ENVIRONMENTAL

Environmental Operations Commitment to Environmental Management

Ratch Pathana and Affiliates set environmental goals with a strong commitment to continuously improving its management systems to meet high-quality standards. The company integrates business operations with environmental stewardship and social responsibility. It has established policies on quality, environmental protection, safety, and energy conservation to ensure the reliable supply of high-quality energy while taking responsibility for environmental protection, pollution prevention, occupational health and safety, energy conservation, and greenhouse gas reduction.

Environmental Policy and Compliance

1. The company strictly adheres to laws and regulations governing quality, environmental protection, occupational health and safety, and energy management.
2. Measures are in place to prevent, reduce, and mitigate pollution, wastewater discharge, waste, and emissions resulting from business activities. Efficiency improvements aim to reduce energy and water consumption while preserving biodiversity and adapting to climate change.
3. Risk management strategies are implemented to minimize incidents, accidents, asset damage, and occupational hazards affecting employees, contractors, and stakeholders.
4. Employees, contractors, and stakeholders are provided with training and awareness programs on environmental management, quality control, and energy conservation.
5. Stakeholder engagement and consultation processes are promoted to enhance operational safety and efficiency.
6. The company allocates adequate resources to achieve environmental and sustainability objectives while ensuring efficient use of natural resources.
7. The company maintains the security of its utilities and infrastructure, ensuring preparedness for emergencies affecting production and supply chain continuity.
8. Environmental performance and sustainability targets are regularly reviewed to drive continuous improvement, with transparent communication of progress to stakeholders.

Environmental Compliance and Performance

Ratch Pathana and Affiliates committed to full compliance with environmental regulations and legal requirements applicable to its operations. The company adheres strictly to Environmental Impact Assessment (EIA) frameworks at Rach Patana Energy Power Plant, as well as Initial Environmental Examination (IEE) and Code of Practice (CoP) guidelines at Sahacogen Green Biomass Power Plant and Sahagreen Forest Biomass Power Plant. To ensure compliance, environmental quality is continuously monitored, with biannual reports submitted to regulatory authorities.

The company has also established an Environmental Management System (EMS) to ensure operations align with legal and regulatory requirements. Recognizing the importance of sustainable environmental management, the company continuously enhances its environmental strategies to meet international standards. Between 2005 and 2024, the company underwent external audits conducted by the Management System Certification Institute (MASCI) and successfully achieved ISO 14001 : 2015 certification. Currently, 33% of Ratch Pathana's subsidiaries are ISO 45001:2018 certified, reflecting the company's unwavering commitment to environmental responsibility, operational excellence, and long-term sustainability.

This demonstrates the company's unwavering commitment to environmentally responsible operations and strict compliance with environmental regulations. It reflects the continuous development and tangible improvement of the company's environmental management system. Moving forward, the company remains dedicated to enhancing and expanding its operations in alignment with international standards, further minimizing environmental impact and creating long-term value for all stakeholders.

From 2022 to 2024, the company has maintained full compliance with environmental regulations, with no recorded complaints, violations, fines, or penalties related to environmental laws. This reflects the company's strong commitment to sustainable business

practices and strict adherence to environmental standards

Incident/Issue	Number of Cases (per year)		
	2022	2023	2024
Complaints and environmental law violations	0	0	0
Fines for legal violations (THB)	0	0	0

Water Management

- **Sustainable Water Management Plan**

Ratch Pathana and Affiliates is places a strong emphasis on efficient water resource management across all production processes, from water intake to post-production environmental conservation. The company has established strict water management measures in full compliance with legal requirements, ensuring minimal impact on community water resources while mitigating operational risks associated with water scarcity.

Key Water Management Strategies:

- Ratch Pathana Energy and Sahacogen Green Biomass Power Plants are located within the Saha Industrial Park, utilizing water from designated industrial water sources that provide sufficient reserves for production, without affecting local community water supply.
- Process Water Treatment and Reuse:
  - Neutralization Basin: Water from production processes undergoes quality adjustments before being transferred to the wastewater treatment system of the Saha Industrial Park.
  - Water Reuse Initiatives: Treated water is repurposed for landscaping irrigation, with excess water discharged into external water bodies in full compliance with legal discharge standards.
  - Cooling System Compliance: Water discharged from cooling systems is regulated to not exceed 40°C, in accordance with legal temperature limits for environmental protection.

RO Rejected Water Recycle Project – Ratch Pathana Energy Power Plant

Ratch Pathana Energy has implemented the RO Rejected Water Recycle Project, a water conservation initiative designed to reclaim and reuse process water through a Reverse Osmosis (RO) Water Recycle system. This project has successfully reduced freshwater consumption in production processes while also minimizing wastewater disposal costs.

RO Rejected Water Recycle in 2022-2024

Year	2022	2023	2024
Water Saved in Production (m^3/year)	113,556.80	89,702.60	48,350.20

Sahagreen Forest Biomass Power Plant has adopted a comprehensive water management strategy by constructing a 40-Rais water reservoir with a storage capacity of 370,000 cubic meters per year, ensuring a stable water supply for year-round power generation.

Key Features of the Water Management System:

- Sediment Separation & Main Reservoir: Designed to maintain water quality, reduce the need for chemical treatment, and minimize wastewater discharge.
- Green Belt Initiative: Windbreak trees have been planted around the reservoir to reduce water evaporation and facilitate water reuse in power generation.
- Zero Discharge Approach: All treated water is retained and reused for landscaping irrigation, with no wastewater discharge into external water bodies.

To ensure compliance and minimize environmental impact, the plant strictly monitors water quality and cooling water temperatures as per legal requirements. Additionally, regular ecological assessments are conducted to safeguard the local aquatic ecosystem.

Water Risk Management

The company recognizes the critical importance of sustainable water management to mitigate water scarcity risks and enhance water-use efficiency in its operations. To ensure a stable water supply for power generation, the company has implemented the following measures:

1. Water Management at Power Plants

- Ratch Pathana Energy Power Plant (Chonburi Province):Sources raw water from a regional water network covering three provinces: Chonburi, Rayong, and Chachoengsao.Secured a 10-year long-term water supply contract with backup reserves for emergency situations.
- Ratch Pathana Energy & Sahacogen Green Biomass Power Plants:Located within the Saha Industrial Park, utilizing dedicated industrial water sources that do not impact local community water supply.
- Sahagreen Forest Biomass Power Plant:Constructed a 40-rai water reservoir with a storage capacity of 370,000 cubic meters per year, ensuring year-round power generation.

2. Water Risk Assessment

- Water stress, flood risks, drought conditions, and water quality concerns.
- Short-term (annual) and long-term (project lifecycle) risk evaluations.
- Utilization of risk assessment results to develop and enhance preventive and mitigation plans.
- Annual risk reviews to refine strategies based on improved forecasting data.

3. Additional Measures for Efficient Water Management

- Installation of water treatment systems before water enters production processes.
- Increased water recirculation cycles in cooling systems to reduce raw water consumption.
- Reuse of treated RO wastewater for applications such as landscaping and green spaces.
- Regular inspections of water pipelines to prevent leaks and minimize water loss.

4. Optimization of Water Usage through the 3Rs Approach (Reduce–Reuse–Recycle)

- Reduce water usage in production by increasing recycling loops within cooling tower systems.
- Reuse treated wastewater as a substitute for raw water, reducing dependence on public water sources.
- Recycle and consistently monitor discharged water to ensure compliance with environmental standards and minimize community impact.

5. Collaborative Water Resource Management

- Engagement with government agencies, such as the Royal Irrigation Department and the Ministry of Natural Resources and Environment, along with local communities, to align water usage with availability.
- Monitoring water forecasts and watershed conditions to anticipate fluctuations in supply.
- Establishing agreements with water suppliers to secure emergency water reserves in case of shortages.

Water Consumption Reduction Targets and Achievements (2024)

Target	Achievement
Ratch Pathana Energy Power Plant	
• Reduce process water consumption by reusing at least 40,000 m^3 of treated wastewater (3% of total water usage).	48,350.20 m^3 of wastewater was reused, achieving 3% of total water savings.
• Reduce office water consumption by at least 2,593.8 m^3 (40% of total office water use).	2,996.17 m^3 of office water was saved, achieving 46% reduction.
Sahacogen Green Power Plant	
• Reduce process water consumption by reusing at least 45,000 m^3 (9.74% of total water usage).	53,432 m^3 of wastewater was reused, achieving 11.36% of total water savings.
• Reduce office water consumption by 346 m^3 (4% from the 2023 baseline).	1,105 m^3 of office water was saved, achieving 15.96% reduction.
Sahagreen Forest Power Plant	
• Reduce process water consumption by reusing at least 20,000 m^3 annually (5.13% of total water usage).	15,507 m^3 of wastewater was reused, achieving 4.48% reduction.
• Reduce office water consumption by 1,000 m^3 (45.64% from the 2023 baseline).	1,637 m^3 of office water was saved, achieving 74.71% reduction.

Water Consumption Statistics

Ratch Pathana Energy Power Plant	2022	2023	2024
Water Consumption (m^3)	1,824,400	1,908,007	1,698,676
Water Intensity (Withdrawal/MWh net)	1.74	1.98	2.40
Treated Wastewater (%)	100	100	100
Water Management Approach	Industrial Park Treatment System / Green Area / RO Rejected Water Recycl		
Sahacogen Green Power Plant	**2022**	**2023**	**2024**
Water Consumption (m^3)	311,616.00	357,221.00	355,857.01
Water Intensity (Withdrawal/MWh net)	4.96	5.36	5.34
Treated Wastewater (%)	100	100	100
Water Management Approach	Industrial Park Treatment System / Green Area		
Sahagreen Forest Power Plant	**2022**	**2023**	**2024**
Water Consumption (m^3)	400,671.00	448,220.00	391,445.67
Water Intensity (Withdrawal/MWh net)	7.12	7.93	4.68
Treated Wastewater (%)	-	-	-
Water Management Approach	zero discharge		

Wastewater Discharge and Quality (2022-2024)
Ratch Pathana Energy Power Plant

Parameter	2022	2023	2024
Wastewater Discharge Volume (m^3/year)	536,531.03	670,593.02	239,143.65
Water Quality			
• Temperature (°C)	31.8	31.8	32.6
• pH Level	7.7	7.6	7.6
• Biochemical Oxygen Demand (BOD) (mg/L)	2.0	2.5	2.3
• Chemical Oxygen Demand (COD) (mg/L)	50.1	48.9	40.3
• Total Dissolved Solids (mg/L)	863.6	855.4	805.5

Sahacogen Green Power Plant

Parameter	2022	2023	2024
Wastewater Discharge Volume (m^3/year)	54,760	48,627	60,000
Water Quality			
• Temperature (°C)	32	34	33
• pH Level	8.7	8.7	8.8
• Biochemical Oxygen Demand (BOD) (mg/L)	21.1	11.6	9.0
• Chemical Oxygen Demand (COD) (mg/L)	161	80	97
• Total Dissolved Solids (mg/L)	<3.0	<3.0	<3.0

Sahagreen Forest Power Plant

Parameter	2022	2023	2024
Wastewater Discharge Volume (m^3/year)	78,419	58,740	51,082
Water Quality			
• Temperature (°C)	31	31	31
• pH Level	7.5	7.9	8.0
• Biochemical Oxygen Demand (BOD) (mg/L)	11.6	9.3	8.7
• Chemical Oxygen Demand (COD) (mg/L)	118	87	75
• Total Dissolved Solids (mg/L)	<3.0	<3.0	<3.0

Water Usage Incident Statistics

Incident/Issue	Number of Cases (per year)		
	2022	2023	2024
Conflicts with water users/stakeholders	0	0	0
Environmental violations/legal infractions	0	0	0

Waste Management

- **Waste Management Plan**

Ratch Pathana and Affiliates implements waste management in compliance with legal standards and specific measures for each power plant. The waste is categorized into two types: hazardous waste and non-hazardous waste, and is managed as follows:

1. Hazardous Waste: This includes waste that may impact on the environment, such as transformer oil, engine oil, chemical drums, etc. The company controls the usage of transformer oil that does not contain hazardous substances and ensures proper disposal according to legal requirements. The waste is disposed of by licensed agencies authorized by the Department of Industrial Works.

2. Non-Hazardous Waste: This refers to waste similar to household waste, such as food scraps, wood, paper, cables, plastic bags, construction materials, etc. Measures are in place to segregate and manage these materials before they are either safely landfilled or repurposed. The company has established a waste bank project to raise awareness and encourage employees to consider resource efficiency and sustainability.

Additionally, the biomass ash generated from the combustion process in the Sako-Cogen Green and Sako-Green Forest Biomass Power Plants is classified as non-hazardous waste. This ash has been developed for use in agriculture and brick production, which is distributed to local communities through the company's corporate social responsibility programs. This initiative helps maximize the value of non-hazardous waste, ensuring its optimal benefit.

Waste Management Target for 2024

Target	Performance Results
Ratch Pathana Energy Power Plant	
Amount of waste from the production process sent for incineration (non-energy) to be zero	Amount of waste from the production process sent for incineration (non-energy) is zero
Reduce office waste disposed of by landfill by 10% through the 3R process	Reduced office waste disposed of by landfill by 2.42 tons, representing 8.09% through the 3R process
Sahacogen Green Power Plant	
Waste from the production process sent for incineration to be zero; hazardous waste sent for landfill to be zero	Waste from the production process sent for incineration (non-energy) is zero
Reduce office waste disposed of by landfill by 10% of total general waste in 2024 through the 3R process	Reduced office waste disposed of by landfill by 12.52 tons, representing 13.50% through the 3R process
Sahagreen Forest Power Plant	
Waste from the production process sent for incineration to be zero; hazardous waste sent for landfill to be zero	Waste from the production process sent for incineration (non-energy) is zero
Reduce office waste disposed of by landfill by 8% through the 3R process	Reduced office waste disposed of by landfill by 624 kg, representing 8.95% through the 3R proces

Waste Generation Volumes from Business Operations

Company	Item	2022	2023	2024
SCG	Non-hazardous waste (tons)	168.72	115.50	90.07
	Hazardous waste (tons)	28.74	23.10	18.15
	Waste reused (tons)	0	4.39	2.35
	Other recovery operations (tons)	11.9	11.31	7.06
	Non-recyclable waste (tons))	185.56	122.9	98.86
SGN	Non-hazardous waste (biomass ash) (tons)	12,521.71	12,215.90	12,526.64
	Hazardous waste (tons)	5.22	8.90	4.7
SGF	Non-hazardous waste (biomass ash) (tons)	6,367.89	4,956.00	2653.06
	Hazardous waste (tons)	2.52	1.57	2.25

Waste Management Promotion Activities within the Organization

Last year, the company implemented the 3R principles (Reduce, Reuse, Recycle) to manage waste and promote environmental responsibility within the organization. The following approaches were adopted:

1. **Reduce (Reducing Consumption)**
   - o Reduced paper usage by supporting electronic documentation systems (Paperless Office).
   - o Reduced the use of single-use packaging, such as plastic cups and utensils.
   - o Encouraged the use of environmentally friendly materials within the office.
2. **Reuse (Reusing Materials)**
   - o Provided communal containers for reusable items, such as water glasses and lunchboxes.
   - o Encouraged employees to reuse office supplies, such as file folders and document envelopes.
   - o Set up donation points for reusable items, such as clothes, books, and office equipment, to be given to those in need.

In the past year, the company launched a donation project to collect unused items from employees, such as clothes, books, toys, and other good-condition goods, which were sent to the Ban Nok Khamin Foundation and organizations supporting disadvantaged individuals. This initiative helped reduce waste and maximize the value of resources. Additionally, the company collaborated with partners to donate recyclable waste, such as old bras to Waco Ltd. Lamphun, and soda can pull tabs for prosthetic leg production. This project is ongoing every year to promote efficient and sustainable resource use.

3. **Recycle (Recycling)**
   - Segregated waste by type, such as paper, plastic, and organic waste, for proper recycling.
   - Established e-waste collection points for discarded items like batteries and light bulbs.
   - Coordinated with external agencies for the proper disposal of hazardous waste.

The implementation of the 3R principles has helped reduce waste within the organization, increase resource efficiency, and foster an environmentally friendly workplace culture.

- Sahacogen Green Co., Ltd. has participated in the "Lamphun Clean City for Sustainable Development" project for the fourth consecutive year in 2024. The project aims to promote and develop businesses toward a green industry. It drives initiatives such as the Wet Waste–Free Province project, Lamphun Clean City without Foam (Foam–Free), and the "Lamphun People United for the Environment" campaign. The focus is on reducing, refusing, and reusing plastic shopping bags and plastic straws. Additionally, the project enhances waste management practices in Lamphun Province to ensure continuous, tangible progress and long–term sustainability.
- Waste Bank for the Environment Project Sahacogen Green Co., Ltd. and Sako–Green Forest Co., Ltd. launched the Waste Bank for the Environment project to raise employee awareness about environmental protection through waste segregation in both offices and factories. The initiative also encourages employees to donate or exchange household waste for goods before selling it to recycling buyers. The goal of the project is to reduce waste and help mitigate global warming caused by greenhouse gases. In 2024, the project segregated five types of waste: paper, plastic, metal, glass, and aluminum, totaling 764 kilograms, resulting in a reduction of greenhouse gas emissions by 549.92 kg CO_2 equivalent.

Summary of Waste and Greenhouse Gas Emission Reduction from Waste Segregation for Recycling in the Waste Bank for the Environment Project (2024)

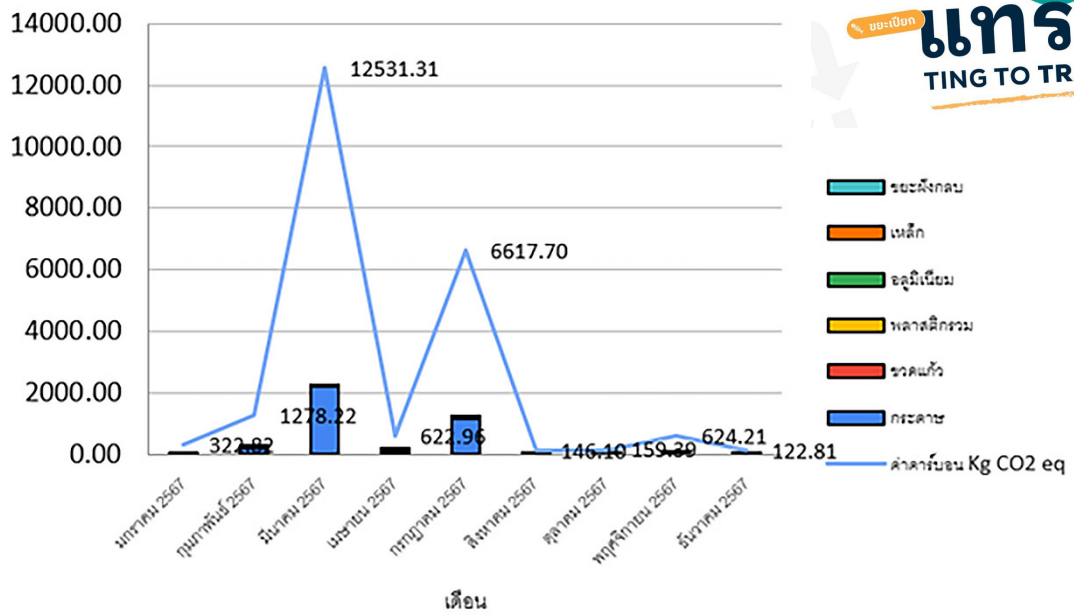
Waste Type	Waste Volume (Kg)	Greenhouse Gas Emission Reduction (kgCO_2e)
Paper	412	203.53
Plastic	90	78.21
Metal	61	69.95
Glass	619	460.54
Aluminum	13.5	45.58
Total	**764**	**549.92**

Note: The project supports greenhouse gas emission reduction activities through waste segregation for recycling (source: GHG Reduction) by the Greenhouse Gas Management Organization (Public Organization).

• 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.

Noise Pollution Management

- Equipment and machinery are designed, installed, and maintained with appropriate inspection schedules to minimize noise generation. Tall, dense trees have been planted to serve as noise barriers and windbreaks, enabling noise levels to be controlled within legally mandated standards.
- Three noise monitoring points have been established: at the noise source within the power plant, in the production control room, and along the power plant perimeter fence. Noise levels are maintained within legal standards, with workplace noise measurements conducted quarterly.
- Hearing protection equipment (earmuffs) is provided to employees who must work in areas where noise levels exceed 80 dBA. Personnel working in such areas are required to wear personal protective equipment to reduce noise exposure. Warning signs have been installed, and this requirement has been established as a mandatory regulation that all employees must strictly follow.

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

Noise Quality Monitoring Results	2022	2023	2024	Legal Criteria
	Average Measurement Results (Min–Max)			
Ratch Pathana Energy Power Plant				
General Noise Level (Leq 24 hr) (dBA)				
Northern Project Fence Perimeter	–	–	64.4–67.5	70
Eastern Project Fence Perimeter	–	–	60.1–63.5	70
Southern Project Fence Perimeter	–	–	64.9–67.4	70
Western Project Fence Perimeter	59.8–63.0	61.8–64.0	65.9–68.3	70
Ban Rai Nueng Area	56.2–58.5	63.4–64.0	58.7–68.3	70
Workplace Noise Level – Personal Noise Dosimetry (Leq 12 hr) (dBA)	63.2–80.3	78.1–79.9	73.1–77.6	83
Sahacogen Green Biomass Power Plan				
General Noise Level (Leq 24 hr)				
Nong Pla Kho Temple Area	46.6–60.7	46.6–60.7	48.9–60.4	70 dBA
San Luang Temple Area	45.8–63.3	45.8–63.3	46.8–52.6	70 dBA
Project Fence Perimeter	62.7–64.7	54.8–65.2	64.5–66.6	70 dBA
Workplace Noise Level – Personal Noise Dosimetry (Leq 12 hr)	79.3–80.4	81–82.1	76.1–78.6	83 dBA

Noise Quality Monitoring Results	2022	2023	2024	Legal Criteria
	Average Measurement Results (Min–Max)			
Sahagreen Forest Biomass Power Plant				
General Noise Level (Leq 24 hr)				
Location202220232024Legal CriteriaBan Huai Nam Sai School	48.7 – 55.8	47.6–56.7	48.5–67.3	70 dBA
Si Chumphorn Wirawat Temple (Rai Dong Temple)	50.4 – 51.8	65.0–67.5	47.8–65.5	70 dBA
Project Fence Perimeter	65.0–67.5	51.3–58.5	64.6–67.4	70 dBA
Workplace Noise Level – Personal Noise Dosime–try (Leq 12 hr)	77.7 – 81.9	78.6–80.3	79.6–82.0	83 dBA
ผลการตรวจวัดระดับเสียงในพื้นที่ทำงาน–ระดับเสียงสะสมแบบติดตามตัวบุคคล (Leq 12 hr)	79.3–80.4	81–82.1	76.1–78.6	83 dBA

Chemical Leakage Statistics (volatile organic compounds: VOC) During the past three years (2022-2024), there have been no incidents of volatile organic compounds (VOC) leakage.

Incident/Issue	Number of Occurrences (Times)		
	2022	2023	2024
Chemical Leakage	0	0	0