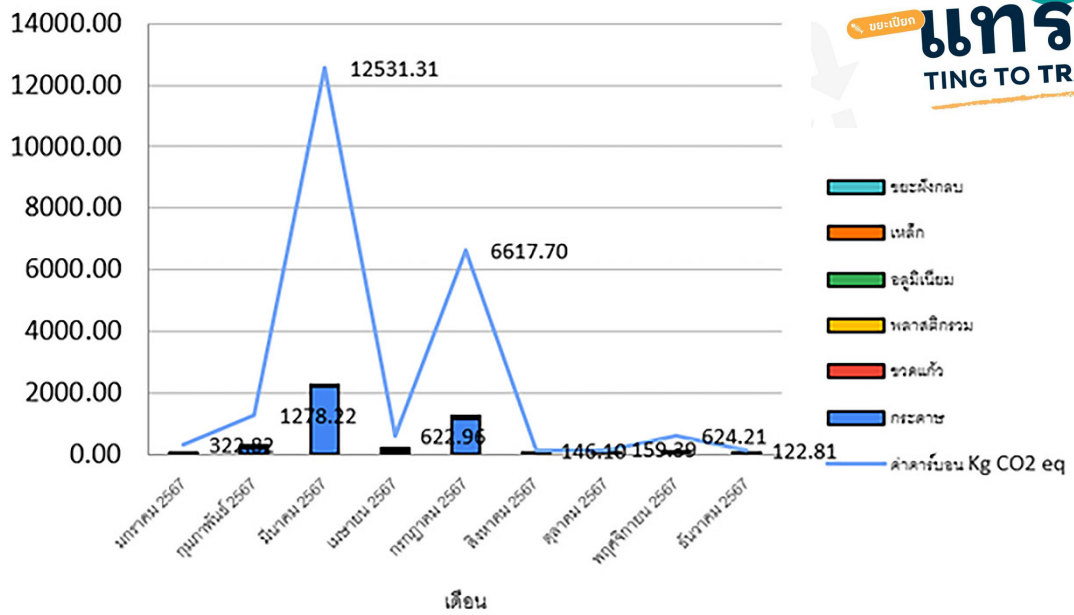
• Ratch Pathana Energy Public Company Limited participated in the “Ting to Trash” project with the Securities and Exchange Commission (SEC) and the Thai Listed Companies Association to promote registered companies’ understanding of proper waste segregation methods and to foster an organizational culture aimed at reducing greenhouse gas emissions.

In 2024, the project segregated 6 types of waste: paper, landfill waste, glass bottles, mixed plastics, metal, and aluminum, with a total weight of 4,167 kilograms. This effort helped reduce greenhouse gas emissions by 22,425.51 kg CO2 equivalent.

Performance Results of the “Ting to Trash” Project (2024)



Air Quality Management

The company strictly adheres to legal requirements for air quality management as follows:

- Air quality measurement equipment is installed at the stack venting point to monitor the levels of pollutants released into the air. These pollutants include total suspended particulates (TSP), sulfur dioxide (SOx as SO2), and nitrogen dioxide (NOx as NO2). The measured pollutant levels for all three types are within the limits set by legal standards.
- Air quality measurement equipment is also installed in the surrounding community areas around the plant. The company monitors air quality regularly and prepares environmental monitoring reports to be presented to the community and relevant authorities every 6 months. This is done to ensure continuous monitoring and control of air quality impacts, keeping them within the legal standards.
- The company has installed an electrostatic precipitator (ESP) system, which is highly effective in removing over 99.5% of particulate matter from exhaust gases at the Sako-Cogen Green Biomass Power Plant and the Sako-Green Forest Biomass Power Plant. This equipment helps prevent airborne dust pollution from being emitted from the power plants, ensuring that the air released from the stack meets the required air quality standards.

Air Pollution Emission Reduction Targets from Production Processes, Year 2024

Targets	Performance Results
Ratch Pathana Energy Power Plant	
Reduce nitrogen oxide emissions by more than 280 metric tons from standard requirements, equivalent to 10%	Reduced by 419.38 metric tons, equivalent to 65.79% reduction from standard requirements
Reduce sulfur oxide emissions by more than 65 metric tons from standard requirements, equivalent to 10%	Reduced by 144.05 metric tons, equivalent to 98.15% reduction from standard requirements
Reduce total particulate matter by more than 95 metric tons from standard requirements, equivalent to 10%	Reduced by 98.06 metric tons, equivalent to 81.37% reduction from standard requirements
Sahacogen Green Power Plant	
Reduce nitrogen oxide emissions by 54.3 metric tons, equivalent to 10% from standard requirements	Reduced nitrogen oxide emissions by 236.25 metric tons, equivalent to 43.5% from standard requirements
Reduce sulfur oxide emissions by 22.7 metric tons, equivalent to 10% from standard requirements	Sulfur oxide emissions reduced by 221.11 metric tons, equivalent to 97.5% reduction from standard require-ments
Reduce total particulate matter by 17.3 metric tons, equivalent to 10% from standard requirements	Total particulate matter reduced by 165.41 metric tons, equivalent to 95.4% reduction from standard require-ments
Sahagreen Forest Power Plant	
Reduce nitrogen oxide emissions by 21.4 metric tons, equivalent to 10% from standard requirements	Reduced nitrogen oxide emissions by 173.33 metric tons, equivalent to 81.8% from standard requirements
Reduce sulfur oxide emissions by 9.0 metric tons, equivalent to 10% from standard requirements	Sulfur oxide emissions reduced by 88.12 metric tons, equivalent to 98.4% reduction from standard require-ments
Reduce total particulate matter by 6.8 metric tons, equivalent to 10% from standard requirements	Total particulate matter reduced by 64.82 metric tons, equivalent to 94.7% reduction from standard require-ments

Air Quality Monitoring Results for Ratch Pathana and Affiliates, 2022-2024

Parameter	Average Monitoring Results (Min-Max)			Legal Criteria
	2022	2023	2024	
Natural Gas Power Plant				
Ratch Pathana Energy Power Plant				
• Total Suspended Particulates (TSP) (mg/m^3)	1.58–6.05	0.4–3.52	4.91–13.10	≤ 54
• Sulfur Dioxide (SOx as SO_2) (ppm)	0.13–0.87	0.07–1.3	0.18–0.83	≤ 18
• Nitrogen Dioxide (NOx as NO_2) (ppm)	18.75–97.74	30.5–70.99	17.32–65.7	≤ 108
• Fine Particulate Matter (PM 2.5) (µg/m^3)				
• Ban Nong Kham Community	–	–	20.2–27.0	≤ 37.5
• Ban Huai Lek Community	–	–	24.6–29.6	≤ 37.5
• Nisarat Kindergarten	–	–	22.8–29.4	≤ 37.5
• Nong Phang Phuai Community	–	–	17.6–31.3	≤ 37.5
Biomass Power Plants				
Sahacogen Green Biomass Power Plant				
• Total Suspended Particulates (TSP) (mg/m^3)	16.4–28.9	5.4–10	1.6–8.6	≤ 120
• Sulfur Dioxide (SOx as SO_2) (ppm)	<1.3	<1.4	3.7–4.3	≤ 60
• Nitrogen Dioxide (NOx as NO_2) (ppm)	122–143.8	65.8–77.1	209.4–216.4	≤ 200
• Fine Particulate Matter (PM 2.5) (µg/m^3)				
• Nong Pla Kho Temple	9.6–19.6	11.4–36.0	14.9–33.0	≤ 37.5
• San Luang Temple	9.5–19.7	0.046–0.140	16.5–33.2	≤ 37.5
Sahagreen Forest Biomass Power Plant				
• Total Suspended Particulates (TSP) (mg/m^3)	3.3–8.7	39.4–52.8	2.8–11.5	≤ 120
• Sulfur Dioxide (SOx as SO_2) (ppm)	<1.3	<1.4	1.6–3.8	≤ 60
• Nitrogen Dioxide (NOx as NO_2) (ppm)	60.6–60.9	4–72.4	45.1–102.7	≤ 200
• Fine Particulate Matter (PM 2.5) (µg/m^3)				
• Ban Huai Nam Sai School	4.2–28.3	35–37.2	1.3–62.0*	≤ 37.5
• Ban Khui Pom Sub-district Health Promotion Hospital	4.6–23.1	34.3–37.3	3.6–55.0*	≤ 37.5

Note: * Although these measurements exceeded the standard threshold in certain periods, a comprehensive environmental assessment, which considered stack emission monitoring results in conjunction with meteorological data such as wind speed and direction, indicated that the dispersion pattern of pollutants did not impact the surrounding communities. Therefore, it can be reasonably concluded that the project activities did not adversely affect air quality in community areas. The measured values more likely reflect the general dispersion characteristics of pollutants in the overall area rather than direct impacts on the communities.