

INNOVATION FOR SUSTAINABILITY

Ratch Pathana Energy Public Company Limited and its subsidiaries are committed to promoting and supporting the development of innovation by integrating innovative solutions into their operational processes. This enhances efficiency, competitiveness, and sustainable growth within the organization. One of the company's key approaches is the study and development of green energy to address the evolving energy industry landscape. This initiative supports the use of clean energy, reduces environmental impacts, and promotes the efficient use of resources.

Furthermore, the company places great importance on research and development, collaborating with communities, government agencies, and academic institutions to explore methods for increasing productivity. This includes repurposing waste materials from production processes into new products that can be reused, thus promoting a circular economy and reducing waste from production processes.

Policy and Practices on Innovation Development

1. Promote and support innovation development to align with the organization's goals, create a competitive advantage, and ensure the sustainable growth of the company.
2. Establish an innovation plan, allocate resources, and set budgets to promote and support innovation development.
3. Enhance the capabilities of personnel to enable them to create and effectively apply innovations.
4. Encourage the study and development of green energy to support the transformation within the energy industry, thereby fostering long-term business growth.
5. Support collaboration with agencies and educational institutions to conduct research on innovations, and cooperate with communities to study the utilization of waste materials from production processes to create new, functional inventions.
6. Implement evaluation, monitoring, and reporting systems to ensure that innovation development activities align with the planned objectives and continuously track progress for management

Process of Developing and Promoting Organizational Culture

The company places a strong emphasis on innovation and fostering a corporate culture that supports sustainability. By integrating cutting-edge technologies into operations, the company enhances energy production efficiency, minimizes environmental impact, and generates value for society.

1. Advancement of Clean Energy Innovation

- Promoting investments in renewable energy sources such as solar power and biomass energy.
- Enhancing power plant efficiency through digital technologies, including AI, to optimize energy utilization.

2. Establishing an Innovation-Driven Corporate Culture

- Developing mechanisms for employee engagement in process improvement and innovation.
- Supporting research and development of technologies related to clean energy.
- Encouraging continuous learning and skill development through training programs focused on creativity and technological applications.



3. Sustainable and Environmentally Friendly Operations

- Implementing measures to reduce greenhouse gas emissions and pollution from production processes.
- Developing recycling initiatives and promoting efficient resource utilization.
- Strengthening collaboration with communities and stakeholders to advance clean energy development.

Innovation Development and Promotion

Innovation Sector	Process of Developing and Promoting Organizational Culture	Benefits	Cost (Baht)
Energy	<ul style="list-style-type: none"> • Collaboration with the National Metal and Materials Technology Center (MTEC), NSTDA: We have partnered with MTEC to develop a framework for assessing technology and investment feasibility. This initiative aims to provide policy recommendations for the industrial sector to support informed decision-making on investments in Bio-Energy with Carbon Capture and Storage (BECCS) technology in Thailand. • Research and Monitoring of Green Energy Technologies: We continuously study and track advancements in green energy technologies to ensure preparedness for future energy transitions. Key focus areas include Small Modular Reactors (SMRs), Green Hydrogen Technology, Carbon Capture and Storage (CCS), and Battery Energy Storage Systems (BESS). 	<ul style="list-style-type: none"> • Supporting Sustainability Goals Preparing for the transition to clean energy to enhance competitive advantage and drive sustainable organizational growth. • Strategic Investment Planning Identifying and investing in high-potential, long-term projects such as Small Modular Reactors (SMRs), Green Hydrogen, Carbon Capture and Storage (CCS), and Battery Energy Storage Systems (BESS). • Enhancing Energy Efficiency Optimizing energy utilization, improving energy storage and management capabilities, and minimizing resource losses. 	Non
Information Technology	<ul style="list-style-type: none"> • Implemented IT systems for engineering management, providing engineering feedback through online platforms. This allows for data recording, review, and retrieval from the system, reducing manual labor and errors in record-keeping. • Developed AMR (Automatic Meter Reading) software and a billing system to enhance operational efficiency. • Implemented systems according to the department's requirements, including ERP, MyHr, CAR OI Online, and engineering feedback systems. • Established cybersecurity systems, including PAM (Privileged Access Management), WAF (Web Application Firewall), and DLP (Data Loss Prevention), to ensure robust protection. 	<ul style="list-style-type: none"> • Enhance work efficiency and effectiveness • Ensure the safety of connecting or using the company's information systems in compliance with international standards • Respond to the needs of departments seeking to modernize their information systems • Support the organization's business expansion through digital transformation 	2,996,768
Other	<ul style="list-style-type: none"> • Develop a project to add value to sugarcane leaves by processing them into sugarcane briquettes. • Further develop the IREC business by promoting renewable energy power plants to register for IREC and encouraging factories with policies to reduce GHG emissions to use IREC to lower Scope 2 GHG emissions. 	<ul style="list-style-type: none"> • Add value to agricultural waste products such as sugarcane leaves by processing them into compressed sugarcane leaves for sale as fuel to factories. This not only helps reduce pollution from the burning of sugarcane leaves by farmers but also increases income for farmers by allowing them to sell the leaves to factories. • Support the policy to reduce GHG emissions under Scope 2 by compensating through IREC (International Renewable Energy Certificates). 	Non

In 2024, the company undertook various initiatives and activities to promote innovation, as outlined below:

- The company collaborated with the National Metal and Materials Technology Center (MTEC), NSTDA, to develop a project focused on assessing appropriate technology and investment evaluation models. This project aims to provide policy recommendations for the industrial sector to support decision-making regarding investments in bio-energy production technologies combined with carbon capture and storage (BECCS) in Thailand.



Additionally, the company has conducted studies and continuously monitors advancements in technologies related to green energy production. This includes gathering information to proactively prepare for future shifts in the energy landscape, such as Small Modular Reactors (SMRs), Green Hydrogen Technology, Carbon Capture and Storage (CCS), and Battery Energy Storage Systems (BESS).

- The company organized the **“Energy Conservation Invention Contest”** at the Energy Day event to encourage employees to participate in the creation and development of energy-saving technologies. This initiative reinforces the company’s commitment to fostering innovation for sustainability. The event is part of a strategy to promote a culture of innovation within the organization, providing employees the opportunity to showcase their potential in developing solutions that reduce energy consumption and enhance operational efficiency sustainably.

