

Environmental Performance

| | GRI | Indicators | Unit | Performance Result | | | | |
|--------|---------|--|--|--------------------|------------------|------------------|------------------|--------------|
| | | | | 2018 | 2019 | 2020 | 2021 | |
| Energy | GRI 302 | Total energy consumption within organization | MWh | 2,017,137.66 | 2,005,125.90 | 2,041,213.70 | 2,074,139.55 | |
| | | Total non - renewable energy consumed | MWh | 3,589,946.30 | 3,581,348.76 | 3,532,552.71 | 3,545,132.72 | |
| | | Total Stationary Combustion | MWh | 3,589,180.45 | 3,580,656.85 | 3,532,005.84 | 3,543,780.28 | |
| | | | MWh | 3,589,156.17 | 3,580,642.69 | 3,531,983.13 | 3,543,749.63 | |
| | | Natural Gas ¹ | GJ | 12,920,858.86 | 12,890,210.55 | 12,715,037.54 | 12,757,396.60 | |
| | | | MMBTU | 12,246,712.14 | 12,217,662.91 | 12,051,629.56 | 12,091,778.54 | |
| | | Natural Gas expense | Baht | 3,384,994,376.42 | 3,567,605,704.70 | 2,822,481,322.36 | 3,221,992,789.54 | |
| | | | MWh | 24.28 | 14.16 | 22.71 | 30.65 | |
| | | Diesel | GJ | 87.41 | 50.99 | 81.76 | 110.33 | |
| | | | Liter | 2,400.00 | 1,400.00 | 2,245.00 | 3,029.50 | |
| | | Mobile Combustion | MWh | 765.84 | 691.91 | 546.87 | 1,352.44 | |
| | | | MWh | 730.85 | 656.28 | 515.43 | 1,274.33 | |
| | | Diesel | GJ | 2,631.05 | 2,362.61 | 1,855.54 | 4,587.58 | |
| | | | Liter | 72,241.84 | 64,871.16 | 50,948.45 | 125,963.21 | |
| | | Gasoline | MWh | 35.00 | 35.63 | 31.45 | 78.11 | |
| | | | GJ | 125.98 | 128.28 | 113.20 | 281.21 | |
| | | | Liter | 4,002.00 | 4,075.00 | 3,596.00 | 8,933.00 | |
| | | | Total non - renewable energy sold ² | MWh | 1,626,252.34 | 1,628,783.12 | 1,593,168.78 | 1,600,859.32 |
| | | | Non - renewable energy sold | MWh | 1,552,883.05 | 1,560,829.98 | 1,535,670.45 | 1,543,851.11 |
| | | GRI 302-1d | | GJ | 5,590,334.26 | 5,618,942.98 | 5,528,369.39 | 5,557,819.53 |
| | | Steam sold | MWh | 73,369.29 | 67,953.14 | 57,498.33 | 57,008.21 | |
| | | | GJ | 264,127.32 | 244,629.34 | 206,992.34 | 205,227.93 | |

Remark: ¹ The amount of energy from natural gas is only available at Bangpa-in Cogeneration Power Plant only and there are no renewable energy generated at Bangpa-in Cogeneration Power Plant

² The volume of the energy sold is based on the Power Purchase Agreement (PPA) between the Company and partners.

Environmental Performance (continued)

| | GRI | Indicators | Unit | Performance Result | | | |
|------------------------------|------------|---|------|--------------------|---------------|---------------|---------------|
| | | | | 2018 | 2019 | 2020 | 2021 |
| Energy | GRI 302-1d | Total Energy Purchased | MWh | 3,838.78 | 17,260.70 | 8,708.58 | 10,521.86 |
| | | Electricity purchased | MWh | 3,838.78 | 17,260.70 | 8,708.58 | 10,521.86 |
| | | | GJ | 13,819.62 | 62,138.51 | 31,350.90 | 37,878.71 |
| | | Electricity purchased expense | Baht | 24,543,262.66 | 79,786,958.81 | 33,509,041.72 | 51,584,840.01 |
| | GRI 302-1b | Total renewable energy consumed ¹ | MWh | ND | ND | 50,041.11 | 87,596.57 |
| | | Solar cell | MWh | ND | ND | ND | ND |
| | | | GJ | ND | ND | ND | ND |
| | | Hydropower | MWh | ND | ND | 50,041.11 | 87,596.57 |
| | | | GJ | ND | ND | 180,147.98 | 315,347.64 |
| | GRI 302-1d | Total renewable energy sold | MWh | 2,467,187.98 | 2,535,123.97 | 7,241,637.74 | 9,172,747.20 |
| | | Renewable energy sold | MWh | 2,467,187.98 | 2,535,123.97 | 7,241,637.74 | 9,172,747.20 |
| | | | GJ | 8,881,805.67 | 9,126,373.28 | 26,069,683.71 | 33,021,625.75 |
| | GRI 302-3 | Energy Intensity | | | | | |
| Energy consumption intensity | | MWh consumption/ MWh generated | 0.53 | 0.48 | 0.23 | 0.19 | |
| Water | GRI 303-3a | Total Water Withdrawal ³ | ML | 1,838.97 | 2,033.15 | 1,907.22 | 1,722.86 |
| | | Municipal water supplies | ML | 1,838.97 | 2,033.15 | 1,907.22 | 1,722.86 |
| | | Surface water | ML | ND | ND | ND | 0.01 |
| | | Total volume of water recycled and reused by the organization | ML | ND | ND | ND | ND |
| | | Water recycled and treatment expense | Baht | 45,876,823.00 | 50,466,488.00 | 47,203,695.00 | 42,639,621.75 |
| | GRI 303-3b | Total Water Withdrawal from water stress | ML | 0.00 | 0.00 | 0.00 | 0.00 |
| | | Municipal water supplies | ML | 0.00 | 0.00 | 0.00 | 0.00 |

Remark: - ND stands for No Data available

³ Amount of water used

- Bangkhenchai Solar Power Plant began collecting data in August 2021.

- Excluding the amount of utility water used by the Nam Ngum 2 Hydroelectric Power Plant and the Xayaburi Hydroelectric Power Plant that are in the process of collecting data. There is a plan to install a water meter in Q1/2023.

Environmental Performance (continued)

| | GRI | Indicators | Unit | Performance Result | | | |
|--------------------|--------------------------------|---|-------------------|--------------------|-----------------|-----------------|---------------|
| | | | | 2018 | 2019 | 2020 | 2021 |
| Water | GRI 303-3b | Surface water | ML | 0.00 | 0.00 | 0.00 | 0.00 |
| | | Water Intensity | | | | | |
| | | Revenue | ML/MWh generate | 0.0005 | 0.0005 | 0.0002 | 0.0002 |
| | GRI 303-4 | Total Water Discharged⁴ | ML | 370.78 | 407.81 | 381.44 | 344.56 |
| | | Municipal water supplies | ML | 370.78 | 407.81 | 381.44 | 344.56 |
| | | Surface water | ML | ND | ND | ND | ND |
| GRI 303-5 | Total Water Consumption | ML | 1,468.20 | 1,625.34 | 1,528.56 | 1,378.30 | |
| Effluent and Waste | GRI 306-3 Offsite | Hazardous waste diverted from disposal (Offsite) | Metric ton | 0.00 | 0.00 | 0.00 | 0.00 |
| | | Reuse | Metric ton | 0.00 | 0.00 | 0.00 | 0.00 |
| | | Recycle | Metric ton | 0.00 | 0.00 | 0.00 | 0.00 |
| | | Other | Metric ton | 0.00 | 0.00 | 0.00 | 0.00 |
| | | Hazardous waste disposed (Offsite)⁵ | Metric ton | 0.00 | 0.00 | 1.50 | 2.53 |
| | | Incineration with energy recovery | Metric ton | 0.00 | 0.00 | 0.00 | 0.00 |
| | | Incineration without energy recovery | Metric ton | 0.00 | 0.00 | 0.00 | 0.00 |
| | | Landfill | Metric ton | 0.00 | 0.00 | 1.50 | 2.53 |
| | | Other | Metric ton | 0.00 | 0.00 | 0.00 | 0.00 |
| | | Non-Hazardous waste diverted from disposal (Offsite)⁶ | Metric ton | 0.00 | 0.00 | 15.40 | 14.61 |
| | | Reuse | Metric ton | 0.00 | 0.00 | 0.00 | 0.00 |
| | | Recycle | Metric ton | 0.00 | 0.00 | 0.00 | 0.00 |
| | | Other | Metric ton | 0.00 | 0.00 | 15.40 | 14.61 |
| | | Non-Hazardous waste disposed (Offsite)⁷ | Metric ton | 9.92 | 14.82 | 25.42 | 19.17 |
| | | Incineration with energy recovery | Metric ton | 0.00 | 0.00 | 0.00 | 0.00 |
| | | Incineration without energy recovery | Metric ton | 9.92 | 14.82 | 13.92 | 19.17 |

Remark: - ND stands for No Data available

⁴ the amount of water discharged represent Bangpa-in Cogeneration Power Plant only.

⁵ The amount of hazardous waste disposed of outside the organization is the data of the Xayaburi Hydroelectric Power Plant, which has been operating since 2020.

⁶ Amount of general waste that is reused outside the organization and the amount of general waste disposed of within the organization is data from the Xayaburi Hydroelectric Power Plant and the Nam Ngum 2 Hydroelectric Power Plant only

⁷ Amount of general waste disposed of outside the organization and the amount of hazardous waste recycled within the organization are the data of Bangpa-in Cogeneration Power Plant only

Environmental Performance (continued)

| | GRI | Indicators | Unit | Performance Result | | | | |
|--------------------|-----------|------------|--|--------------------|-------------|--------------|--------------|--------------|
| | | | | 2018 | 2019 | 2020 | 2021 | |
| Effluent and Waste | GRI 306-3 | Landfill | Metric ton | 0.00 | 0.00 | 11.50 | 0.00 | |
| | Offsite | Other | Metric ton | 0.00 | 0.00 | 0.00 | 0.00 | |
| | GRI 306-3 | Onsite | Hazardous waste diverted from disposal (Onsite)⁷ | Metric ton | 6.78 | 26.41 | 4.84 | 5.03 |
| | | | Reuse | Metric ton | 2.78 | 21.31 | 2.54 | 3.00 |
| | | | Recycle | Metric ton | 4.00 | 5.10 | 2.30 | 2.03 |
| | | | Other | Metric ton | 0.00 | 0.00 | 0.00 | 0.00 |
| | | | Hazardous waste disposed (Onsite)⁸ | Metric ton | 0.05 | 1.47 | 2.46 | 9.19 |
| | | | Incineration with energy recovery | Metric ton | 0.00 | 0.00 | 0.00 | 0.00 |
| | | | Incineration without energy recovery | Metric ton | 0.00 | 0.00 | 2.02 | 6.83 |
| | | | Landfill | Metric ton | 0.05 | 1.47 | 0.44 | 1.28 |
| | | | Other | Metric ton | 0.00 | 0.00 | 0.00 | 1.08 |
| | | | Non-Hazardous waste diverted from disposal (Onsite)⁹ | Metric ton | 0.00 | 0.00 | 0.00 | 14.58 |
| | | | Reuse | Metric ton | 0.00 | 0.00 | 0.00 | 14.58 |
| | | | Recycle | Metric ton | 0.00 | 0.00 | 0.00 | 0.00 |
| | | | Other | Metric ton | 0.00 | 0.00 | 0.00 | 0.00 |
| | | | Non-Hazardous waste disposed (Onsite)⁶ | Metric ton | 0.00 | 0.00 | 46.34 | 65.75 |
| | | | Incineration with energy recovery | Metric ton | 0.00 | 0.00 | 0.00 | 0.00 |
| | | | Incineration without energy recover | Metric ton | 0.00 | 0.00 | 42.50 | 44.86 |
| | | | Landfill | Metric ton | ND | ND | 3.84 | 20.88 |
| | | | Other | Metric ton | 0.00 | 0.00 | 0.00 | 0.00 |

Remark: - ND stands for No Data available

⁶ Amount of general waste that is reused outside the organization and the amount of general waste disposed of within the organization is data from the Xayaburi Hydroelectric Power Plant and the Nam Ngum 2 Hydroelectric Power Plant only

⁷ Amount of general waste disposed of outside the organization and the amount of hazardous waste recycled within the organization are the data of Bangpa-in Cogeneration Power Plant only

⁸ The amount of hazardous waste disposed of within the organization is the information of Bangpa-in Cogeneration Power Plant and Xayaburi Hydroelectric Power Plant only.

⁹ The amount of general waste that is reused within the organization is the information of the Nam Ngum 2 Hydroelectric Power Plant only

Environmental Performance (continued)

| GRI | Indicators | Unit | Performance Result | | | | |
|-------------------------|--|---|------------------------|--------------|--------------|--------------|---------------|
| | | | 2018 | 2019 | 2020 | 2021 | |
| Greenhouse gas emission | GRI 305 | Total GHG Emission (Scope 1+2) | tCO ₂ e | 726,812.62 | 731,141.74 | 717,288.67 | 721,309.64 |
| | | Total GHG Emission Scope 1 | tCO ₂ e | 725,050.61 | 723,443.46 | 713,439.47 | 716,049.76 |
| | | Natural Gas ¹⁰ | tCO ₂ e | 724,852.65 | 723,126.85 | 713,299.86 | 715,684.30 |
| | | Diesel | tCO ₂ e | 724,846.15 | 723,126.81 | 713,299.80 | 715,676.10 |
| | | Liquefied Petroleum Gas | tCO ₂ e | 6.50 | 0.04 | 0.06 | 8.20 |
| | GRI 305-1 | Mobile Combustion | tCO ₂ e | 197.96 | 177.77 | 139.61 | 365.46 |
| | | Diesel | tCO ₂ e | 197.96 | 177.77 | 139.61 | 345.18 |
| | | Gasoline | tCO ₂ e | 0.00 | 0.00 | 0.00 | 20.28 |
| | | Sulfur Hexafluoride SF6 ¹¹ | tCO ₂ e | 0.00 | 138.85 | 0.00 | 0.00 |
| | | Weight of Sulfur Hexafluoride: SF6 | Kg | 0.00 | 5.91 | 0.00 | 0.00 |
| | | Total GHG Emission Scope 2 | tCO ₂ e | 1,762.00 | 7,698.27 | 3,849.19 | 5,259.88 |
| | GRI 305-2 | Electricity purchased | tCO ₂ e | 1,762.00 | 7,698.27 | 3,849.19 | 5,259.88 |
| | | Grid Emission Factor | tCO ₂ e/MWh | 0.4590 | 0.4460 | 0.4420 | 0.4999 |
| | GRI 305-3 | Total GHG Emission Scope 3 ¹² | tCO ₂ e | ND | ND | ND | ND |
| | | GHG Intensity | | | | | |
| | GRI 305-4 | Total electricity generated | MWh | 4,020,071.03 | 4,095,953.95 | 8,777,307.19 | 10,716,598.31 |
| | | GHG (Scope 1+ Scope2) Per unit electricity generated | tCO ₂ e/MWh | 0.18 | 0.18 | 0.08 | 0.07 |
| | Other air emission¹³ | | | | | | |
| GRI 305-7 | NOx | Kg | 440,614.05 | 600,637.09 | 597,770.75 | 598,910.61 | |
| | SOx | Kg | 12,415.79 | 18,555.05 | 17,258.39 | 24,398.44 | |
| | Particulate Matter: PM | Kg | 14,867.35 | 25,834.65 | 21,890.13 | 33,911.76 | |

Remark: - ND stands for No Data available

¹⁰ Stationary combustion This is the information of Bangpa-in Cogeneration Power Plant and Xayaburi Hydroelectric Power Plant only; and Mobile combustion data of Bangpa-in Cogeneration Power Plant and Xayaburi Hydroelectric Power Plant is not included

¹¹ Sulfur Hexafluoride (SF 6) is used at Bangpa-in Cogeneration Power Plant only

¹² Data collection system of greenhouse gas emissions Scope 3 is in development

¹³ Other air emissions occur at Bangpa-in Cogeneration Power Plant only

Environmental Performance (continued)

| | GRI | Indicators | Unit | Performance Result | | | |
|-------------------------|-----|----------------------------------|-------------------------|--------------------|--------------|--------------|--------------|
| | | | | 2018 | 2019 | 2020 | 2021 |
| Greenhouse gas emission | - | Avoided GHG Emission | tCO ₂ e | 1,132,439.28 | 1,130,665.29 | 3,200,803.44 | 4,585,456.33 |
| | | Total Renewable Energy generated | MWh | 2,467,187.98 | 2,535,123.97 | 7,241,636.74 | 9,172,747.20 |
| | | Grid Emission Factor | tCO ₂ e/ MWh | 0.4590 | 0.4460 | 0.4420 | 0.4999 |

Remark: - Xayaburi Hydroelectric Power Plant started commercial operation and start collecting environmental data in October 2019