based]	tCO <sub>2</sub> e	5,259.88	2,245.17	1,851.15	1,979.70
GRI 305-3	Total GHG emissions scope 1, 2 and 3	Total GHG emissions scope 3	Total GHG emissions scope 3	tCO <sub>2</sub> e	ND	122,367.29	119,586.41	181,920.80
			Category 3: Fuel- and energy-related activities not included in scope 1 or 2	tCO <sub>2</sub> e	ND	122,367.29	119,586.41	181,920.80
			GHG emissions from transmission & distribution losses of purchased electricity	tCO <sub>2</sub> e	ND	443.28	287.67	390.87
			GHG emissions from upstream fuel uses	tCO <sub>2</sub> e	ND	121,924.01	119,220.92	181,529.93
			Natural gas	tCO <sub>2</sub> e	ND	121,770.14	119,049.42	181,366.53
			Diesel	tCO <sub>2</sub> e	ND	130.96	149.38	138.46
			Gasoline	tCO <sub>2</sub> e	ND	22.91	22.12	24.94
			Liquefied petroleum gas: LPG	tCO <sub>2</sub> e	ND	0	0	0
			Natural gas for vehicles: NGV	tCO <sub>2</sub> e	ND	0	0	0
GRI 305-4	GHG emissions intensity	Total energy generated <sup>5</sup>		MWh	10,771,901.16	11,704,379.09	10,412,371.50	10,459,304.91
		GHG emissions scope 1 and 2 per total energy generated		tCO <sub>2</sub> e/MWh	0.067	0.061	0.069	0.069
		GHG emissions scope 1 and 2 per total energy sold		tCO <sub>2</sub> e/MWh	ND	0.063	0.071	0.070
GRI 305-1		Biogenic emissions		tCO <sub>2</sub> e	ND	0	5.59	3.83
		Biogenic emissions (Reported separately from Scope 1 emissions)	Stationary combustion: Diesel B7	tCO <sub>2</sub> e	ND	0	0	0
			Mobile combustion: Diesel B7	tCO <sub>2</sub> e	ND	0	5.59	3.83

Remarks

ND means No Data Available)

5 Data from 2019-2021 were reported using power purchase agreement (PPA) between the Company and suppliers as reference, while data from 2022-2024 were reported using the Company's actual total energy generation.

Disclosure	Performance		Unit	2021	2022	2023	2024
GRI 305-7	Other air emissions <sup>6</sup>	Nitrogen oxides: NOx	ppm	ND	168.91	32.49	33.73
			kg	598,910.61	636,065.50	703,548.78	706,282.84
		Sulphur oxides: SOx	ppm	ND	1.16	1.29	0.77
			kg	24,398.44	34,192.07	37,992.93	20,785.85
		Persistent organic pollutants: POP	kg	ND	0	0	0
		Volatile organic compounds: VOC	kg	ND	0	0	0
		Hazardous pollutant: HAP	kg	ND	0	0	0
		Particulate matter: PM	mg/m <sup>3</sup>	ND	14.14	1.67	1.10
			kg	33,911.76	28,978.59	16,733.91	10,504.32
		Direct mercury emission	Metric ton	ND	0	0	0
	Other air emissions intensity	Nitrogen oxides: NOx	kg/MWh	0.056	0.054	0.068	0.426
		Sulphur oxides: SOx	kg/MWh	0.002	0.003	0.004	0.013
		Persistent organic pollutants: POP	kg/MWh	ND	0	0	0
		Volatile organic compounds: VOC	kg/MWh	ND	0	0	0
		Hazardous pollutant: HAP	kg/MWh	ND	0	0	0
		Particulate matter: PM	kg/MWh	0.003	0.002	0.002	0.063
		Direct mercury emission	Ton/MWh	ND	0	0	0
-	Avoided GHG emissions		tCO <sub>2</sub> e	4,604,509.49	5,023,206.78	4,371,169.94	4,399,901.38
-	Total renewable energy generated		MWh	9,210,861.16	10,048,423.25	8,744,088.70	8,801,563.07
-	Grid emission factor for Thailand		tCO <sub>2</sub> e/MWh	0.4999	0.4999	0.4999	0.4999

#### Remarks

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<sup>6</sup> The Company had other air emissions only from the Bangpa-in Cogeneration power plant.



About  
CKPower

Clean  
Electricity

Kind  
Neighbor

Partnership  
for Life

Performance  
Data

GRI Content  
Index

Assurance  
Statement

Disclosure	Performance		Unit	2021	2022	2023	2024
GRI 303-3	Total water withdrawal from all areas <sup>7</sup>		Million Liters	1,722.68	10,621.26	8,512.74	9,322.91
	Total water withdrawal from non-water stress areas		Million Liters	1,722.86	10,621.26	6,672.50	7,538.54
	Total water withdrawal from non-water stress areas	Municipal water suppliers Freshwater (≤1,000 mg/L Total Dissolved Solids)	Million Liters	1,722.85	1,837.46	0.60	0
		Surface water Freshwater (≤1,000 mg/L Total Dissolved Solids)	Million Liters	0.01	8,783.80	6,628.11	7,499.22
		Groundwater Freshwater (≤1,000 mg/L Total Dissolved Solids)	Million Liters	ND	0	43.79	39.32
		Water recycled and reused within the organization	Million Liters	ND	0	0	0
	Total water withdrawal from water stress areas <sup>8</sup>		Million Liters	0	0	1,840.24	1,784.36
	Total water withdrawal from water stress areas	Municipal water suppliers Freshwater (≤1,000 mg/L Total Dissolved Solids)	Million Liters	0	0	1,840.24	1,784.31
		Surface water Freshwater (≤1,000 mg/L Total Dissolved Solids)	Million Liters	0	0	0	0.05
		Groundwater Freshwater (≤1,000 mg/L Total Dissolved Solids)	Million Liters	ND	0	0	0
GRI 303-4	Water intensity	Total water withdrawal from all areas per total energy generated	Million Liters /MWh	0	0.001	0.001	0.001
	Total water discharged		Million Liters	344.56	9,042.01	6,837.47	7,603.39
	Total water discharged	Municipal water suppliers Freshwater (≤1,000 mg/L Total Dissolved Solids)	Million Liters	344.56	367.72	328.74	222.16
		Surface water Freshwater (≤1,000 mg/L Total Dissolved Solids)	Million Liters	ND	8,674.29	6,508.73	7,341.90
		Groundwater Freshwater (≤1,000 mg/L Total Dissolved Solids)	Million Liters	ND	0	0	39.32

#### Remarks

ND means No Data Available

7 The Company increased the data coverage of water indicators to include Xayaburi power plant, Nam Ngum 2 power plant and the Company's Headquarter for the first time in 2022.

8 The Company had withdrawal and water consumption from water stress areas at the Bang Pa-In Cogeneration Power Plant and the Bangkhenchai Solar power plant.

Disclosure	Performance		Unit	2021	2022	2023	2024
GRI 303-5	Total water consumption from all areas		Million Liters	1,378.30	1,579.25	1,675.30	1,719.52
	Total water consumption from water stress areas <sup>8</sup>		Million Liters	0	0	1,511.88	231.12
GRI 306-3	Total waste generated <sup>9</sup>		Metric ton	130.86	136.16	143.58	231.12
GRI 306-3	Total non-hazardous waste generated		Metric ton	114.11	120.53	119.49	124.04
GRI 306-4	Total non-hazardous waste generated	Total non-hazardous waste diverted from disposal	Metric ton	29.19	14.82	21.24	19.86
GRI 306-5		Total non-hazardous waste directed to disposal	Metric ton	84.92	105.71	98.25	104.18
GRI 306-3	Total hazardous waste generated		Metric ton	16.75	15.62	24.09	107.07
GRI 306-4	Total hazardous waste generated	Total hazardous waste diverted from disposal	Metric ton	5.03	4.60	8.21	44.29
GRI 306-5		Total hazardous waste directed to disposal	Metric ton	11.72	11.02	15.87	62.78
GRI 306-4	Total waste diverted from disposal [on-site and off-site]		Metric ton	34.22	19.42	29.46	64.15
	Total hazardous waste diverted from disposal [on-site]		Metric ton	5.03	0	0	0
	Total hazardous waste diverted from disposal [on-site]	Preparation for reuse [on-site]	Metric ton	3	0	0	0
		Recycling [on-site]	Metric ton	2.03	0	0	0
		Other recovery operations [on-site]	Metric ton	0	0	0	0
	Total hazardous waste diverted from disposal [off-site]		Metric ton	0	4.60	8.21	44.29
	Total hazardous waste diverted from disposal [off-site]	Preparation for reuse [off-site]	Metric ton	0	0	7	42.59
		Recycling [off-site]	Metric ton	0	0	0	0.48
		Other recovery operations [off-site]	Metric ton	0	4.6	1.21	1.22

#### Remarks

ND means No Data Available

<sup>8</sup> The Company had withdrawal and water consumption from water stress areas at the Bang Pa-In Cogeneration Power Plant and the Bangkhenchai Solar power plant.

<sup>9</sup> Major overhaul activity at Nam Ngum 2 power plant in 2023-2024 had caused the Company's amount of waste to increase when compared to last year.

Disclosure	Performance			Unit	2021	2022	2023	2024
GRI 306-4	Total non-hazardous waste diverted from disposal [on-site]			Metric ton	14.58	9.20	16.77	16.44
	Total non-hazardous waste diverted from disposal [on-site]	Preparation for reuse [on-site]		Metric ton	14.58	0	0	0
		Recycling [on-site]		Metric ton	0	0	1.30	2.14
		Other recovery operations [on-site]		Metric ton	0	9.2	15.47	14.30
	Total non-hazardous waste diverted from disposal [off-site]			Metric ton	14.61	5.62	4.47	3.42
	Total non-hazardous waste diverted from disposal [off-site]	Preparation for reuse [off-site]		Metric ton	0	0	0	0
		Recycling [off-site]		Metric ton	0	5.62	4.47	3.42
		Other recovery operations [off-site]		Metric ton	14.61	0	0	0
GRI 306-5	Total waste directed to disposal [on-site and off-site]			Metric ton	96.64	116.74	114.12	166.97
	Total waste directed to disposal [on-site]			Metric ton	74.94	82.24	73.97	77.87
	Total waste directed to disposal [on-site]	Total hazardous waste directed to disposal [on-site]		Metric ton	9.19	0	1.42	0.90
		Total waste directed to disposal [on-site]	Incineration with energy recovery [on-site]	Metric ton	0	0	0	0
			Incineration without energy recovery [on-site]	Metric ton	6.83	0	1.42	0.90
			Landfilling [on-site]	Metric ton	1.28	0	0	0
			Other disposal operations [on-site]	Metric ton	1.08	0	0	0
		Total non-hazardous waste directed to disposal [on-site]		Metric ton	65.75	82.24	72.55	76.97
		Total non-hazardous waste directed to disposal [on-site]	Incineration with energy recovery [on-site]	Metric ton	0	0	0	0
			Incineration without energy recovery [on-site]	Metric ton	44.86	40.18	31.88	38.31
			Landfilling [on-site]	Metric ton	20.88	42.06	40.67	38.66
			Other disposal operations [on-site]	Metric ton	0	0	0	0



Disclosure	Performance		Unit	2021	2022	2023	2024
GRI 306-5	Total waste directed to disposal [off-site]		Metric ton	21.70	34.50	40.15	89.09
	Total hazardous waste directed to disposal [off-site]		Metric ton	2.53	11.02	14.45	61.88
	Total hazardous waste directed to disposal [off-site]	Incineration with energy recovery [off-site]	Metric ton	0	10.50	14.06	21.82
		Incineration without energy recovery [off-site]	Metric ton	0	0.02	0.04	0.02
		Landfilling [off-site]	Metric ton	2.53	0.34	0.24	39.96
		Other disposal operations [off-site]	Metric ton	0	0.17	0.12	0.08
	Total non-hazardous waste directed to disposal [off-site]		Metric ton	19.17	23.47	25.69	27.21
	Total non-hazardous waste directed to disposal [off-site]	Incineration with energy recovery [off-site]	Metric ton	0	0	0	0
		Incineration without energy recovery [off-site]	Metric ton	19.17	14.35	10.08	5.68
		Landfilling [off-site]	Metric ton	0	0	4.72	2.89
		Other disposal operations [off-site]	Metric ton	0	9.12	10.90	10.44