PEA
PROVINCIAL ELECTRICITY AUTHORITY

Our GREEN GRID

Toward Energy Transition

Sustainability Report 2024 | Provincial Electricity Authority

Content of Index

00. About This Report

Background [2-3]

PEA has consistently published an annual sustainability report. The 2024 Sustainability Report was prepared in accordance with the international GRI Standards to disclose the organization's sustainability performance across economic, social, and environmental dimensions, following ESG principles. The reporting period is an annual cycle from January 1, 2024, to December 31, 2024, in line with the Electric Utilities (EU) sector guidance of the Global Reporting Initiative (GRI).

To illustrate commitment to sustainable development, PEA has aligned its operations with the 17 Sustainable Development Goals (SDGs) of the United Nations, which are featured throughout this publication.

Reporting Scope [2-2]

The information disclosed in this report presents data and impacts from operations across PEA's entire value chain. The reporting scope encompasses the head office, regional offices, power plants, and substations, in addition to relevant stakeholders. The reported performance data does not include any of PEA's affiliates.

Sustainability Report Assurance

PEA’s Board of Directors and senior management are responsible for monitoring, reviewing, and providing guidance on the reporting processes, as well as approving key information disclosed in this report. Their involvement ensures the completeness and integrity of the report's contents and creates shared value for all stakeholders. [2-14]

PEA has engaged an external third-party expert to verify and provide assurance on the reporting process (External Assurance), which ensures the report's credibility and aligns with the reporting guidelines of the international GRI Standards. [2-5]

Reporting Quality Improvement

All stakeholders are encouraged to provide feedback on the Sustainability Report 2024 through a reader survey. The feedback will be analyzed to further improve and enhance our future sustainability reporting. This ensures that the reporting efficiently meets the needs and expectations of all stakeholders.

Enquiry [2-3]

For questions or additional suggestions, please contact the Sustainability and Stakeholder Engagement Management Division, Stakeholder Engagement and Corporate Communication for Sustainability Department, Provincial Electricity Authority Head Office, Building 4.

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pea.co.th (Sustainability)

Questionnaire

01. Message From The Governor [2-22]

The Provincial Electricity Authority (PEA) is committed to integrating technology and innovation to advance its electricity grid and distribution services, along with leveraging clean and renewable energy sources. This aims to facilitate the concrete and sustainable realization of Thailand's energy transition. We deliver efficient and comprehensive services that meet the demands of modern lifestyles, notably by supporting Electric Vehicle (EV) adoption and expanding access to electricity to over 22,123,367 households, covering 99.57% of our entire service area. These efforts directly align with the 13th National Economic and Social Development Plan (2023–2027).

Additionally, PEA has fully integrated sustainability materiality topics into every dimension of its organizational strategy – Environmental, Social, and Governance (ESG) – to ensure the stable growth of the organization while creating shared value with surrounding communities and society. These successes are a result of the collaborative efforts of PEA's board of directors, executives, employees, and all workers, who are committed to the organization's mission, demonstrated through operations across the ESG dimensions as follows:

E: Environment

PEA is actively pursuing its carbon neutrality goal in accordance with the PEA Carbon Neutrality Roadmap. Our internal operations have significantly reduced Greenhouse Gas (GHG) emissions by 10,343.40 tCO_2eq through various measures. These include the adoption of 226 Battery Electric Vehicles (BEVs) for our fleet, the installation of solar power systems on office buildings, and the successful participation of 61 offices in the Green Office program, which received the excellent level (G-Gold) certification from the Department of Climate Change and Environment, Ministry of Natural Resources and Environment. These efforts reflect PEA's commitment to reducing carbon across all organizational dimensions, driving towards the future with a sustainable and environmentally friendly energy.

At a national level, PEA supports greenhouse gas management for businesses and organizations through its Renewable Energy Certificate (REC) service, which is certified to international standards (I-REC). Additionally, PEA offers Carbonform, a digital platform for assessing and managing carbon footprints with ease, suitable for organizations of all sizes. We are also expanding our business with PEA SOLAR, a comprehensive solar power generation system that covers survey, design, installation, and maintenance, with over 1,320 systems already installed nationwide. Furthermore, PEA supports the transition to electric transportation by developing the PEA VOLTA Platform, an extension of our PEA VOLTA charging stations, which boasts a network of over 400 charging stations across 75 provinces nationwide. Users can access real-time information on station locations, charger availability, and usage status, as well as convenient payment options via the PEA VOLTA application.

S: Social

To enhance the user experience for electricity users and drive service delivery through digital channels, PEA has launched the “PEA Sabuy Service: Smart Services for All Electricity Matters” campaign. This campaign consolidates five key services designed for convenience in the digital age:

- PEA Smart Plus: A payment and point accumulation (Watt-D Point) service that allows users to redeem various privileges, such as discounts on the next electricity bill or discounts at shops and for fuel.
- PEA e-Service: Covers applications for electricity connection, expansion of the distribution system, and related services, such as solar panel installation, electric vehicle charging station inspection, and trading of Renewable Energy Certificates (REC).
- PEA e-Bill: An electronic bill and tax invoice system accessible via SMS or Email.
- LINE Official Account PEA Thailand: Provides electricity bill payment reminders and allows for easy QR Code generation for payments.
- Watt-D Point Service: A point accumulation system from using the application services, redeemable for numerous benefits.

In addition to service development, PEA is committed to promoting an equitable quality of life for all citizens through the Electricity Access Expansion Project Phase 2, which successfully connected 179,174 new households, exceeding the original target of 141,960 households. For remote areas, such as Koh Phaluai in Surat Thani province, PEA has implemented the Microgrid Project, which combines solar power generation systems with battery energy storage to create a stable electricity system and elevate the community's quality of life. Regarding electrical safety, PEA has initiated projects that promote knowledge and standards among the public:

- The “1 Tambon 1 Electrician” project aims to elevate the skills of electricians to meet professional standards.
- The “Light for Life Safety” project focuses on educating the public about electrical safety.

PEA adheres strictly to human rights principles in both its organizational management and collaboration with all sectors. We received the “Human Rights Model Organization Award 2024” from the Rights and Liberties Protection Department, Ministry of Justice, reflecting our leadership in fostering an organizational culture that respects diversity and prohibits discrimination.

According to a stakeholder engagement survey conducted by a third-party organization, PEA achieved an engagement score of 84.12%, surpassing the set target of 80%. This reflects the trust and confidence stakeholders have in PEA, stemming from our unwavering commitment to transparent and fair operations and our respect for everyone's value.

G: Governance

PEA is steadfast in its operations under the principles of good governance, transparency, and accountability, prioritizing sound oversight at every level to build stakeholder confidence and lay the foundation for sustainable growth.

In 2024, we elevated our management systems to be more prudent, modern, and interconnected across risk management, internal controls, and regulatory compliance. Concurrently, we fostered an organizational culture that upholds ethics, integrity, and responsibility in the workplace.

Furthermore, PEA developed more efficient monitoring tools and mechanisms to ensure all operations meet set targets and can adapt swiftly to changes. We also continuously promoted knowledge in ESG risk management and organizational ethics among executives and personnel. These commitments are reflected in our high score of 95.58 points in the Integrity and Transparency Assessment (ITA) for state agencies, placing us 3rd among state-owned enterprises in the energy sector and 5th within the Ministry of Interior. Maintaining a score above 95 points for the fifth consecutive year further affirms our strong governance standards and transparency across all organizational dimensions.

PEA's success today stems from the power of the people behind every system, every transmission line, and every service. It is the continuous dedication of our Board of Directors, executives, employees, and all workers, who tirelessly collaborate each day.

Finally, I would like to express my sincere gratitude to all stakeholders for your valuable support, trust, and feedback. Every suggestion from you is a driving force for us to continuously develop and elevate our electricity system and services to meet life's demands sustainably, under our vision: “Smart Energy for Better Life and Sustainability”.

MR. SUPACHAI EK-UN

Governor

02. PEA 2567 Summary

PEA's Recognition

State Enterprise Excellence Awards (SOE Award) for the Year 2024

Organized by the State Enterprise Policy Office (SEPO), Ministry of Finance. A total of 5 awards were presented, including:

1. Outstanding State Enterprise Committee Award This award reflects the commitment of the Provincial Electricity Authority's (PEA) Board of Directors in overseeing state enterprises, promoting efficient and transparent management, aligning with good governance principles. It highlights the board's role in defining the organization's vision, policies, and operational direction, as well as its focus on corporate social responsibility and environmental sustainability, alongside continuous monitoring of performance.
2. Outstanding Organizational Management Award This recognizes the efficient management system of PEA, its competitive potential, and sustainable growth. The award acknowledges excellence in strategic planning, risk management, stakeholder focus, digital technology development, human capital management, knowledge and innovation management, and internal auditing.
3. Outstanding Organizational Leadership Award This award celebrates the exemplary leadership of Mr. Supachai Ek-Un, Governor of PEA, who has successfully guided the organization towards sustainable success through visionary leadership and effective organizational management.
4. Digital State Enterprise Development Award This recognizes PEA's promotion towards becoming a digital state enterprise, aligning with its vision "Smart Energy for Better Life and Sustainability." The award highlights the use of digital technologies to develop the organization across various dimensions, facilitating seamless adaptation to change.
5. Outstanding Corporate Social Responsibility and Environmental Sustainability Award PEA's "PEA Recovery: Community Safety Focus" initiative, ensuring the safety of electrical usage in communities during normal and crisis situations, is recognized. This includes proactive accident prevention, inspecting and improving household electrical systems, and using technology to track outcomes and alleviate flood-affected communities nationwide.

<table>
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<td>  </td>
<td>Model Ethical Organization Award
Presented by the Ministry of the Interior to organizations promoting ethical practices in alignment with Buddhist principles, sufficiency economy philosophy, and Thai cultural traditions. PEA received 6 awards, including recognition at the corporate level and across regional divisions.</td>
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<td>Sustainability Disclosure Award 2024
Organized by the Thai Phatt Institute, PEA, a member of the Sustainability Disclosure Community (SDC), was awarded for its commitment to transparency in sustainability reporting. This is the 6th consecutive year PEA has received this award.</td>
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<td>Asia Responsible Enterprise Awards 2024 (AREA 2024)
Organized by Enterprise Asia, a non-governmental organization, to present awards to leading companies that operate in line with ESG principles and play a crucial role in driving change for sustainable development in the Asian region. The Provincial Electricity Authority (PEA) has received awards for its social and environmental performance for 6 consecutive years, and for its sustainability reports for 3 consecutive years. And this year, PEA won 3 awards, including:
1. Social Empowerment for the “PEA Community Safety Focus” project
2. Corporate Sustainability Reporting for its 2022 sustainability report
3. Sustainability Emblem</td>
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<td>Asia Sustainability Reporting Awards 2024 (ASRA)
CSRWorks International Pte Ltd. promotes quality and transparent sustainability disclosures among leading organizations in Asia. The Provincial Electricity Authority (PEA) was awarded the Silver level in the 'Asia's Best Stakeholder Reporting' category for its 2023 Stakeholder Engagement Report.</td>
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Environmental

- The plan to elevate organizational development towards Carbon Neutrality includes projects to install solar power systems at 154 PEA offices, a Green Office project, and a Low Emission Support Scheme (LESS) project. The total volume of greenhouse gas reduced from these activities was 10,343.40 tCO_2eq, which is 2.41% more than the target of 10,100.00 tCO_2eq.
- The plan to prepare the Green Tech Fund aims to generate investment returns while also integrating technology into PEA's operations. The feasibility study for establishing a company and investing in the Green Tech Fund has met its objectives.
- The level of success in achieving eco-efficiency was 1,609.55 units/tCO_2eq, with a Factor X value of 1.090577.
- The organization has collected data from its Building Energy Management System (BEMS) to monitor energy usage across the entire organization in both real-time and retrospectively. This allows the system to be applied as a tool for data collection in compliance with the Energy Conservation Promotion Act B.E. 2535 (1992) and the ISO 50001 Energy Management System standard.
- The plan to analyze power transformer asset data within substations for usage planning, maintenance, and replacement involves establishing a database for long-term asset management planning within the substations.

	**Thailand Energy Awards 2024** The Department of Alternative Energy Development and Efficiency (DEDE), Ministry of Energy, has presented an Energy Conservation Award to the Provincial Electricity Authority (PEA) Head Office. The building was recognized in the Controlled Building category as it is designated a controlled building under the Energy Conservation Promotion Act B.E. 2535 (1992) (as amended in B.E. 2550). The award acknowledges the continuous energy management efforts and the dedicated energy management team that conducts energy conservation activities both within and outside the organization.

Social

- The plan to develop the Use Case and PEA system structure, along with the digital innovation process in collaboration with Start-ups, has met its goal, with over 5 collaborating companies.
- The plan to develop innovations to support expanded use within the organization has also met its goals, with over 10 innovations/processes that have been rolled out for use within PEA.
- The plan to develop innovations to support commercial expansion and focus on creating opportunities for organizational growth has generated 192.29 million Baht in revenue for PEA.

	**The "2024 Bangkok International Intellectual Property, Innovation and Technology Exposition" presented international innovation awards:** 1. Gold Medal and a special award from the European Exhibition of Creativity and Innovation, Romania, for the "Automated 185 mm Cable Stripping Tool." 2. Silver Medal for the "Kapacitor," a system for storing and trading energy as a Digital Asset using Smart Contracts on a Blockchain.
	**PEA's innovations received several awards at The 49th International Exhibition of Inventions Geneva:** 1. Silver Medal for the Interface Analog Radio and Digital Radio, a tool that acts as a communication bridge between analog and digital radios. 2. Silver Medal and a special award from the Delegation of Malaysia for the Distributed Electric Power Source Exchange Platform of Household Electricity Supplier, a system for storing and trading energy as a Digital Asset using Smart Contracts on a Blockchain. 3. Silver Medal for the Low Voltage Rubber Insulating Gloves Tester, a device for testing low-voltage insulating rubber gloves.

- The plan to develop a learning system and curricula to effectively enhance employees' digital competencies and skills in line with PEA's Use Cases has met its goals.
- The Employee Experience plan has met its goals, with two Pilot Projects initiated along with Event Touch Points for each stage: Pre-Employment, Employment, and Achievement (post-retirement) for all employees.

	**The 12th Annual Outstanding Provident Fund Awards 2024,** organized by the Association of Provident Funds, recognized the Provincial Electricity Authority (PEA) employee provident fund with the following awards: 1. First Place Award in the Single Fund category for state enterprises with a fund size over 15 billion baht. 2. Outstanding Employer Promotion Award in the Single Fund or Pooled Fund category for state enterprises. 3. Outstanding Fund Committee (FC) Promotion Award in the Single Fund or Pooled Fund category for state enterprises.

- The plan to develop a mechanism to support the career progression of new-generation employees, in order to align with business direction and replace personnel in key positions, has successfully developed a number of evaluated talents and successors according to its goals.
- The plan to enhance employee skills in Big Data Analytics and Data Analytics has met its objectives.
- The plan to elevate safety operations to national and international standards has met its goals, resulting in the implementation of the PEA Work Permit system for safety officers and enhanced measures to prevent accidents.
- The Disabling Injury Index (√DI) was 0.1034, meeting the target. This successfully kept the accident rate below the target of 0.1208, representing a reduction of 16.83%.

	**Human Rights Awards 2024** The Human Rights Awards 2024 were organized by the Department of Rights and Liberties Protection. The awards recognize selected government agencies, state enterprises, private businesses, and civil society organizations as model organizations on human rights. These organizations also serve as a positive example for others in building a society that sustainably respects human rights.

- The plan to increase the effectiveness of Grid Modernization investments has successfully completed the feasibility study for the first phase of a distributed power generation management system on PEA's grid, meeting its goals.
- PEA completed the expansion of the electrical grid to 179,174 new households (KFM.2), exceeding the target of 141,960 households by 26.21%.
- The electrical grid has been expanded to 22,123,367 households nationwide, meaning more than 99.57% of all households now have access to electricity.
- The project to study equipment for 22 and 33 kV electrical systems on PEA's grid has met its goals, allowing for the application of a Voltage Control system to support electric vehicles (EVs) and the Energy Market.
- PEA has implemented Pilot and Test Bed projects in the Smart Low-voltage Distribution System to prepare for scaling up, reviewing, and improving the efficiency of Grid Modernization, as well as to accommodate the increasing number of EVs, RE (Renewable Energy), and ESS (Energy Storage Systems).
- The Triple Transformation plan has successfully integrated business benefits, promoted technology adoption, and enhanced personnel capabilities. This has resulted in the development of 3 Use Cases, creating over 717 million Baht in value-added to the core regulated business.
- The plan to enhance B2B and B2C business operations has met its goals, generating total B2B revenue of over 6,708.20 million Baht, exceeding the target of 5,000 million Baht by 34.16%. Total B2C revenue was over 1,090.48 million Baht, surpassing the target of 500 million Baht by 118.10%.

Asia Pacific Enterprise Awards (APEA) 2024

The Asia Pacific Enterprise Awards (APEA) 2024 were organized by a regional non-governmental organization (NGO). The Provincial Electricity Authority (PEA) received the Inspirational Brand Award, which is given to organizations that have continuously grown their brand, operated under good governance principles, managed their organization efficiently, and served as an inspiration and role model for building a sustainably better society.

- The plan to establish the ThaiSkill BU has met its goals with the creation of the TCC to support the training business. It has also designed and developed training courses and provided initial training to a cumulative total of over 29,700 employees and contractors.
- The plan for preparing for the future restructuring of the electricity business, which aims to support the opening of Third-Party Access (TPA) to accommodate RE100 services, has developed guidelines for determining UGT rates for UGT 1 and UGT 2. It also created a business model for registering renewable energy producers under PEA's Registrant account for the Renewable Energy Certificate (REC) trading business.
- The plan to increase the number of users on the PEA Smart Plus platform has met its goals, with the average number of Monthly Active Users conducting transactions throughout the year reaching over 1.47 million, exceeding the target of 1.10 million by 33.63%.
- The management structure of the Provincial Electricity Authority's provincial offices has been adjusted and expanded to ensure comprehensive safety oversight for households in local communities.
- The plan to develop and enhance community electrical safety has been implemented to reduce the impact of safety risks in the electrical system on users.
- The plan to build relationships with stakeholders across all departments has met its goals. The survey results from a third-party organization showed that the overall average engagement score across all stakeholder groups was 84.12%, which is 5.15% higher than the target of 80.00%.

Government Easy Contact Center: GECC

The Government Easy Contact Center (GECC) award, organized by the Office of the Permanent Secretary, Prime Minister's Office, is presented to ministries, departments, provinces, and state enterprises that have been certified for their service standards at each level of a government contact center.

A total of 61 offices under the Provincial Electricity Authority (PEA) received this certification, consisting of 24 at the Advanced Level and 37 at the Fundamental Level.

	**The Best Contact Center Awards 2024** Organized by the Thai Contact Center Trade Association (TCCTA), the Provincial Electricity Authority (PEA) received the following awards: - Gold Medal for The Best Social Media Contact Center in the category "Social Media Touchpoint for Greater Impact". - Bronze Medal for The Best Business Contribution Contact Center in the category "Enhancement and Transformation for Sustainable Business".

Governance

- PEA's 2024 GRC Integration Plan focuses on developing effective tools and mechanisms for performance monitoring. It also includes the continuous promotion of knowledge in ESG risk management and corporate ethics for executives and employees, ensuring the organization can adapt to changes.
- In the Integrity and Transparency Assessment (ITA) for government agencies, PEA scored 95.58 points. This places the organization third among state enterprises in the energy sector and fifth within the Ministry of Interior, marking the fifth consecutive year PEA has maintained a score above 95 points.
- The expansion of security management in accordance with the international ISO/IEC 27001 standard has been a success. PEA obtained the ISO 27001:2022 Certification from an external auditor.

	**Plaque of Honor from the Anti-Corruption Foundation for 2024** The Plaque of Honor from the Anti-Corruption Foundation for 2024 was awarded to the Provincial Electricity Authority (PEA) for its outstanding support of the foundation. The award recognizes PEA's executives and employees for their honesty and integrity, which is demonstrated through their adherence to the Sufficiency Economy Philosophy. This commitment is exemplified by the organization's "PEA Moo Ban Chor Sa-ard Village Project," which is implemented through its social and environmental (CSR) activities.

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<td>The Good Organization Award
The Good Organization Award is presented by the Office of the Senate Committee on Religion, Morals, Ethics, Arts, and Culture. This award honors organizations that serve as a positive role model in Thai society by adhering to principles of morality, ethics, and good governance, and by instilling strong moral values in their personnel.</td>
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สำนักงานคณะกรรมการป้องกันและปราบปรามการทุจริตในภาครัฐ
การไฟฟ้าส่วนภูมิภาค
ด้านการใช้จ่ายงบประมาณ
"งานจัดหามิเตอร์และอุปกรณ์ประกอบสำรองจ่าย (ติดตั้งใหม่และชำรุด)
(การจัดหามิเตอร์ไฟฟ้าอิเล็กทรอนิกส์ทับเปลี่ยนทดแทนมิเตอร์จานหมุน)"
ระดับ ดีเยี่ยม (Excellent)</td>
<td>The Excellent-Level Award for the Corruption Risk Management System (CRMS) Qualitative Risk Assessment for Fiscal Year 2023 was presented by the Office of the Public Sector Anti-Corruption Commission (PACC).
The Provincial Electricity Authority received this award for its corruption risk assessment in the area of budget spending, specifically for the project on "the procurement of meters and related spare parts (for new and damaged installations), which involved the acquisition of electronic meters to replace rotating meters."</td>
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03. About PEA

General Information [2-1]

The Provincial Electricity Authority (PEA) [2-1] was established on 28 September 1960, replacing the former Provincial Electricity Organization, which commenced operations on 6 March 1954. During its initial decade, PEA undertook the vital tasks of procuring electricity generators and employing skilled technicians for generator installation to facilitate electrification of undeveloped regions. Now, in the sixth decade, it PEA has undertaken organizational restructuring and improved operational strategies to provide efficient electricity services while fostering continuous development in quality and service standards. Striving to excel in this business, PEA is committed to meeting customers' expectations, creating value for society and the environment through digital technology and driving toward becoming PEA Digital Utility.

As a state enterprise in the energy sector under the Ministry of Interior, PEA is regulated by the State Enterprise Policy Office (SEPO). [2-1] Our core business is the procurement and distribution of electricity to consumers in provincial areas. Also offering supplementary services to our customers, including construction, inspection, maintenance, and repair, we explore new business opportunities to capitalize on our assets, knowledge, and capability for potential future growth or ventures. To ensure a reliable and adequate supply of electricity to meet customers' demand and electrify remote areas, PEA has devised plans and projects to expand distribution systems, enhance and reinforce power infrastructure, and improve services. These endeavors inevitably impact stakeholders in all sectors, society, and the environment. Therefore, we strive to conduct our operations in compliance with the law, aligning with the organization's mission and public policies.

Vision, Mission, Core Value [2-23]

Vision	Mission	Core Value
Smart Energy for Better Life and Sustainability	PEA is responsible for the provision of standardized electricity services and related business to attain the customer's satisfaction on products and services through PEA's continual corporate development plan with the recognition of social and environmental responsibility.	Modernization Excellent Service Good Governance

Businesses and Services [2-6]

PEA is responsible for providing electricity to 74 provinces in Thailand except Bangkok, Nonthaburi, and Samut Prakan. We procure electricity from power producers, including the Electricity Generating Authority of Thailand (EGAT) and Very Small Power Producers (VSPPs), which is transmitted to major consumers (large industries, hotels, and department stores) and medium-sized industries. We also distribute electricity to residential consumers in the North, Northeast, Central, and South. Furthermore, PEA provides comprehensive electrical engineering services, including consultancy, planning, design, construction, installation, and maintenance through a professional team equipped with modern tools and equipment. We aim to deliver quality, reliable, and efficient services to meet customers' needs and ensure maximum satisfaction.

- **Power Procurement and Distribution Business**

This involves sourcing electrical power from power producers and distributing it to customers in the North, Northeast, Central, and South.

- **Power Service Support Business**

Related Businesses: These consist of supplementary and new businesses related to electrical power services. These regulated or non-regulated businesses aim to foster business growth and increase returns from operations to PEA.

Supplementary Businesses: These businesses provide support to PEA's customers or power services domestically and internationally. It entails further development of PEA's resources, expertise, and capability in various fields, including construction, inspection, repair, maintenance, and leasing.

New Businesses: These concern electrical power services. They can be adjacent businesses that leverage PEA's existing assets or expertise, or a new S-Curve business developed for a domestic or international market by PEA or in collaboration with public or private partners to address changes in the power industry and add value to PEA's portfolio and its affiliates.

- **Energy Trading Management Business**

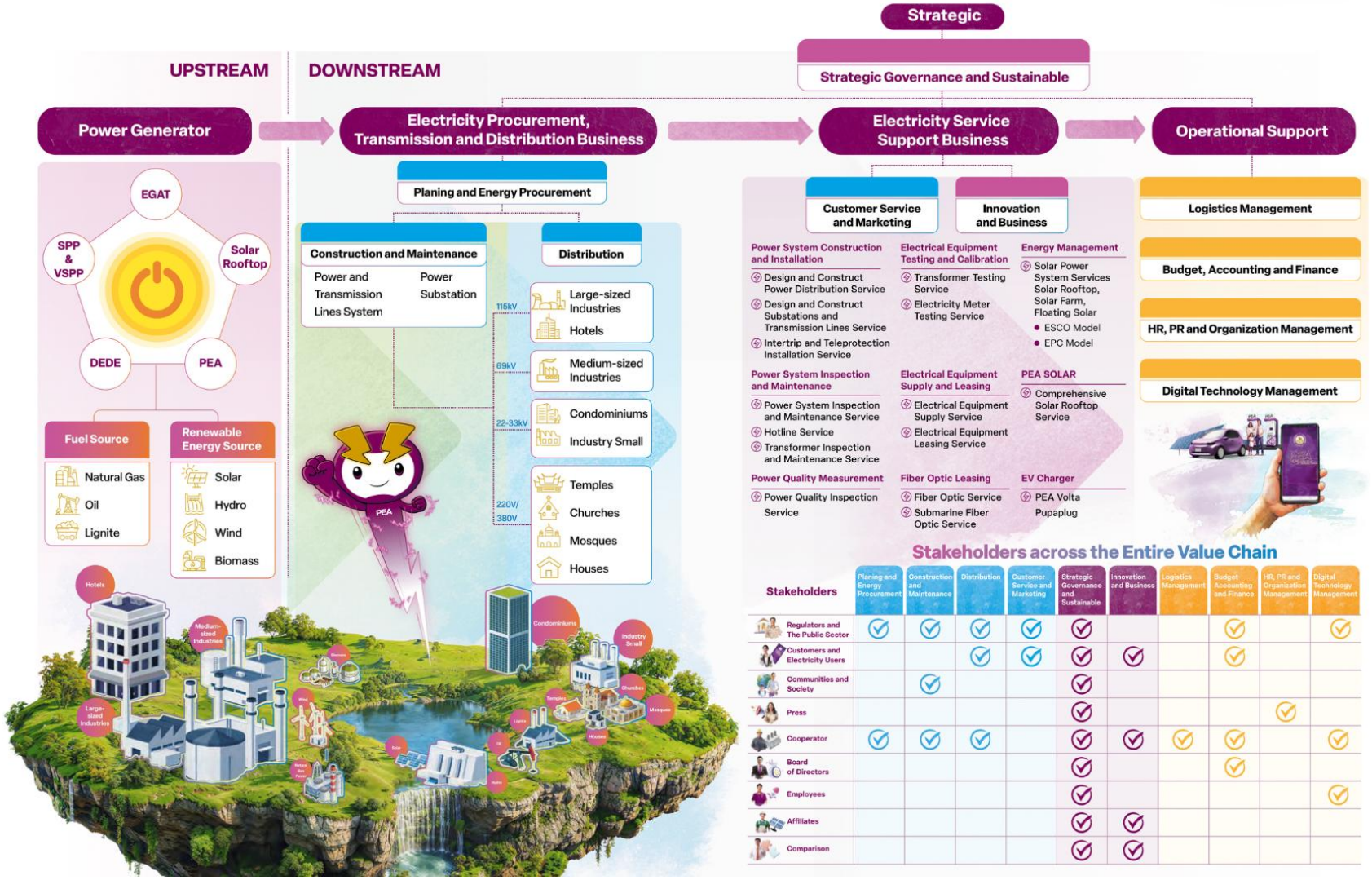
Leveraging expertise in power distribution systems to engage in the energy trading management business, PEA develops and provides energy trading channels while developing and managing power systems that connect power producers, prosumers, and energy storages. This enables efficient management of energy resources within cost-effective structures.

- **Investment Businesses by Affiliates**

To drive business growth, PEA needs to adapt to changes in the power industry and create new opportunities by investing in renewable energy or other ventures through PEA ENCOM and other affiliates that act as primary investors and engage in joint ventures with PEA's business partners. This supports the country's renewable energy development.

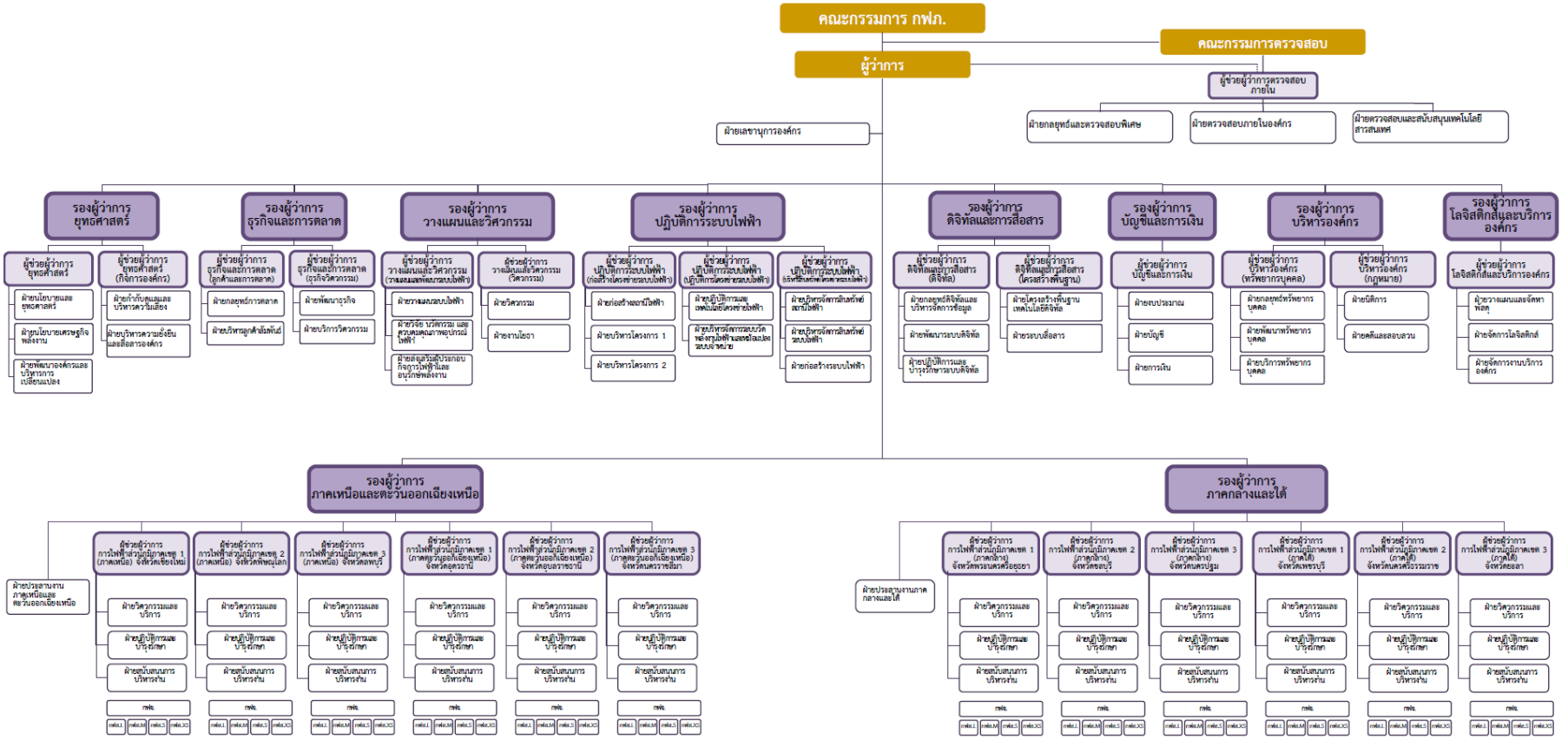
PEA ENCOM International Company Limited (PEA ENCOM) is PEA's first affiliate. It is a state enterprise established under the Cabinet Resolution dated 3 June 2009, which engages in the electricity investment business and provides power system training to public and private organizations in Thailand and abroad. PEA ENCOM is wholly owned by PEA, with an initial registered capital of 100,000,000 baht. Currently, its registered capital amounts to 5,110,621,250 baht.

Value Chain based on PEA's Business Architecture [2-6]



Organizational Structure [2-4, 2-9]

In October 2024, PEA adjusted and integrated its management structure to better suit its operations and align with its strategic mission. This change was made to accommodate future shifts in the industry and support the growth of new businesses in the electric power sector.



หมายเหตุ : การไฟฟ้าส่วนภูมิภาคจังหวัดและการไฟฟ้าส่วนภูมิภาคสาขา มีช่วงเวลาการปรับโครงสร้างดังนี้
ตุลาคม 2566 : 12 จังหวัด เมษายน 2567 : 33 จังหวัด ตุลาคม 2567 : 29 จังหวัด

กองพัฒนาองค์กร ฝ่ายพัฒนาองค์กรและบริหารการเปลี่ยนแปลง สายงานยุทธศาสตร์

Service Areas [2-1]

PEA's Head Office is located at 200 Ngamwongwan Road, Ladyao, Chatuchak, Bangkok 10900. PEA is responsible for providing electricity to 74 provinces in Thailand except Bangkok, Nonthaburi, and Samut Prakan. This represents 99 percent of Thailand, which is about 510,000 square kilometers, serving 22,062,761 electricity users.

Number of Service Offices [2-6]

Offices Types	Number of Offices (units)			
	North	Northeast	Central	South
Public Service Center				
Head Office	-	-	1	-
Regional Offices	3	3	3	3
PEA L-size Office (L)	15	20	39	21
PEA M-size Office (M)	29	28	34	24
PEA S-size Office (S)	85	84	44	62
PEA XS-size Office (XS)	119	189	60	95
Total PEA branch (961)	251	324	181	205
Factories and Diesel Power Plants				
Concrete product factory	1	1	4	1
Independent diesel power plant	1	-	-	2
Reserve diesel power plant	4	5	-	5
Total PEA's factories (24)	**6**	**6**	**4**	**8**
Total PEA's offices	**985**			

Number of Electricity Users [2-6]

Electricity Users		2020	2021	2022	2023	2024
Major Customers	Industrial	37,066	37,856	38,456	39,984	41,763
	Major Commercial	50,394	48,810	51,993	58,401	63,580
Retail Customers	Residential	18,308,892	18,757,812	19,107,386	19,364,315	19,310,869
	Retail Commercial	1,759,639	1,817,650	1,863,496	1,913,393	1,992,126
Public Sector		578,726	595,404	608,726	630,590	654,423
Total Electricity Users		**20,734,717**	**21,257,532**	**21,670,057**	**22,006,683**	**22,062,761**

Number of Employees [2-7, 2-8]

Number of Employees / Contractors	2020		2021		2022		2023		2024	
	Number (Person)	%	Number (Person)	%	Number (Person)	%	Number (Person)	%	Number (Person)	%
Number of Employees and Contractors by Gender										
Employees										
Male	20,962	73.88	20,870	74.09	20,893	74.38	20,704	74.24	7,003	25.52
Female	7,410	26.12	7,298	25.91	7,197	25.62	7,182	25.76	20,327	74.48
Total	**28,372**	**100**	**28,168**	**100**	**28,090**	**100**	**27,886**	**100**	**27,330**	**100**
Contractors										
Male	4,047	66.75	3,705	65.36	3,778	66.46	4,158	69.27	3,819	68.31
Female	2,016	33.25	1,964	34.64	1,907	33.54	1,845	30.73	1,772	31.69
Total	**6,063**	**100**	**5,669**	**100**	**5,685**	**100**	**6,003**	**100**	**5,591**	**100**
Number of Employees and Contractors by Area										
Employees										
Head Office	3,917	13.81	3,895	13.83	3,878	13.81	3,792	13.81	3,752	13.73
Northern Region	5,572	19.64	5,561	19.74	5,522	19.66	5,540	19.87	5,416	19.82
Northeastern Region	6,610	23.30	6,583	23.37	6,584	23.44	6,506	22.98	6,360	23.27
Central Region	6,953	24.51	6,859	24.35	6,819	24.28	6,802	24.43	6,600	24.15
Southern Region	5,320	18.75	5,270	18.71	5,287	18.82	5,246	18.91	5,202	19.03
Contractors										
Head Office	170	2.80	166	2.93	160	2.81	171	2.85	168	3.01
Northern Region	1,212	19.99	1,219	21.50	1,227	21.58	1,277	21.27	1,192	21.32
Northeastern Region	1,564	25.80	1,400	24.70	1,478	26.00	1,501	25.00	1,371	24.52
Central Region	1,775	29.28	1,671	29.48	1,679	29.53	1,725	28.74	1,588	28.40
Southern Region	1,342	22.13	1,213	21.40	1,141	20.07	1,329	22.14	1,272	22.75
Total	**34,435**		**33,837**		**33,775**		**33,889**		**32,921**	

Notes: Employees refer to:

(1) Management (Executives), including Deputy Governors, Assistant Governors / Department Directors / Managers Level 1, Deputy Department Directors, Division Directors, Center Directors, Electric Vocational School Directors, Managers Level 2-3 or equivalents, Deputy/ Assistant Division Directors, Deputy / Assistant Center Directors, Deputy / Assistant Electric Vocational School Directors, Deputy Managers Level 1-2, Branch Managers, Assistant Managers Level 3, Section Heads, Sub-Branch Managers, and Assistant Section Heads

(2) Specialists, including Experts Level 12-13, Researchers Level 9-11, Specialists Level 9, Specialists Level 8, Researchers Level 7-8, and Professional Officers Level 7

(3) Operations, including Researchers/Professional Officers Level 4-6 and Professional Officers Level 2-3.

Contractors refer to monthly workers who agree to work for the employer and receive monthly wages under the workforce plan. They also include full-time workers in the Governor's, Deputy Governors', and Assistant Governors' Offices, including drivers and housekeepers

Protection of Employee Welfare and Benefits [2-30]

To protect employee welfare and benefits, employees have formed a group to serve as labor representatives in negotiations with management. This group also provides consultation to members who feel they have been treated unfairly. Additionally, an official labor relations policy has been announced to all personnel throughout the organization. This is to build confidence among PEA's workforce, assuring them that the organization values building positive relationships between management and employees, which benefits all stakeholder groups.

All employees are covered by a collective bargaining agreement with the labor union.

Membership Associations [2-28]

Operating under the Provincial Electricity Authority Act 1960, PEA has adopted national and international requirements, frameworks, standards, and principles to improve its operations. These include requirements of the State Enterprise Policy Office, COSO ERM Framework, ISO/IEC 22301 (Business Continuity Management), ISO/IEC 27001 (Information Security Management), ISO 26000 (Social Responsibility), GRI Standards, and UN SDGs.

Furthermore, to drive efficient operations and deliver value to communities and society, PEA participates as a member or collaborates with various public and private organizations below:

- Key operations (distribution system)
  - Energy Policy and Planning Office
  - Office of the Energy Regulatory Commission
  - Engieering Institute of Thailand under the Royal Patronage
  - Institute of Electrical and Electronics Engineers (IEEE) Thailand Sect
  - Electricity Supply Industry Association of Thailand (TESIA), Heads of ASEAN Power Utilities/ Authorities (HAPUA)
  - Electricity System Reliability Improvement Committee (the three electricity authorities)
- Other associations:
  - Thailand Business Council for Sustainable Development (TBSCD)
  - Thai Electrical and Mechanical Contractors Association
  - Personnel Management Association of Thailand (PMAT)
  - Department of Skill Development, Ministry of Labor
  - Department of Environmental Quality Promotion, Ministry of Natural Resources and Environment.

04. Corporate Governance

Governance and Anti-Corruption [3-3]

Good corporate governance is a vital factor in driving an organization to operate efficiently and sustainably. It encompasses all aspects of the relationships among the regulatory body, the board of directors, executives, employees, and all stakeholders. Therefore, PEA is committed to developing its management system under international standards through an appropriate, transparent, and auditable organizational structure. This includes setting strategic objectives, creating clear operational guidelines, and implementing a systematic performance monitoring and evaluation process. This is all carried out on a foundation of ethical standards to build trust with both internal and external stakeholders. The PEA Board of Directors performs its governance duties with integrity and due care, with oversight from the Corporate Governance and Sustainable Development Committee. PEA management is also held to the same high standards.

These actions demonstrate the organization's firm commitment to preventing and combating all forms of corruption. This approach is intended to improve the Corruption Perception Index (CPI), which is crucial for the overall development of the country. It also aligns with the United Nations' Sustainable Development Goals (SDGs), specifically Goal 16 - Peace, Justice and Strong Institutions, with a focus on Target 16.5 to substantially reduce corruption and bribery in all their forms and Target 16.6 to develop effective, accountable, and transparent institutions at all levels.

Objectives [3-3]

- Be A leading organization that conducts business according to good governance principles, adhering to the ethical standards and code of conduct for the board of directors, management, and employees, as well as the organization’s core professions. It will have a positive reputation and public recognition, free from all forms of corruption.
- Personnel will achieve an ethical performance evaluation score of no less than 90%.
- Complaints of corruption and misconduct will decrease as a result of effective, standardized, and fair processes for prevention, deterrence, and suppression.
- Stakeholders will have confidence in and accept the organization's operations under good governance principles.
- Maintain a score of 98–100 points on the Integrity and Transparency Assessment (ITA) (Excellent pass), or be ranked among the top 5 of all state enterprises.
- All units evaluated on GRC will receive a score of Level B or higher (75.00–84.99 points), in accordance with the ITA evaluation criteria.

Strategy [3-3]

PEA conducted an assessment of its good governance system's fundamental components and operational guidelines. This included a SWOT analysis to identify its strengths, weaknesses, opportunities, and threats. The findings informed the strategies set forth in the Master Plan on Governance, Anti-Corruption, and Suppression (2024–2028), 1st Revision 2024. The plan encompasses ethical standards, core business ethics, a code of ethics for the board, management, and employees, and PEA's professional code of conduct. To ensure consistent performance, concrete plans and projects have been established with regular monitoring. These efforts are comprised of the following three strategies:

Implementation [3-3]

- Announced the GRC (Governance, Risk, and Compliance) Integration Policy to support an efficient management system based on good governance principles. This promotes transparency, fairness, and accountability, allowing the organization to achieve its vision and mission, and building confidence among the board, management, employees, and both direct and indirect stakeholders to drive sustainable growth.
- Announced the Governance Policy to establish a framework of principles, concepts, and practices that meet international standards. This will lead to the transparent, fair, and auditable achievement of goals and drive the organization's sustainable growth.
- Announced the Related Party Transaction Policy and reviewed guidelines for reporting conflicts of interest as well as PEA's related party transactions.
- Announced the continuous use of the No Gift Policy during festive seasons and at all other times. This expresses PEA's intent to operate with transparency, combat bribery, and prevent all forms of corruption.

- Announced the PEA Fair Competition Policy, which requires the organization to conduct business within a framework of fair competition under good governance principles and to strictly comply with all relevant laws. This includes refraining from any actions that would impede free competition or involve the misuse of market dominance.
- Reviewed and announced the PEA Business Governance and Ethics Manual to encourage the board, management, and employees to use it as a transparent and straightforward guide for their work. The board and management are committed to elevating good governance standards to ensure the organization achieves its goals with transparency, fairness, and accountability.
- Co-announced a statement of intent to prevent and suppress corruption. This expresses a commitment to honesty, integrity, and transparency in accordance with good governance principles, while also considering ethics and responsibility to stakeholders. It aims to push the organization to create value for society, adapt to a changing environment, and stand together in opposition to all forms of corruption. This marked the 8th consecutive year PEA has held this event, with executives and employees nationwide participating in unison.
- Continuously participated in the Integrity and Transparency Assessment (ITA) project by the Office of the National Anti-Corruption Commission (NACC) for the 10th consecutive year. The assessment results are used to develop and improve the organization's efficiency and integrity, demonstrating a true commitment to becoming a transparent organization.
- Organized activities and training to enhance ethics and transparency in operations (Soft Control) to build a positive atmosphere and instill a consciousness of the importance of anti-corruption among three target groups: 1) PEA technical students, 2) new employees, and 3) management and current employees.
- Upgraded the good governance database to keep pace with corruption issues and meet international standards (CG e-System). The system consists of three main platforms: 1) CG Acknowledgement, used for communicating and distributing the governance manual and obtaining signed acknowledgements; 2) CG Testing, used for assessing business ethics; and 3) COI Reporting, used for reporting conflicts of interest within PEA.

Corporate Governance Structure [2-9]

PEA Board of Directors	
PEA Executive Committee	PEA Audit Committee
PEA Risk Management and Internal Control Committee	PEA Corporate Governance and Sustainable Development Committee
Subcommittee on the Performance Evaluation of the PEA Governor	Subcommittee on the Consideration of the PEA Governor's Remuneration
PEA Corporate Relations Committee	Subcommittee on Legal Matters, Regulations, and Appeals Consideration
PEA Governor Search Committee	PEA Digital Technology Committee

PEA Board of Directors [2-9]

1. Name – Surname: Mr. Unsit Sampuntharat
   Age: 53 Age
   Position: Chairman
   Term: January 9, 2024 – Present
   Other Positions: Permanent Secretary, Ministry of Interior
   Positions on Sub-Committees: None

2. ชื่อ-นามสกุล: นายไชยวัฒน์ จุนถิระพงศ์
   อายุ: 59 ปี
   ตำแหน่งในคณะกรรมการการไฟฟ้าส่วนภูมิภาค: กรรมการ
   ระยะเวลาดำรงตำแหน่ง: 9 มกราคม 2567 – ปัจจุบัน
   ตำแหน่งในหน่วยงานอื่น: อธิบดีกรมการปกครอง
   ตำแหน่งในคณะกรรมการชุดย่อย: 1. ประธานกรรมการบริหารของการไฟฟ้าส่วนภูมิภาค
   2. ประธานอนุกรรมการประเมินผลการดำเนินงานของผู้ว่าการการไฟฟ้าส่วนภูมิภาค
   3. ประธานกรรมการสรรหาผู้ว่าการการไฟฟ้าส่วนภูมิภาค

3. ชื่อ-นามสกุล: พลโท อดุลย์ บุญธรรมเจริญ
อายุ: 60 ปี
ตำแหน่งในคณะกรรมการการไฟฟ้าส่วนภูมิภาค: กรรมการ
ระยะเวลาดำรงตำแหน่ง: 9 มกราคม 2567 – ปัจจุบัน
ตำแหน่งในหน่วยงานอื่น: นายทหารราชองครักษ์พิเศษ
ตำแหน่งในคณะกรรมการชุดย่อย: 1. ประธานกรรมการตรวจสอบของการไฟฟ้าส่วนภูมิภาค
2. กรรมการสรรหาผู้ว่าการการไฟฟ้าส่วนภูมิภาค

4. ชื่อ-นามสกุล: นายกรณินทร์ กาญจโนมัย
อายุ: 53 ปี
ตำแหน่งในคณะกรรมการการไฟฟ้าส่วนภูมิภาค: กรรมการ
ระยะเวลาดำรงตำแหน่ง: 9 มกราคม 2567 – ปัจจุบัน
ตำแหน่งในหน่วยงานอื่น: รองผู้อำนวยการสำนักงบประมาณ สำนักงบประมาณ
ตำแหน่งในคณะกรรมการชุดย่อย: กรรมการตรวจสอบของการไฟฟ้าส่วนภูมิภาค

5. ชื่อ-นามสกุล: นายจิระพงศ์ เทพพิทักษ์
อายุ: 51 ปี
ตำแหน่งในคณะกรรมการการไฟฟ้าส่วนภูมิภาค: กรรมการ
ระยะเวลาดำรงตำแหน่ง: 9 มกราคม 2567 – ปัจจุบัน
ตำแหน่งในหน่วยงานอื่น: ผู้ตรวจราชการกระทรวง (ผู้ตรวจราชการกระทรวงระดับสูง สำนักงานปลัดกระทรวงคมนาคม)
ตำแหน่งในคณะกรรมการชุดย่อย: 1. กรรมการบริหารของการไฟฟ้าส่วนภูมิภาค
2. กรรมการธรรมาภิบาลและการพัฒนาอย่างยั่งยืน
3. อนุกรรมการประเมินผลการดำเนินงานของ ผู้ว่าการการไฟฟ้าส่วนภูมิภาค
4. กรรมการสรรหาผู้ว่าการการไฟฟ้าส่วนภูมิภาค

6. ชื่อ-นามสกุล: พลตำรวจโท สำราญ นวลมา
อายุ: 51 ปี
ตำแหน่งในคณะกรรมการการไฟฟ้าส่วนภูมิภาค: กรรมการ
ระยะเวลาดำรงตำแหน่ง: 9 มกราคม 2567 – ปัจจุบัน
ตำแหน่งในหน่วยงานอื่น: ผู้ช่วยผู้บัญชาการตำรวจแห่งชาติ สำนักงานตำรวจแห่งชาติ
ตำแหน่งในคณะกรรมการชุดย่อย: 1. ประธานกรรมการกิจการสัมพันธ์การไฟฟ้าส่วนภูมิภาค
2. กรรมการบริหารความเสี่ยงและควบคุมภายในของการไฟฟ้าส่วนภูมิภาค
3. กรรมการธรรมาภิบาลและการพัฒนาอย่างยั่งยืน
4. กรรมการเทคโนโลยีดิจิทัลการไฟฟ้าส่วนภูมิภาค
5. กรรมการสรรหาผู้ว่าการการไฟฟ้าส่วนภูมิภาค

7. ชื่อ-นามสกุล: รองศาสตราจารย์ธีร เจียศิริพงษ์กุล
อายุ: 49 ปี
ตำแหน่งในคณะกรรมการการไฟฟ้าส่วนภูมิภาค: กรรมการ
ระยะเวลาดำรงตำแหน่ง: 9 มกราคม 2567 – ปัจจุบัน
ตำแหน่งในหน่วยงานอื่น: รองอธิการบดีฝ่ายบริหารศูนย์รังสิต มหาวิทยาลัยธรรมศาสตร์
ตำแหน่งในคณะกรรมการชุดย่อย: 1. ประธานกรรมการเทคโนโลยีดิจิทัลการไฟฟ้าส่วนภูมิภาค
2. กรรมการบริหารของการไฟฟ้าส่วนภูมิภาค

8. ชื่อ-นามสกุล: นายพนิต ธีรภาพวงศ์
อายุ: 57 ปี
ตำแหน่งในคณะกรรมการการไฟฟ้าส่วนภูมิภาค: กรรมการ
ระยะเวลาดำรงตำแหน่ง: 9 มกราคม 2567 – ปัจจุบัน
ตำแหน่งในหน่วยงานอื่น: ที่ปรึกษากฎหมาย สำนักงานปลัดกระทรวงการคลัง
กระทรวงการคลัง
ตำแหน่งในคณะกรรมการชุดย่อย: กรรมการตรวจสอบของการไฟฟ้าส่วนภูมิภาค

9. ชื่อ-นามสกุล: นายวิรัตน์ เอื้อนฤมิต
อายุ: 62 ปี
ตำแหน่งในคณะกรรมการการไฟฟ้าส่วนภูมิภาค: กรรมการ
ระยะเวลาดำรงตำแหน่ง: 9 มกราคม 2567 – ปัจจุบัน
ตำแหน่งในหน่วยงานอื่น: ประธานกรรมการบริษัทจัดการและพัฒนาทรัพยากรน้ำ
ภาคตะวันออก จำกัด (มหาชน) หรือ EASTW
ตำแหน่งในคณะกรรมการชุดย่อย: 1. ประธานอนุกรรมการพิจารณาผลตอบแทนผู้ว่าการการไฟฟ้าส่วนภูมิภาค
2. กรรมการบริหารของการไฟฟ้าส่วนภูมิภาค
3. กรรมการเทคโนโลยีดิจิทัลการไฟฟ้าส่วนภูมิภาค
4. กรรมการสรรหาผู้ว่าการการไฟฟ้าส่วนภูมิภาค
5. อนุกรรมการประเมินผลการดำเนินงานของผู้ว่าการ

10. ชื่อ-นามสกุล: รองศาสตราจารย์ นายแพทย์ ดิลก ภิยโยทัย
อายุ: 56 ปี
ตำแหน่งในคณะกรรมการการไฟฟ้าส่วนภูมิภาค: กรรมการ
ระยะเวลาดำรงตำแหน่ง: 9 มกราคม 2567 – ปัจจุบัน
ตำแหน่งในหน่วยงานอื่น: ผู้อำนวยการโรงพยาบาลธรรมศาสตร์เฉลิมพระเกียรติ
ตำแหน่งในคณะกรรมการชุดย่อย: 1. กรรมการบริหารความเสี่ยงและควบคุมภายในของการไฟฟ้าส่วนภูมิภาค
2. กรรมการธรรมาภิบาลและการพัฒนาอย่างยั่งยืน

11. ชื่อ-นามสกุล: นายสุวิทย์ ธรณินทร์พานิช
อายุ: 59 ปี
ตำแหน่งในคณะกรรมการการไฟฟ้าส่วนภูมิภาค: กรรมการ
ระยะเวลาดำรงตำแหน่ง: 9 มกราคม 2567 – ปัจจุบัน
ตำแหน่งในหน่วยงานอื่น: ประธานกลุ่มอุตสาหกรรมพลังงานหมุนเวียน สภาอุตสาหกรรมแห่งประเทศไทย
ตำแหน่งในคณะกรรมการชุดย่อย: 1. กรรมการบริหารความเสี่ยงและควบคุมภายในของการไฟฟ้าส่วนภูมิภาค
2. กรรมการเทคโนโลยีดิจิทัลการไฟฟ้าส่วนภูมิภาค

12. ชื่อ-นามสกุล: นายเจษฎ์ โทณะวณิก
อายุ: 52 ปี
ตำแหน่งในคณะกรรมการการไฟฟ้าส่วนภูมิภาค: กรรมการ
ระยะเวลาดำรงตำแหน่ง: 9 มกราคม 2567 – ปัจจุบัน
ตำแหน่งในหน่วยงานอื่น: ประธานหลักสูตรคณะนิติศาสตร์ วิทยาลัยบัณฑิตเอเชีย
ตำแหน่งในคณะกรรมการชุดย่อย: 1. ประธานกรรมการบริหารความเสี่ยงและควบคุมภายในของการไฟฟ้าส่วนภูมิภาค
2. ประธานอนุกรรมการกฎหมาย ข้อบังคับ และพิจารณาอุทธรณ์

13. ชื่อ-นามสกุล: ผู้ช่วยศาสตราจารย์พงษ์ศักดิ์ กีรติวินทกร
อายุ: 50 ปี
ตำแหน่งในคณะกรรมการการไฟฟ้าส่วนภูมิภาค: กรรมการ
ระยะเวลาดำรงตำแหน่ง: 9 มกราคม 2567 – ปัจจุบัน
ตำแหน่งในหน่วยงานอื่น: อาจารย์ประจำภาควิชาวิศวกรรมคอมพิวเตอร์
คณะวิศวกรรมศาสตร์ สถาบันเทคโนโลยีพระจอมเกล้าเจ้าคุณทหารลาดกระบัง
ตำแหน่งในคณะกรรมการชุดย่อย: กรรมการเทคโนโลยีดิจิทัลการไฟฟ้าส่วนภูมิภาค

14. ชื่อ-นามสกุล: ร้อยโท ปรีชาพล พงษ์พานิช
อายุ: 44 ปี
ตำแหน่งในคณะกรรมการการไฟฟ้าส่วนภูมิภาค: กรรมการ
ระยะเวลาดำรงตำแหน่ง: 9 มกราคม 2567 – ปัจจุบัน
ตำแหน่งในหน่วยงานอื่น: ประธานเจ้าหน้าที่บริหาร บริษัท วินน์ แคปปิตอล จำกัด
ตำแหน่งในคณะกรรมการชุดย่อย: 1. ประธานกรรมการธรรมาภิบาลและการพัฒนาอย่างยั่งยืน
2. กรรมการบริหารความเสี่ยงและควบคุมภายในของการไฟฟ้าส่วนภูมิภาค

15.	ชื่อ-นามสกุล:	นายศุภชัย เอกอุ่น
	อายุ:	59 ปี
	ตำแหน่งในคณะกรรมการการไฟฟ้าส่วนภูมิภาค:	ผู้ว่าการการไฟฟ้าส่วนภูมิภาค (กรรมการและเลขานุการ)
	ระยะเวลาดำรงตำแหน่ง:	17 สิงหาคม 2564 – ปัจจุบัน
	ตำแหน่งในหน่วยงานอื่น:	กรรมการบริษัท พีอีเอ เอ็นคอม อินเตอร์เนชั่นแนล จำกัด
	ตำแหน่งในคณะกรรมการชุดย่อย:	1. กรรมการบริหารของการไฟฟ้าส่วนภูมิภาค 2. กรรมการบริหารความเสี่ยงและควบคุมภายในของการไฟฟ้าส่วนภูมิภาค

Nomination and Selection Process for the Board [2-10]

The qualifications for individuals nominated to the PEA Board of Directors are stipulated in the Provincial Electricity Authority Act and the State Enterprise Standard Qualifications for Directors and Employees Act. Nominees must be of Thai nationality and have sufficient knowledge and experience in business administration, electricity, engineering, economics, finance, or law. They must also meet other qualifications and not have any prohibited characteristics as defined in the aforementioned Acts. The PEA Board of Directors must include individuals from the Directors' Pool (DP), a list prepared by the Ministry of Finance, comprising no less than one-third of the board's members. Additionally, at least one-third of all directors should be independent directors, in line with the principles and guidelines for good corporate governance in state enterprises 2019. The criteria and procedures for selecting state enterprise directors require the State Enterprise Director Screening Committee to review and select individuals for appointment as PEA directors. The committee then submits its recommendations to the Cabinet for final approval.

PEA recruits the Board in line with the announcement of the Screening Committee for State Enterprise Directors and the State Enterprise Policy Office (SEPO) in two cases as follows:

1) In case a state enterprise does not have sufficient directors to serve as its directors:

Ministry of Interior/SEPO announces recruitment of state enterprise directors.

Ministry of Interior/SEPO announces closing of recruitment of the directors (at least seven days).

Ministry of Interior investigates prohibitions and skills.

SEPO investigates prohibitions and skills.

SEPO submits to the Screening Committee for State Enterprise Directors' names for consideration.

SEPO announces the results of the consideration to enable the relevant authorities to submit the appointment for approval (within 60 days).

The Cabinet approves the appointment of the directors.

2) In case a state enterprise has enough directors to serve as its directors:

State enterprises must propose a list of candidates for director positions, with the number of candidates being no less than double the number of open director positions.

Approved by SEPO

The Steering Committee for State Enterprise Directors selects the nominees

Notify the state enterprise about the results

Ministry of Interior

Cabinet's approval

Composition of the Board [2-11]

The Provincial Electricity Authority (PEA) Board of Directors consists of a Chairman, other directors, and the PEA Governor, who serves as an ex-officio director, for a total of 15 members. These individuals possess diverse qualifications, experience, and expertise, as stipulated in the Provincial Electricity Authority Act B.E. 2503 (1960) and its amendments. Their expertise spans various fields, including business management, electricity, engineering, finance, or law, as well as other areas such as information technology, internal auditing, and sustainability management.

To ensure balance and transparency, the Chairman does not hold a management position at PEA; the Governor acts as the highest executive of the management team. As of 2024, 11 directors (73.33%) had a term of one to three years, while 4 directors (26.67%) had a term of more than three years. The board includes 11 independent external directors who are free to make decisions and express their opinions, and 4 directors who are representatives from regulatory agencies or are ex-officio directors. This composition is in line with the principles and guidelines for good governance in state enterprises 2019 and the practices of the State Enterprise Policy Office. These guidelines stipulate that a state enterprise should have at least one-third of its total directors as independent external directors to ensure genuine independence in decision-making and have enough influence to impact meeting discussions. These individuals should also possess specialized knowledge and abilities that are beneficial to the state enterprise.

Information	Number (Person)
Breakdown by Gender	
Male	15
Female	-

Information	Number (Person)
Breakdown by Term	
Less than a year	-
1-3 years	11
More than 3 years	4

Role and Duties of the Board in Corporate Governance and Sustainability Management [2-12, 2-13, 2-14, 2-24]

The PEA Board of Directors, which is appointed by the Cabinet, is responsible for establishing governance mechanisms and reviewing all critical systems under the principles of good governance and best practices. To support this, it has appointed 10 ad-hoc subcommittees with board members participating in each. These committees are established via official orders that specify their powers, duties, and responsibilities. Their role is to monitor all systems, provide recommendations, and screen all plans before they are presented to the full board. Annual

operational plans are approved or acknowledged before the end of the calendar year, with their progress monitored through a quarterly review of management process efficiency.

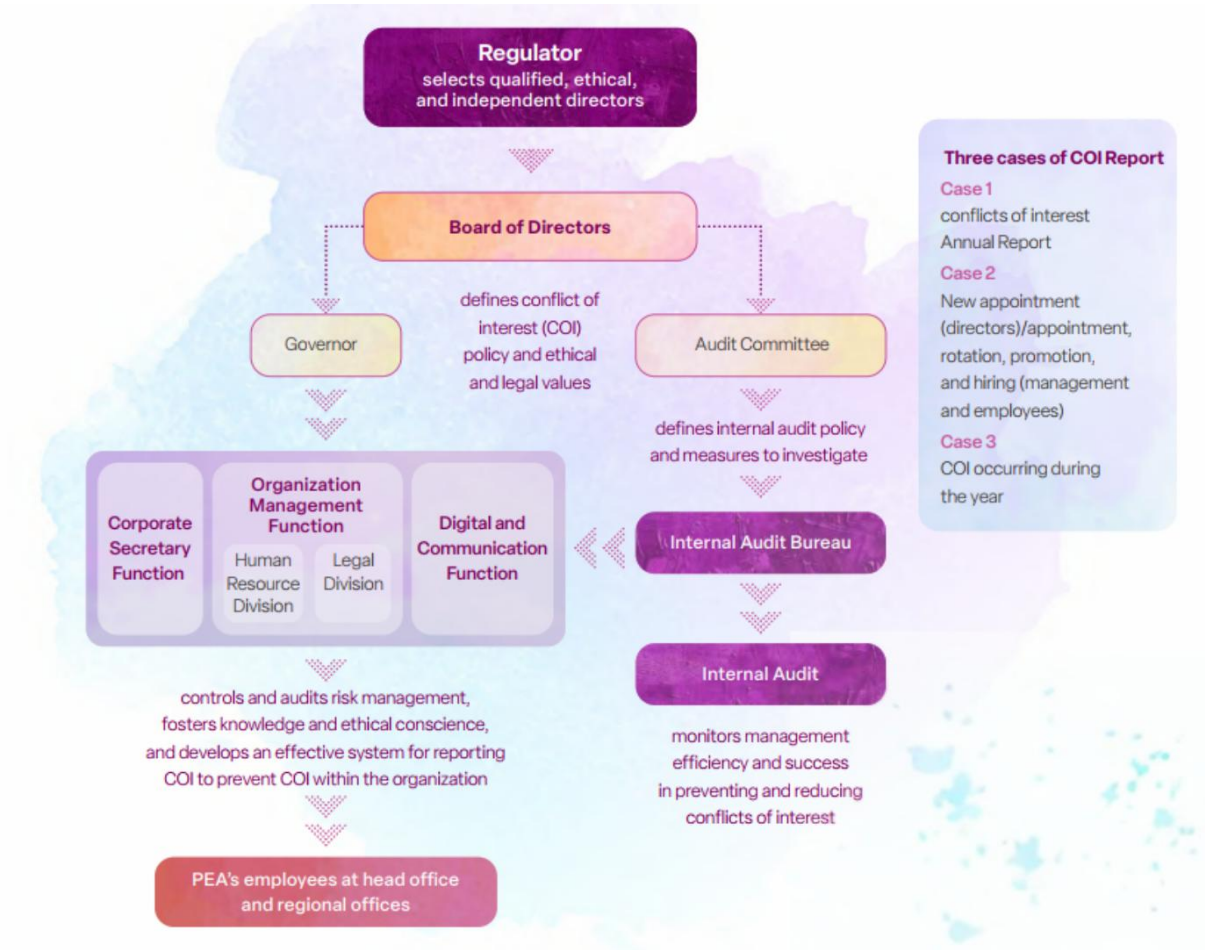
The Board has also assigned the Corporate Governance and Sustainable Development Committee with the responsibility to oversee, monitor, and evaluate the implementation of policies and plans related to good governance and sustainable development. This includes supervising the integration of good corporate governance, risk management, and regulatory compliance. Furthermore, the committee reviews guidelines on governance, corruption deterrence, CSR in Process, stakeholder-centric operations, and sustainable development, which covers the environmental, social, and governance (ESG) dimensions. It also handles sustainability reporting, comparing its practices to international guidelines and presenting the findings to the Board. Progress on managing sustainability impacts is reported to the Board at least once per quarter.

In 2024, management and the Corporate Governance and Sustainable Development Committee regularly reported key concerns to the PEA Board on a quarterly basis. As a result, 38 issues related to governance and sustainable development were directed to the relevant units for action and follow-up reporting back to the Board for its acknowledgment. [2-16]

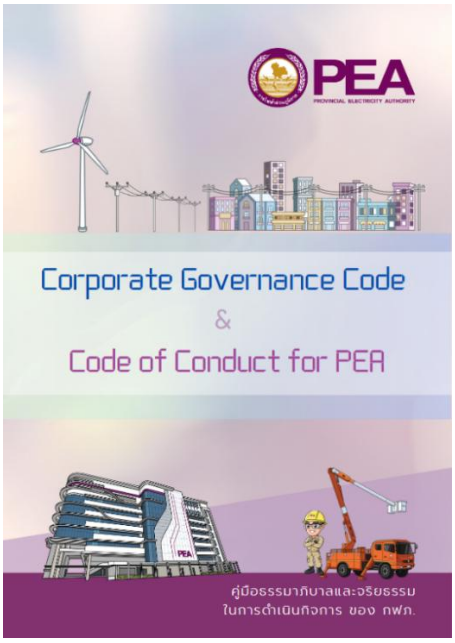
Prevention of Conflicts of Interest [2-15, 2-24]

The Provincial Electricity Authority (PEA) prioritizes the prevention of conflicts of interest. As stipulated in the Provincial Electricity Authority Act 1960 and the State Enterprise Standard Qualifications for Directors and Employees Act 1975, individuals appointed to the PEA Board of Directors must not have any direct or indirect interests in contracts with PEA or in businesses working for PEA.

Furthermore, PEA's Good Corporate Governance and Best Practices Manual assigns the Board the duty of establishing a conflict of interest policy based on ethical and legal principles. An Audit Committee has also been established to set internal audit policies and measures for verifying conflicts of interest violations. The organization simultaneously controls and audits its risk management, enhances ethical knowledge and awareness, and develops an efficient conflict of interest reporting system to prevent their occurrence within the organization.



Corporate Governance Code and Code of Conduct for PEA [2-23]



Knowledge Development and Improvement of Directors [2-17]

PEA develops and promotes the knowledge and understanding of its Board of Directors regarding organizational sustainable development. The board participated in 10 activities as follows:

1. PEA Operational Briefing (Orientation) on January 25, 2024.
2. Briefing to enhance knowledge and understanding of the State Enterprise Policy Office's (SEPO) newly revised Core Business Enablers assessment criteria on March 22, 2024.
3. Visit to the Hydro Floating Solar Hybrid Power Plant at Sirindhorn Dam in PEA Region 2 (Northeast), Ubon Ratchathani Province, on June 4-6, 2024.
4. Joined a forum to listen to opinions from electricity users in the economic and seasonal crop farmer group in Ban Sam Tamrom, Kantaralak District, Si Sa Ket Province, on June 4-6, 2024.
5. Attended a report on the operation of the Battery Energy Storage System (BESS) in the Koh Samui area, Surin Thani Province, on July 4-5, 2024.
6. Delivered a project to improve the household electrical system in PEA Region 1 (Northern), Chiang Mai Province, on July 18, 2024.
7. Opening ceremony for the Microgrid development project on Ko Phaluai and the long-term plan for the procurement of a Battery Energy Storage System (BESS) on Koh Samui on August 15, 2024.
8. Attended a lecture on "CMU Smart City for Sustainable Communities" by Asst. Prof. Dr. Chai Rungsiayakun, Director of the Smart City Management Center, Chiang Mai University, on July 19, 2024.
9. Study visit to the Smart Substation project at North Pattaya Substation 1, PEA Region 2 (Central), Chonburi Province, which helps increase the efficiency of the power station's protection and control systems and is a key part of supporting PEA's Smart Grid operations, on November 5, 2024.
10. Meeting to present PEA's vision, mission, direction, policies, and operational plans for the year 2025 (Vision Meeting).

Additionally, the PEA Board of Directors participated in other knowledge-enhancing activities, which are a factor in ensuring PEA operates sustainably, as follows:

1. Joined the PEA GRC DAY 2024 event under the concept of "Building Sustainability through GRC Systems" on March 20, 2024.
2. Participated in a mobile PEA Corporate Relations Committee meeting to find solutions for problems and obstacles in PEA Region 1 (Southern), Phetchaburi Province, and met with employees in the area on May 29-31, 2024.
3. Attended a training session on ESG risk management for sustainability at PEA Headquarters on August 20, 2024.
4. Delivery ceremony for the "PEA Moo Ban Chor Sa-ard Village Project," project at Ban Pa Sang School, Lamphun Province, on July 18, 2024.

Performance Evaluation of the Board [2-18]

The performance evaluation of the PEA Board of Directors is based on criteria such as meeting attendance, along with a self-assessment on both an individual and collective basis. The results of this self-assessment are formally discussed in board meetings and are used to create a plan to enhance the board's governance efficiency, in accordance with PEA's Good Corporate Governance and Best Practices Manual. At present, sustainability criteria are not included in the performance evaluation. However, the Board does oversee and monitor sustainability operations through continuous and regular presentations from the Corporate Governance and Sustainable Development Committee. In the future, PEA plans to consider incorporating sustainability criteria into the Board's performance evaluation to align with international sustainability practices.

Remuneration Policy for the Board of Directors [2-19, 2-20]

PEA follows the resolution of the Cabinet of 24 April 2019 that approved the adjustment of rate and criteria for monthly and meeting allowances for state enterprises' committees, subcommittees, or other working groups of the group 1: large state enterprises. The monthly and meeting allowances for the Board were adjusted according to the resolution of the Cabinet as seen below.

Monthly Remuneration

The chairman of a state enterprise receives twice the pay of other directors as follows:

1) The chairman receives 20,000 baht per month.

2) Each director receives 10,000 baht per month.

If a state enterprise board member does not serve a full month, the monthly pay is to be prorated to the duration of service.

Meeting Allowance

1) The meeting allowance must be paid on a per-meeting basis, or once per month. In exceptional circumstances, it may be paid more than once per month, but no more than 15 times per year.

2) The chairman of the board of a state enterprise receives a meeting allowance that is 25 percent higher than that of each director. Specifically, the chairman receives 25,000 baht, while each director receives 20,000 baht.

Members of a committee or subcommittee will receive a meeting allowance on a per-meeting basis at a rate of 0.5 times that of the board meetings (up to 10,000 baht per person per meeting). The chairman will receive a meeting allowance that is 25 percent higher than that of other committee members. The allowance will be paid only to attendees. Each committee or subcommittee member or other working group can receive a meeting allowance of no more than two committees and one meeting per committee per month.

Bonus

Board directors of a state enterprise receive a bonus, subject to that state enterprise's performance evaluation. The bonus amount is subject to the state enterprise's net profit and evaluation score and in accordance with the rules set by the Ministry of Finance. The chairman and vice chairman of the Board receive a bonus that is 25 and 12.5 percent higher than other directors. If a director misses more than three monthly meetings in a fiscal year, the following rules will be applied:

1) In the event of absence from meetings for more than three months but not more than six months, the bonus will be reduced by 25 percent.

2) In the event of absence from meetings for more than six months but not more than nine months, the bonus will be reduced by 50 percent.

3) In the event of absence from meetings for nine months or more, the bonus will be reduced by 75 percent.

Meeting Allowances, Monthly Remuneration, and Annual Bonuses of the Board in 2024

Name	Position	Meeting Allowance (baht)		Monthly Remuneration (baht)	
		Before tax	After tax	Before tax	After tax
1. Mr. Unsit Sampuntharat	Chairman	375,000.00	337,500.00	235,332.33	211,800.00
2. นายไชยวัฒน์ จุนถิระพงศ์	Director	280,000.00	252,000.00	117,666.67	105,900.00
3. พลโท อดุลย์ บุญธรรมเจริญ	Director	300,000.00	270,000.00	117,666.67	105,900.00
4. นายกรณินทร์ กาญจโนมัย	Director	300,000.00	270,000.00	117,666.67	105,900.00
5. นายจิระพงศ์ เทพพิทักษ์	Director	300,000.00	270,000.00	117,666.67	105,900.00
6. พลตำรวจโท สำราญ นวลมา	Director	280,000.00	252,000.00	117,666.67	105,900.00
7. รองศาสตราจารย์ธีร เจียศิริพงษ์กุล	Director	300,000.00	270,000.00	117,666.67	105,900.00
8. นายพนิต ธีรภาพวงศ์	Director	280,000.00	252,000.00	117,666.67	105,900.00
9. นายวิรัตน์ เอื้อนฤมิต	Director	260,000.00	234,000.00	117,666.67	105,900.00
10. รองศาสตราจารย์ นายแพทย์ ดิลก ภิยโยทัย	Director	280,000.00	252,000.00	117,666.67	105,900.00
11. นายสุวิทย์ ธรณินทร์พานิช	Director	300,000.00	270,000.00	117,666.67	105,900.00
12. นายเจษฎ์ โทณะวณิก	Director	300,000.00	270,000.00	117,666.67	105,900.00
13. ผู้ช่วยศาสตราจารย์พงษ์ศักดิ์ กีรติวินทกร	Director	300,000.00	270,000.00	117,666.67	105,900.00
14. ร้อยโท ปรีชาพล พงษ์พานิช	Director	300,000.00	270,000.00	117,666.67	105,900.00
15. Mr. Supachai Ek-Un	Governor Director and Secretary (Ex-officio Director)	300,000.00	270,000.00	120,000.00	108,000.00

หมายเหตุ 1. <u>ค่าตอบแทน</u>

เดือนมกราคม 2567 ประธานกรรมการและกรรมการ ได้รับค่าตอบแทนจำนวน 23 วัน เนื่องจากคณะรัฐมนตรีมีมติแต่งตั้งคณะกรรมการการไฟฟ้าส่วนภูมิภาค เมื่อวันที่ 9 มกราคม 2567

2. <u>เบี้ยประชุม</u>

ลำดับที่ 2 ไม่ได้รับเบี้ยประชุมในเดือนกุมภาพันธ์ 2567 เนื่องจากไม่เข้าร่วมประชุม

ลำดับที่ 6 ไม่ได้รับเบี้ยประชุมในเดือนมกราคม 2567 เนื่องจากไม่ประสงค์รับเบี้ยประชุม

ลำดับที่ 8 ไม่ได้รับเบี้ยประชุมในเดือนพฤษภาคม 2567 เนื่องจากไม่เข้าร่วมประชุม

ลำดับที่ 9 ไม่ได้รับเบี้ยประชุมในเดือนมีนาคมและเมษายน 2567 เนื่องจากไม่เข้าร่วมประชุม

ลำดับที่ 10 ไม่ได้รับเบี้ยประชุมในเดือนมกราคม 2567 เนื่องจากไม่เข้าร่วมประชุม

Policy and Remuneration Payment of Senior Management [2-19, 2-20]

The determination and payment of the PEA Governor's compensation are based on a Cabinet resolution dated June 13, 2000, regarding the principles and guidelines for paying performance-based compensation to top executives under employment contracts. The Ministry of Finance is involved in setting this compensation.

The criteria for the Governor's compensation payment consist of three points:

1) A Memorandum of Agreement (MOA) for performance evaluation with the Ministry of Finance.
2) Performance based on the Governor's policies.
3) A 360-degree competency assessment.

These criteria are approved by both the PEA Board of Directors and the Ministry of Finance. Furthermore, according to the letter from the Corporate Management Group (GRB) No. GRB (RB) 1366/2566 dated September 6, 2023, which approved the new job definition for the senior management group, the Governor has assigned the Corporate Management line to determine the compensation and consider the framework and criteria for the annual salary increases and bonuses for senior executives. This is based on a four-point individual performance evaluation:

1) Work based on policies and tasks assigned by supervisors.
2) Work based on duties and responsibilities.
3) Work based on creativity.
4) Behavior according to organizational values.

This evaluation also takes into account leadership quality in management, decision-making, problem-solving, the ability to create a learning environment, developing subordinates, interpersonal skills, and integrity.

Number of Management and Senior Management

No. of management	2020			2021			2022			2023			2024		
	Department Director	Assistant Governor	Deputy Governor	Department Director	Assistant Governor	Deputy Governor	Department Director	Assistant Governor	Deputy Governor	Department Director	Assistant Governor	Deputy Governor	Department Director	Assistant Governor	Deputy Governor
Male	82	25	17	81	27	15	82	24	16	70	18	5	**84**	**24**	**12**
Female	14	3	-	15	2	1	15	4	-	15	3	-	**19**	**5**	**1**
Total	**141**			**141**			**141**			**111**			**149**		

Notes: Senior management consist of:
- Deputy Governors
- Assistant Governors equivalent to Executive Directors/Director of Internal Audit Bureau/Bureau Directors
- Department Directors equivalent to Area Managers/Managers Level 1

Employee compensation ratio [2-21]

The ratio of the monthly total compensation for PEA's highest-paid individual to the median for all employees (excluding the highest-paid individual): 5.6162

The ratio of the increased monthly total compensation for PEA's highest-paid individual to the median for all employees (excluding the highest-paid individual): 1.0020

Free and Fair Competition [2-24]

PEA recognizes the importance of and promotes free and fair competition. It is committed to not misusing its existing market dominance and will not obstruct any future government-led market liberalization, such as a future free power market. The organization has established clear guidelines for fair market competition in its Governance and Ethics Manual, in accordance with the Trade Competition Act 2017 and the Public Procurement and Supplies Management Act 2017. This ensures transparent and fair business operations, avoiding the use of state power or political connections to gain an unfair advantage or increase its monopoly power. Such actions could lead to the exploitation of, or disadvantages for, competitors and creditors, or deprive them of their normal rights and benefits. Furthermore, PEA's procurement process is transparent, fair, and non-discriminatory, which prevents unfair competition. In 2024, **PEA's operations showed no evidence of anti-competitive behavior, antitrust violations, or commercial monopolies.** [206-1]

Channels for Complaints and Listening to the Voice of Customers and Stakeholders [2-16, 2-25, 2-26]

PEA has a systematic and diverse set of channels for complaints and for listening to customers and stakeholders. This ensures that all groups can access them conveniently and quickly and participate in the evaluation of the organization's governance. This allows PEA to effectively manage and respond to complaints, ensuring fairness for all stakeholders, and promoting the development and enhancement of PEA's operations, thereby raising customer and stakeholder satisfaction. The channels are divided into three main groups:

1. Digital Channels: Through PEA's online systems, such as PEA Smart Plus, the PEA Website, and social networks.
2. Physical Channels: This group is further divided into two sub-channels:
    - Service Points: Direct contact at offices, documents, mail, fax, and the 1129 PEA Contact Center.
    - Customer Relationship Activities: Including visits to key customers, Key Account Management, seminars, and forums.
3. Other Channels: Including regulatory agencies and customer feedback received through external websites and the media.

PEA has developed a Voice of the Customer (PEA-VOC) System, an information technology system that enhances the efficiency of complaint management. It centralizes complaint responses, data storage, progress tracking, and performance monitoring on a single database, promoting transparency in operations.

1. Request
2. Incident Report
3. Suggestions/Recommendations
4. Whistleblowing
5. Compliments
6. Complaints, which are further divided into five subtypes:
    - 6.1 Power quality
    - 6.2 Service
    - 6.3 Employee behavior
    - 6.4 Meter reading/billing
    - 6.5 Power disconnection

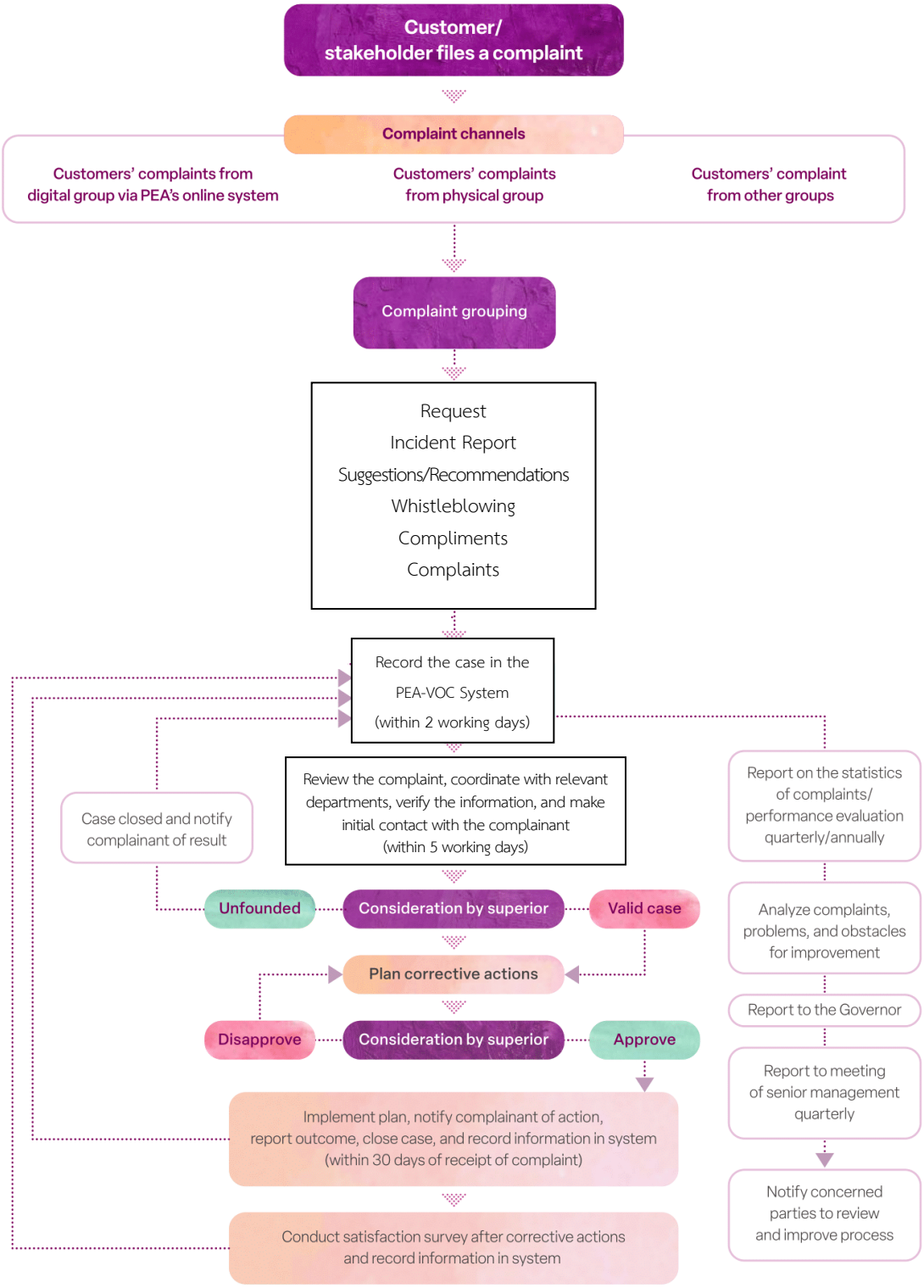
Personal Data Protection

PEA has established clear guidelines for protecting complainants and whistleblowers in its Complaint Management Operations Manual (3rd revision). The manual states:

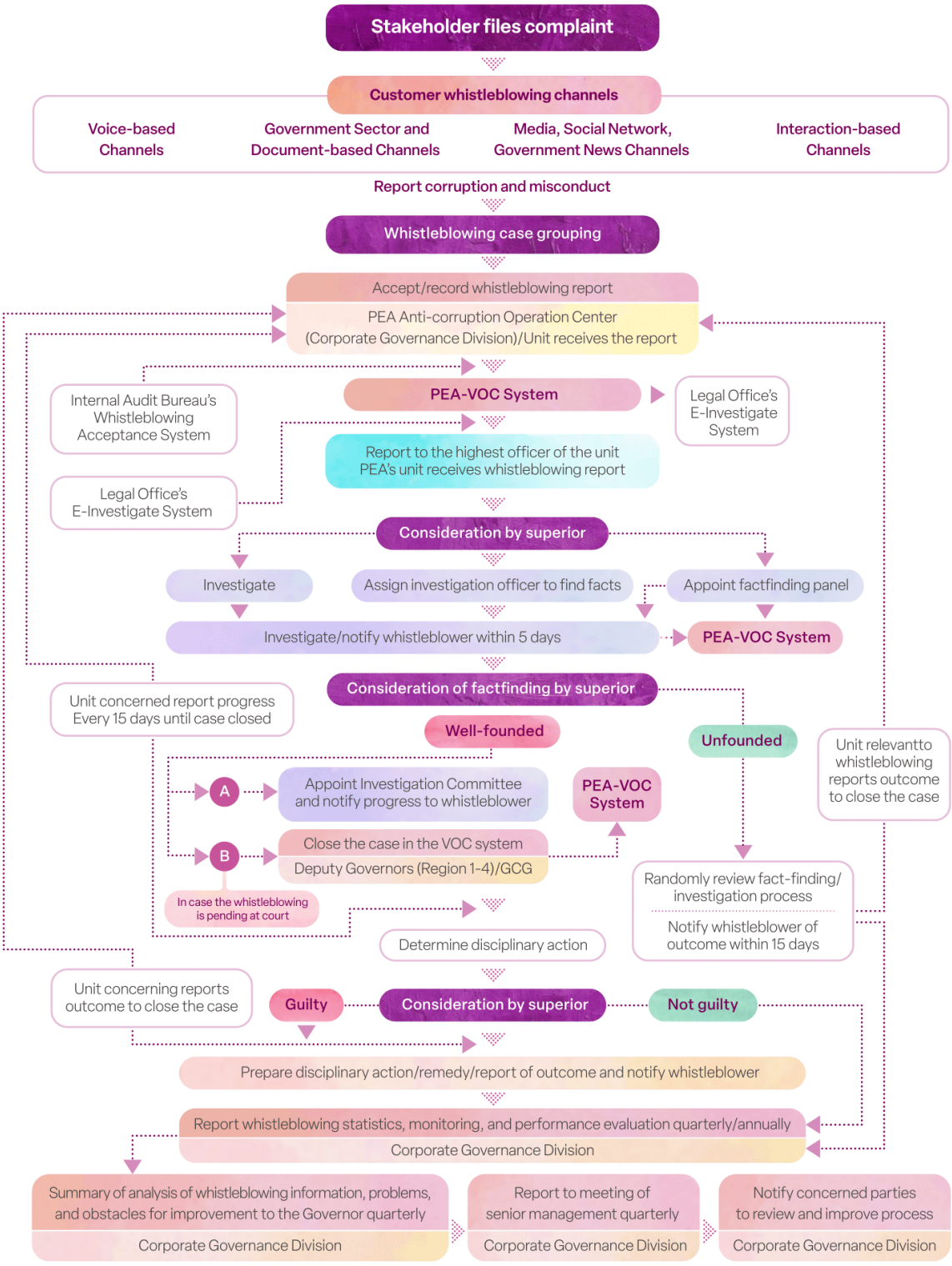
"To ensure effective personal data protection and provide efficient remedies for data subjects whose rights have been violated, personal data is defined as information about a natural person that can directly or indirectly identify the data subject, but does not include deceased persons. This also covers sensitive personal data like religion, political opinions, criminal history, and health records."

"PEA must maintain the confidentiality and security of personal data to prevent its loss, unauthorized access, use, alteration, modification, and unlawful disclosure. This is achieved by implementing technical and administrative measures, procedures, and access rights in accordance with the law and/or international standards. If any action is taken against personal data, whether intentionally or negligently, or in violation of the Personal Data Protection Act, causing annoyance or damage to the data subject, the violator will be held liable as prescribed by law, whether in civil, criminal, or administrative terms."

Service Complaint Handing Process [2-25]



Whistleblowing Handing Process [2-26]



Compliance with Laws [2-27]

In 2024, there were 96 reported incidents of non-compliance with laws and regulations. Of these, 37 have been resolved, with 59 cases still in progress. The 37 confirmed incidents were caused by the misuse of authority for severe corruption and misconduct, and violations of the Occupational Safety, Health, and Environment Act. These non-compliance issues resulted in total fines of 5,046,264.58 Baht. For comparison, the total compensation and humanitarian costs related to product and service health and safety impacts in the previous year amounted to 5,547,375.07 Baht.

Performance [3-3]

- The results of the ethics assessment for management, employees, and contract workers show that 99.35% of all personnel in the organization responded to the assessment.
- There were 96 whistleblowing and misconduct complaints submitted through the VOC System. Of these, 59 cases are still in progress, 37 have been addressed, 24 were found to be without merit, and 13 were substantiated.
- A summary report of disciplinary actions shows a total of 16 cases within the organization, stemming from severe corruption and misconduct. These cases led to disciplinary action against 59 individuals, with PEA terminating 7 and dismissing 4. The total damage value amounted to 5,046,264.58 Baht. [205-3]
- PEA's score on the Integrity and Transparency Assessment (ITA) for government agencies was 95.58. This ranks PEA 3rd among state enterprises in the energy sector and 5th within the Ministry of Interior.
- All units received the GRC Excellence Award based on assessments in five areas: 1) Transparent Governance, 2) Risk Management, 3) Business Continuity Management, 4) Internal Control Assessment, and 5) Regulatory Compliance. All units achieved an average GRC performance score of 89.82%.
- Communication of anti-corruption policies and training was provided to the board, personnel, and relevant business partners. In total, 15 board members and 26,808 employees were informed of the policies, representing 98.09% of all employees. [205-2]

Number of Directors, Employees, Cooperator who received Communication PEA's Anti-corruption Policy and Guidelines [205-2]

Category	Number of Recipients	Percentage of Total
Board of Directors	15	100
Breakdown by Employee Group*		
Management	2,417	99.06
Specialists	11,652	99.08
Operations	12,739	97.02
Breakdown by Area		
Head Office	3,655	97.41
Northern Region	5,283	97.54
Northeastern Region	6,203	97.54
Central Region	6,525	98.86
Southern Region	5,142	98.86
Cooperator**		
Electricity Provider	-	-
Apparatus Provider	-	-
Service Provider	-	-
Cooperator in PEA mission	-	-

Notes: *Employees refer to:

(1) Management (Executives), including Deputy Governors, Assistant Governors / Department Directors / Managers Level 1, Deputy Department Directors, Division Directors, Center Directors, Electric Vocational School Directors, Managers Level 2-3 or equivalents, Deputy/ Assistant Division Directors, Deputy / Assistant Center Directors, Deputy / Assistant Electric Vocational School Directors, Deputy Managers Level 1-2, Branch Managers, Assistant Managers Level 3, Section Heads, Sub-Branch Managers, and Assistant Section Heads

(2) Specialists, including Experts Level 12-13, Researchers Level 9-11, Specialists Level 9, Specialists Level 8, Researchers Level 7-8, and Professional Officers Level 7

(3) Operations, including Researchers/Professional Officers Level 4-6 and Professional Officers Level 2-3.

** No data on the communication of anti-corruption policies and practices with business partners was collected.

Board of Directors and Employees Who Received Training on Anti-Corruption Practices [205-2]

Category	Number of Recipients	Percentage of Total
Board of Directors	15	100
Breakdown by Employee Group*		
Management	2,254	92.38
Specialists	10,790	91.75
Operations	11,952	91.03
Breakdown by Area		
Head Office	2,687	71.62
Northern Region	5,416	100.00
Northeastern Region	6,360	100.00
Central Region	5,331	80.77
Southern Region	5,202	100.00

Notes: *Employees refer to:

(1) Management (Executives), including Deputy Governors, Assistant Governors / Department Directors / Managers Level 1, Deputy Department Directors, Division Directors, Center Directors, Electric Vocational School Directors, Managers Level 2-3 or equivalents, Deputy/ Assistant Division Directors, Deputy / Assistant Center Directors, Deputy / Assistant Electric Vocational School Directors, Deputy Managers Level 1-2, Branch Managers, Assistant Managers Level 3, Section Heads, Sub-Branch Managers, and Assistant Section Heads

(2) Specialists, including Experts Level 12-13, Researchers Level 9-11, Specialists Level 9, Specialists Level 8, Researchers Level 7-8, and Professional Officers Level 7

(3) Operations, including Researchers/Professional Officers Level 4-6 and Professional Officers Level 2-3.

Upcoming Improvement Action [3-3]

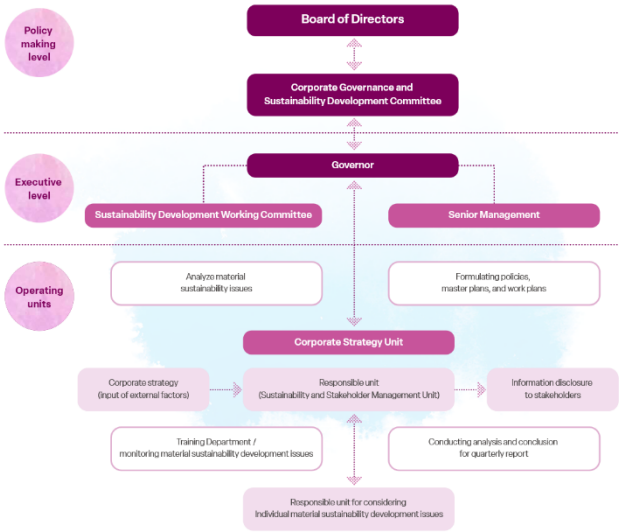
- Collect and compile a summary analysis report to assess potential risks in governance operations over the past year. This will be done in conjunction with continuous study visits to leading national organizations, using the results to improve and elevate PEA's operations.
- Use the results of the stakeholder opinion survey on PEA's operations and the assessment of material sustainability issues as a key input for the review of the governance and anti-corruption master plan and action plan for 2025. This involves continuously inviting relevant internal stakeholders to participate and provide feedback on the preparation and review of the governance action plan.

05. Sustainability and Stakeholder Engagement Management

PEA is committed to becoming a sustainable organization by using international standards and the Sustainable Development Goals (SDGs) as a framework for managing sustainability and stakeholder relations. By analyzing both internal and external sustainability contexts, PEA provides opportunities for all stakeholder groups to participate in decision-making processes. This approach builds confidence among stakeholders in business operations and encourages their support, reflecting their needs and expectations. Ultimately, this leads to the effective formulation of strategies and operations that focus on building trust, strengthening relationships, and reducing negative impacts at every stage of operations. This allows PEA to grow sustainably while delivering lasting value to communities and society.

Sustainability Management Structure [2-13, 2-24]

The PEA Board of Directors has assigned the Corporate Governance and Sustainable Development Committee to oversee sustainable development management and approve the assessment results of material sustainability issues. The PEA Governor, senior management, and the PEA Sustainable Development Working Team are responsible for reviewing and screening these issues. This process serves as a key input for the organization's strategic plan and ensures that all suggestions and recommendations efficiently help to achieve its goals. Direct responsibility for this is assigned to the Sustainability Management and Stakeholder Relations Division, under the Sustainability Management and Corporate Communications Department of the Strategic Affairs line, which reports to the Deputy Governor of Strategy and the Assistant Governor of Strategy (Corporate Affairs). This division is responsible for communicating policies, material sustainability issues, master plans, and other initiatives for implementation across the organization. It works with other responsible units to manage each issue, drive progress, monitor performance, and submit key operational reports to management on a quarterly basis, in line with the governance structure.



Stakeholder Engagement Management [2-29]

PEA applies the principles of the AA1000 Stakeholder Engagement Standard (AA1000SES) and the criteria for stakeholder and customer focus from the State Enterprise Assessment Model (SE-AM) manual. This is done to understand stakeholder feedback and suggestions on PEA's operations during both normal and crisis situations through interviews, suggestion channels, and complaint channels. The organization also identifies, analyzes, and prioritizes stakeholders and key issues that are directly and indirectly related to PEA's business. This process includes analyzing risks and impacts on each stakeholder group, covering ESG topics throughout PEA's operational value chain. As a result of this identification process, PEA's stakeholders are categorized into 9 main groups and 17 sub-groups, as follows:

1. Regulators and Public Sector	
1.1 Public sectors/Independent entity that has the authority to establish or supervise operational policy directions.	Includes entities that have influence over policy-level operational directions, overall performance evaluation, and the inspection of operations to ensure legal compliance.
1.2 Public sectors/Independent entity that has the authority to grant approval or licensing for PEA's operation.	Includes entities responsible for legal matters related to PEA's core business, specifically the installation of poles, stringing of lines, and the expansion of electricity distribution service areas.
1.3 Public sectors/Independent entity that has cooperation or assistance to PEA.	Includes entities that can provide cooperation or support to help ensure PEA's operations and various activities are carried out efficiently.
2. Customers and Electricity Users	
2.1 Users in distribution businesses.	Includes all types of electricity users within PEA's electricity distribution business.
2.2 Users in related businesses.	Includes all types of customers in businesses other than electricity distribution.
3. Community and Social	
3.1 Community and its leader	Includes communities and community leaders located in and around PEA's operational areas.
3.2 Population	Includes all citizens residing in Thailand.

4. Press	
4.1 Press	Includes all types of traditional and online media.
5. Cooperator	
5.1 Electricity provider	Includes all electricity suppliers to PEA's distribution business.
5.2 Apparatus provider	Includes all equipment suppliers to PEA.
5.3 Service provider	Includes providers of various services to PEA, such as system work, construction, meter installation, consulting, and IT systems used to support operations.
5.4 Cooperator in PEA mission	Includes other partners who collaborate to support PEA's mission and business growth, such as those responsible for bill payments, telecommunication agencies that permit the use of their transmission lines, and MOU partners.
6. Board of directors	
6.1 Board of directors	Includes all members of the PEA Board of Directors.
7. Employees	
7.1 Executives/permanent employee and temporary worker	Includes all executives, employees, and temporary workers of PEA.
8. Affiliate	
8.1 PEA Encom international CO, LTD	Companies affiliated with PEA.
9. Comparison	
9.1 Distribution comparison	Covers competitors, manufacturers of substitute products, and benchmarks in the distribution business.
9.2 Related business comparison	Covers related and new businesses (outside of the distribution business) and benchmark companies.

Communication and Listening with Stakeholders [2-29]

PEA provides opportunities for stakeholders to participate in matters that affect them through various channels for receiving suggestions, issues, and complaints. This allows for the exchange of opinions and a clear understanding of stakeholder needs and expectations, whether it is before, during, or after their collaboration with PEA. This is done during interactions or as part of PEA's relationship-building efforts through service touchpoints, which include:

- Physical Touchpoint
    - On-site PEA staff and PEA service points
    - PEA Journal
    - Forums and customer relationship activities
    - 1129 PEA Contact Center
    - Media or Press
- Digital Touchpoint
    - Website: www.pea.co.th
    - Application: PEA Smart Plus
    - Social Media: Facebook, LINE Official Account, X, YouTube, and PEA Email

Furthermore, PEA has a project to survey stakeholder opinions on its operations to assess annual material sustainability issues. The results from all stakeholder groups are analyzed to identify issues, needs, and expectations in their collaboration with PEA. This information is used to improve and develop future operational guidelines in partnership with stakeholders, and it also serves as a key input for the review of the organization's long-term operational plans.

Stakeholder Engagement [2-29]

	1. Regulators and Public Sector	2. Customers and Electricity Users	3. Community and social	4. Press	5. Cooperator	6. Board of directors	7. Employee	8. Affiliate	9. Comparison
Significance to PEA	This group holds **paramount importance** to PEA as they are the **arbiters of policy direction, regulations and the granting authorities** for various organizational operations. Close engagement with this group ensures PEA's **accurate adherence to legal requirements**, fosters an **in-depth understanding of public sector policies** and secures the **necessary support to advance national energy missions**, such as grid expansion or the implementation of crucial infrastructure development projects.	**Customers and Electricity Users** are unequivocally the **linchpin of PEA's business operations**, serving as the direct recipients of our electricity services. Consistently listening to their needs, concerns and feedback enables PEA to **continuously enhance service quality, foster innovation and maximize satisfaction**. This ensures that electricity services are delivered with **uninterrupted efficiency and responsiveness** to evolving lifestyles and dynamic business requirements.	**The Community and social are directly and indirectly impacted by PEA's operations. Engaging with these groups allows PEA to manage environmental and social impacts sustainably, cultivate mutual understanding and cooperation in project implementation and strengthen our positive corporate image while fostering deep local ties within the areas where PEA operates. This ultimately leads to enhanced acceptance and shared sustainability.**	The **Press** plays a **crucial role as disseminators of information and builders of public understanding**. Cultivating positive relationships with media outlets enables PEA to **communicate accurate, transparent and timely information** regarding our policies, operations and social responsibility initiatives. Furthermore, it allows for **effective crisis communication management** to preserve public trust and credibility.	Our **Cooperator** group, encompassing **electricity energy suppliers, material and equipment providers, service providers and other collaborative partners**, constitutes a **vital contributor to PEA's value chain**. Working collaboratively with capable and well-aligned partners enables PEA to **access essential resources, advanced technologies and specialized expertise**. This enhances operational efficiency, reduces costs and facilitates the **continuous creation of innovative new services** for electricity users.	The Board of directors serves as the primary authority for setting and overseeing the organization's key policies and strategic direction. Close engagement with the Board ensures PEA's operations are conducted with utmost transparency and robust corporate governance, thereby facilitating the successful achievement of strategic objectives. Furthermore, this engagement is crucial for effective risk management and the long-term creation of added value for the organization.	Employees represent PEA's invaluable human capital and the driving force behind the organization's progress. Engaging with our employees enables PEA to cultivate a positive work environment, foster strong engagement and satisfaction, enhance personnel capabilities and retain talented individuals within the organization. These efforts directly contribute to PEA's operational efficiency and internal innovation.	The Affiliate group forms an integral part of PEA's broader business ecosystem. Engaging with and actively supporting our affiliates allows PEA to expand our collective business capabilities, stimulate new innovation and enhance overall group value. This is achieved by strategically leveraging shared expertise and existing infrastructure.	While potentially a business rival in certain dimensions, the Comparison group serves as a vital catalyst for PEA's continuous development and improvement. Studying and monitoring the operations of our counterparts enables PEA to gain deeper insights into market trends, drive innovation and refine operational strategies to sustain our competitive edge. Ultimately, this contributes to elevating the overall industry standard.

	1. Regulators and Public Sector	2. Customers and Electricity Users	3. Community and social	4. Press	5. Cooperator	6. Board of directors	7. Employee	8. Affiliate	9. Comparison
Issues of Interest	• Policy and Legal Compliance: Ensuring PEA's operations are in strict adherence to national energy policies, the National Economic and Social Development Plan and all relevant legal frameworks. • Organizational Efficiency and Governance: Concerns regarding the efficiency of organizational management, transparency in operations and budget utilization and the effectiveness of risk management frameworks. • Approvals and Permits: Expectations for swift and accurate processing of requests for land use permits or other operational approvals falling under their purview.	• Electricity Supply Reliability and Quality: Interest in the continuous and stable supply of electricity, consistency of voltage and frequency and rapid restoration times for power outages. • Pricing and Service Charges: Concerns regarding fair and appropriate electricity tariffs and transparency in tariff calculation and billing. • Customer Service: Expectations for convenient, rapid and efficient service delivery at physical service points and through online channels, coupled with useful advice and assistance. • Innovation and Technology: Access to new services such as	• Operational Impacts Management: Managing environmental and social impacts arising from the construction, maintenance and expansion of electricity systems (e.g., noise, disruptions, tree cutting, power line management). • Safety: Ensuring the safety of electricity systems and equipment installed within community areas. • Participation and Development: Interest in community feedback mechanisms, participation in PEA's social activities or projects and the promotion of local quality of life and employment opportunities.	• Information and Transparency: Access to accurate and up-to-date information from PEA, along with transparency in operations and significant events. • Crisis Management: Effective management and communication during widespread power outages or other major incidents that impact the public. • Organizational Role: Interest in PEA's social responsibility initiatives, innovations and its broader role in driving economic and social development.	• **Electricity Purchase:** Ensuring stable and secure purchase of electricity. • **Fair Purchase Terms:** Establishing equitable terms and conditions for electricity purchase. • **Smooth Technical Coordination:** Facilitating seamless technical collaboration and communication. • **Transparency in Procurement:** Ensuring clear and open processes in purchasing goods and services. • **Timely Payments:** Adhering to agreed-upon schedules for financial settlements. • **Sustainable Business Relationships:** Cultivating long-term and mutually beneficial business partnerships.	• Performance and Strategy: Interest in financial performance, progress toward achieving strategic objectives and business growth and expansion. • Governance and Risk: Concerns regarding organizational management aligned with good governance principles, effective internal controls and robust risk management.	• Compensation and Benefits: Fairness of compensation, adequacy of benefits and job security. • Development and Career Progression: Opportunities for skill and knowledge development and clear pathways for career advancement. • Work Environment: Concerns about workplace safety, work-life balance, organizational culture, internal communication and employee participation.	• Support and Direction: Expectations for support from PEA in their operations and the establishment of clear policies and business directions. • Growth Opportunities: Interest in business expansion and the creation of added value for the entire group of affiliated companies.	• Strategy and Innovation: Interest in PEA's development of new business ventures, adoption of new technologies and competitive strategies. • Market Share: Concerns regarding the impact on market share across various related business segments.

	1. Regulators and Public Sector	2. Customers and Electricity Users	3. Community and social	4. Press	5. Cooperator	6. Board of directors	7. Employee	8. Affiliate	9. Comparison
	• Collaboration and Support: Interest in coordinated efforts to promote government projects and the effective utilization of shared infrastructure.	Electric Vehicle (EV) charging stations, Smart Meter systems and energy-saving technologies.			• **Joint Business Opportunities:** Exploring and pursuing collaborative ventures for mutual growth. • **Development of New Technologies and Services**: Collaborating on the creation and advancement of innovative solutions.				
Response Actions	PEA prioritizes **fostering strong collaboration and robust governance** with regulatory bodies and public sector agencies. We are steadfastly committed to **strict adherence to all legal frameworks and government policies**, complemented by **transparent reporting of performance and strategic plans**. This comprehensive approach ensures the acquisition of necessary approvals,	PEA continuously **invests in the modernization and maintenance of its electricity network infrastructure**. We have developed the **PEA Smart Plus application** to facilitate convenient incident reporting and service access and established the **24-hour PEA 1129 Contact Center** for constant support. Regular customer satisfaction surveys are conducted to gather insights and we are	Prior to commencing major projects in local areas, PEA organizes **community forums and public hearings**. We implement **stringent measures for environmental protection and impact mitigation**. Ongoing community and social development programs, such as the **"Electricity for Happiness" project**, are regularly conducted. Furthermore, a **dedicated channel**	PEA conducts **regular press conferences and issues timely press releases** detailing organizational progress and significant projects. We organize **educational activities and site visits for media representatives**. Additionally, a **systematic crisis communication plan** is in place to ensure the prompt and accurate dissemination of information during critical events.	PEA maintains **close coordination on electricity generation and transmission plans**. We establish **clear and equitable purchase agreements** and utilize a **transparent electronic procurement system**. Payments are consistently made on time and we cultivate **strong relationships with our business partners** through regular collaboration meetings. Clearly defined **Memoranda**	PEA provides **regular and comprehensive reports on organizational performance**, encompassing both financial and non-financial dimensions. Detailed presentations of **strategic plans and operational outcomes** are consistently delivered. Furthermore, **periodic risk management reports** are submitted to the Board to ensure robust oversight.	PEA regularly **reviews and updates its compensation and benefits structure** to ensure competitiveness. A **diverse range of training and skill development programs** are provided. We are dedicated to cultivating a safe work environment that promotes well-being and fosters a healthy work-life balance. Open channels for employee feedback and suggestions are	PEA establishes **clear policies and operational guidelines to support affiliate growth**. We provide **essential resource allocation and knowledge transfer**, actively promoting **internal synergy and collaboration** within the group.	PEA continuously **monitors and analyzes market trends and competitor strategies**. We actively **invest in research and development for new innovations** and are committed to **enhancing service quality and operational efficiency** to maintain our industry leadership. This ultimately contributes to elevating overall industry standards.

	1. Regulators and Public Sector	2. Customers and Electricity Users	3. Community and social	4. Press	5. Cooperator	6. Board of directors	7. Employee	8. Affiliate	9. Comparison
	permits and support crucial for fulfilling PEA's core mission.	expanding the **PEA VOLTA Electric Vehicle (EV) charging station network** nationwide.	**for community grievances** has been established to ensure direct communication.		**of Understanding (MOU) / Memoranda of Agreement (MOA)** are put in place and essential information is shared to foster mutual business development.		maintained and organizational policies and strategic directions are consistently communicated through various internal platforms.		
Communication Channels	**Immediately Communication:** Reporting critical incidents or disasters impacting energy infrastructure, or urgent matters concerning significant legal compliance. **Channels:** Telephone, Email, Urgent Official Correspondence, Joint Press Statements. **Real-time Communication:** Responding to urgent inquiries from regulatory bodies, coordinating during unfolding critical events. **Channels:** Telephone, Online Coordination Systems, Email.	**Immediately Communication:** Issuing alerts for widespread power outages, warnings about disasters affecting the electricity system and urgent safety advisories. **Channels:** PEA Smart Plus application (Push Notifications), SMS, 1129 Contact Center, Radio/Television (for widespread incidents). **Real-time Communication:** Providing status updates on power outage resolutions, answering inquiries regarding electricity bills and services and receiving customer complaints.	**Immediately Communication:** Issuing alerts related to electricity system hazards in the area, providing urgent safety advice. **Channels:** Community loudspeakers/public address systems, community leaders, telephone, 1129 Contact Center. **Real-time Communication:** Receiving complaints/suggestions from the community, answering questions about local operations. **Channels:** Community leaders, local PEA office telephone numbers,	**Immediately Communication**: Issuing emergency statements regarding significant PEA incidents (e.g., widespread power system failures) and promptly refuting inaccurate rumors. **Channels**: Emergency Press Conferences, Urgent Press Releases, Exclusive Interviews with key media outlets. **Real-time Communication**: Responding to media inquiries, providing immediate status updates on ongoing events of media interest.	**Immediately Communication**: Notifying of disruptions impacting energy/material/service delivery, or advising on immediate changes to critical policies. **Channels**: Direct coordination (telephone/email), dedicated group notification systems. **Real-time Communication**: Responding to urgent inquiries regarding contracts, payments, or coordination and providing status updates on deliveries or operational progress.	**Immediately Communication**: Reporting critical situations or significant incidents severely impacting the organization (e.g., major accidents, cyberattacks) and providing crucial information requiring urgent decisions. **Channels**: Telephone alerts, emergency Board meetings. **Monthly Communication**: Monthly performance summaries, preliminary financial reports, progress updates on key projects and risk management reviews.	**Immediately Communication:** Announcing critical organizational news directly impacting employees (e.g., changes to welfare policies) and issuing emergency alerts (e.g., disaster warnings, workplace incidents) **Channels**: Intranet/Internal Announcements, Dedicated LINE Groups (for specific teams), Emergency Alert Systems, Urgent Meetings. **Real-time Communication:** Responding to Human Resources inquiries, providing updates on	**Immediately Communication**: Announcing significant policy changes impacting affiliated companies, or critical incidents potentially affecting the overall group's standing. **Channels:** Direct coordination (phone/email), joint executive meetings. **Real-time Communication**: Responding to inquiries about operations/support and providing status updates on relevant activities. **Channels:** Phone, email, inter-company coordination systems. **Monthly**	**Quarterly Communication**: Publishing quarterly financial results and summarizing strategic plan execution. **Channels**: Corporate Website. **Annual Communication**: Releasing the Annual Report and the Sustainability Report. **Channels**: Annual Reports, Corporate Website, Public Announcements. **Ad hoc (On Occasion) Communication:** Announcing the launch of new PEA services/technologies

1. Regulators and Public Sector	2. Customers and Electricity Users	3. Community and social	4. Press	5. Cooperator	6. Board of directors	7. Employee	8. Affiliate	9. Comparison
Monthly **Communication:** Monthly performance summaries, progress reports on key projects and progress updates on certain critical projects (as needed). **Channels:** Official Correspondence, Performance Reports, Meetings (as needed), Online Reporting Systems, Email. **Quarterly** **Communication:** Financial performance reports, progress reports against strategic plans and key performance indicators (KPIs), presentations of risk management plans. **Channels:** Official Reports, Presentations at Joint Meetings with Regulatory Bodies. **Annual** **Communication:** Annual Report, Sustainability Report,	**Channels:** 1129 Contact Center (Phone/Chat), PEA Smart Plus application, Website/LINE OA Chatbot. **Daily** **Communication:** Notifying about scheduled power interruptions for maintenance (localized), sharing daily organizational news and offering energy-saving tips. **Channels:** PEA Website, PEA Smart Plus application, Facebook Page, LINE Official Account, Twitter (X). **Monthly:** **Communication:** Delivering electricity bills, summarizing new promotions and services and distributing customer newsletters (if applicable).	dedicated grievance channels. **Monthly** **Communication:** Summarizing ongoing social activities (if continuous), sharing news about local development projects. **Channels:** Community notice boards, community leaders. **Annual** **Communication**: Presenting the Sustainability Report (including social and environmental data), outlining the annual Corporate Social Responsibility (CSR) plan and providing overall environmental and social impact assessment results. **Channels:** Annual Reports, major meetings with community	**Channels**: Telephone, Email, Dedicated Media LINE Group. **Daily** **Communication**: Sharing daily/monthly PEA news and announcements of public interest, highlighting key organizational achievements and providing informative articles/infographics beneficial for news coverage. **Channels**: Daily Press Releases distributed to editorial desks, PEA Website. **Quarterly** **Communication**: Summarizing notable quarterly performance, updating on key project progress and discussing energy industry trends. **Channels**: Quarterly Earnings Press Conferences, In-depth Press Releases. **Annual**	**Channels**: Telephone, Email, e-Procurement System (for contractors/suppliers). **Monthly** **Communication**: Progress reports on joint projects, performance summaries for partners (for contractors/suppliers) and relevant business news. **Channels**: Electronic reports, monthly coordination meetings. **Quarterly** **Communication**: Reviewing performance against contracts/cooperation agreements, outlining procurement plans for the upcoming quarter and discussing new business opportunities PEA is exploring. **Channels**: Performance review meetings, partner newsletters, plan presentations. **Annual**	**Channels**: Monthly reports, Board/Sub-committee meetings. **Quarterly** **Communication**: Quarterly financial performance reports, summary of strategic plan execution and organizational financial status. **Channels**: PEA Board meetings, earnings reports. **Annual** **Communication**: Annual Report, annual Strategic Plan and Budget, evaluation of senior executive performance, Corporate Governance (CG) Report and Sustainability Report. **Channels**: Annual Board meetings, comprehensive annual reports. **Ad hoc (On Occasion):** **Communication**: Proposing large-scale investment plans,	welfare benefit processing and offering IT support. **Channels**: Telephone, Email, Help Desk Systems, Internal Chat Platforms. **Daily** **Communication:** Sharing daily organizational news and activities, providing useful articles/information for work and issuing task/schedule reminders. **Channels**: Intranet, Internal Email, Notice Boards, Departmental LINE Groups. **Monthly** **Communication**: Distributing internal newsletters, summarizing organizational activities, sharing executive updates and presenting preliminary performance results. **Channels**: Internal Newsletters, Intranet,	**Communication:** Summarizing the performance of each company and sharing news and important activities from each affiliate. **Channels:** Monthly reports from affiliates, joint executive meetings. **Quarterly** **Communication:** Presenting quarterly financial results for each company, summarizing progress on joint projects and reviewing shared business plans. **Channels:** Group executive meetings, financial performance reports. **Annual** **Communication**: Outlining each company's annual business plan and budget, reporting on the annual performance of the affiliate group and	(which may be of interest to competitors), or participating in industry seminars/exhibitions. **Channels:** Press Conferences, Press Releases, PEA Website, Public Industry Forums. **Irregularly** **Communication:** Participating in industry associations and attending academic conferences/seminars for general knowledge exchange within the broader industry. **Channels:** Industry Association Meetings, Academic Forums.

	1. Regulators and Public Sector	2. Customers and Electricity Users	3. Community and social	4. Press	5. Cooperator	6. Board of directors	7. Employee	8. Affiliate	9. Comparison
	Annual Strategic Plan, Annual Budget, Annual Performance Evaluation based on State Enterprise KPIs. **Channels:** Full Annual Reports, Joint Meetings with Regulatory Bodies, Presentations of Plans to Relevant Agencies. **Ad hoc** (On Occasion) **Communication:** Clarifications on issues of interest to government agencies, requests for approval/permits for new projects, presentations of significant plans/policies to relevant agencies. **Channels:** Official Correspondence, Special Meetings, Plan Presentations.	**Channels:** Electricity Bills, PEA Website, PEA Smart Plus application. **Annual:** **Communication:** Presenting the annual service quality report, summarizing PEA's operational overview impacting electricity users and highlighting future innovations and technologies. **Channels:** Annual Report (customer-relevant sections), PEA Website, General Public Relations Media. **Ad hoc** (On Occasion) **Communication:** Announcing new services or technologies (e.g., EV charging stations), publicizing special projects, conducting sales promotions and administering satisfaction surveys. **Channels:** PEA Website, Facebook Page, Press Releases, Advertising	representatives, PEA Website. **Ad hoc (On Occasion)** **Communication:** Providing advance notice for construction/maintenance projects in the area, organizing community forums/public hearings, implementing CSR projects, clarifying impacts and compensation/remediation. **Channels:** Community meetings, official letters to community leaders, leaflets/posters, on-site CSR activities. **Irregularly** **Communication:** Conducting community visits, participating in local events, providing education on safe electricity usage. **Channels:** Direct field visits, setting up booths/ exhibitions at local events.	**Communication**: Publishing the Annual Report, Sustainability Report and outlining the Corporate Strategic Plan. **Channels**: Annual Performance Summary Press Conferences, Publication of Reports on the PEA Website. **Ad hoc (On Occasion)** **Communication**: Organizing press conferences for the launch of new projects/services, inviting media to special events/site visits, conducting exclusive interviews on significant issues and clarifying specific topics of high media interest. **Channels**: Press Conferences, Media Trips, Exclusive Interviews.	**Communication**: Presenting PEA's overall business plans and strategies, conducting annual partner performance evaluations and holding annual partner conferences. **Channels**: Partner conferences, Annual Reports, PEA Website **Ad hoc (On Occasion)** **Communication**: Announcing new project tenders, organizing "Supplier Days" / "Partner Conferences," signing Memoranda of Understanding (MOU) / Memoranda of Agreement (MOA) and clarifying new requirements/standards. **Channels**: Procurement announcements, special meetings, signing ceremonies, clarification meetings. **Irregularly** **Communication**: Conducting	seeking approval for urgent projects and deliberating high-impact strategic issues. Channels: Additional Board/Sub-committee meetings, supporting deliberation documents. **Irregularly** **Communication**: Organizing training/seminars to enhance Board members' knowledge and conducting study visits for future strategic insights. **Channels**: Specialized Board member training sessions, study visits.	Departmental Monthly Meetings. **Quarterly** **Communication**: Summarizing quarterly performance, updating on organizational strategic plan progress, sharing news on personnel development programs and presenting employee engagement survey results. **Channels**: Town Hall Meetings, Executive Presentations, Intranet, Engagement Survey Reports. **Annual** **Communication:** Outlining annual strategic plans and goals, presenting annual personnel development plans, sharing the organization's annual performance report and conducting annual performance evaluations.	setting strategic directions for the group. **Channels**: General Shareholder/Board meetings of affiliated companies, annual group reports. **Ad hoc (On Occasion)** **Communication**: Launching joint projects/services, signing inter-company Memoranda of Understanding (MOU) and clarifying significant issues impacting the group. **Channels**: Joint press conferences, special ad hoc meetings, internal group announcements. **Irregularly** **Communication**: Organizing training/seminars to facilitate knowledge and best practice exchange among affiliates and collaborating on joint research and development projects.	

	1. Regulators and Public Sector	2. Customers and Electricity Users	3. Community and social	4. Press	5. Cooperator	6. Board of directors	7. Employee	8. Affiliate	9. Comparison
		Media, On-site Service Point Activities.			training/seminars to elevate partner standards, initiating joint Research & Development (R&D) projects and exploring business opportunities in new markets. **Channels**: Training sessions, ad hoc working group meetings, study visits/benchmarking.		**Channels:** Annual Employee Meetings, Official Plan Documents, Performance Management Systems (PMS).	**Channels**: Training sessions, special task force meetings, study visits.	
Values for Stakeholders	• **Effective Policy Implementation**: Serving as a pivotal organization driving national energy policies to successful realization. • **Transparent and Principled Governance:** Demonstrating high standards of transparency and good corporate governance in all administrative functions. • **National Socio-Economic Development:** Actively	• **Reliable and High-Quality Electricity Access:** Ensuring consistent access to dependable and high-standard electricity. • **Convenient and Prompt Services:** Providing services that are easy to access and delivered efficiently. • **Fair and Transparent Pricing:** Offering electricity tariffs that are equitable and clearly communicated.	• Safety of Life and Property: Ensuring protection from electricity system-related hazards. • Local Employment and Economic Opportunities: Fostering job creation and economic growth within local communities. • Participation in Quality of Life and Infrastructure Development: Providing avenues for involvement in enhancing local living	• **Reliable and Up-to-Date Information Source:** Providing trustworthy and current information regarding the electricity and energy industry. • **Transparent and Rapid Information Access:** Ensuring quick and clear access to organizational data. • **Contribution to Public Education:** Collaborating in efforts to inform and educate the broader public.	• Stability and Certainty in Partnership: Offering a reliable and predictable partnership framework. • Transparent and Equitable Business Opportunities: Providing clear and fair avenues for business collaboration. • **Reliable and Timely Paying Partner:** Being a stable partner known for prompt payment. • **Joint Business Growth Opportunities**: Facilitating prospects	• **Strong Financial Performance and Sustainable Growth:** Achieving robust financial results coupled with long-term organizational growth. • **Efficient Management and Sound Governance:** Demonstrating highly effective management practices underpinned by strong corporate governance. • **National and Societal Value Creation:** Serving as an organization that generates significant	• **Career Stability:** Ensuring job security and long-term employment prospects. • **Fair Compensation and Benefits:** Providing equitable remuneration and comprehensive welfare. • **Opportunities for Personal and Professional Development:** Offering avenues for skill enhancement and career advancement.	• **Strong Support from the Parent Organization:** Receiving robust backing and guidance from the main entity. • **Joint Business Expansion and Innovation Opportunities:** Providing prospects for collaborative business growth and the co-creation of new ideas. • **Leveraging PEA's Reputation and Resources:** Opportunities to benefit from PEA's	• **Industry Standard Elevation:** Serving as a key player that helps to raise industry benchmarks and promote innovation. • **Stimulus for Continuous Improvement:** Acting as a catalyst for ongoing development through fair competition.	

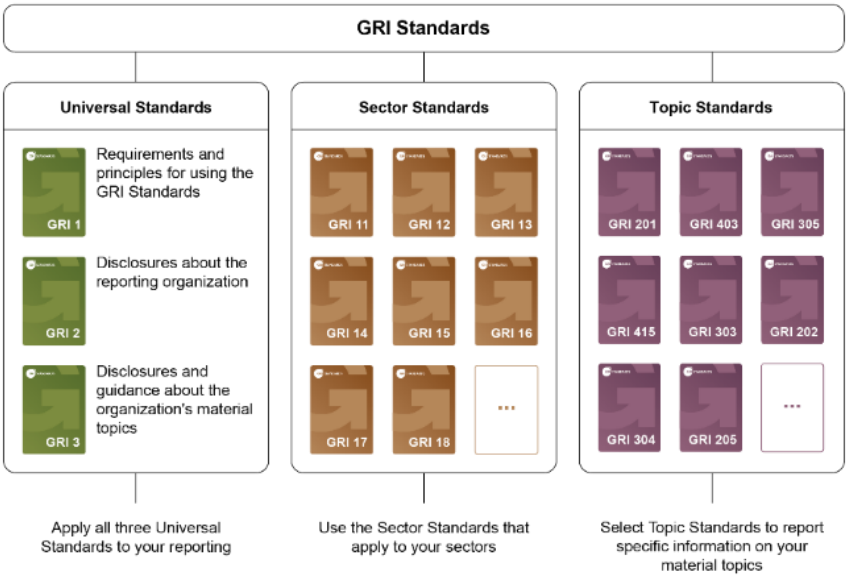
	1. Regulators and Public Sector	2. Customers and Electricity Users	3. Community and social	4. Press	5. Cooperator	6. Board of directors	7. Employee	8. Affiliate	9. Comparison
	supporting the nation's economic and social advancement. ● **Exemplary Corporate Citizenship:** Upholding responsibilities as a diligent and contributing corporate citizen.	● **Electricity Safety:** Guaranteeing safety in the use of electricity. ● **Future-Ready Energy Innovations:** Delivering innovative energy services that anticipate future needs. (e.g., PEA VOLTA) ● **Contribution to Sustainable Energy:** Enabling participation in a sustainable energy system	standards and public utilities. ● Responsible Environmental Stewardship: Demonstrating conscientious care for the environment. ● Beneficial CSR Projects: Engagement through Corporate Social Responsibility initiatives that directly benefit the community.		for mutual business expansion and development. ● **Access to PEA's Infrastructure and Customer Base**: Providing opportunities to leverage PEA's established infrastructure and extensive customer network. ● **Innovation and Solution Development**: Collaborating on the creation of new innovations and solutions within the energy industry.	value for the nation and society.	● **Safe and Quality-Enhancing Work Environment:** Fostering a workplace that prioritizes safety and improves overall well-being. ● **Pride in National Contribution:** Instilling a sense of pride in being part of an organization vital to the country's progress.	established brand and extensive resources.	
Point of interest									
Climate Action & Resource Efficiency	❖ GHG Emissions ❖ Energy and Asset Management ❖ Circular Economy and Environment	❖ GHG Emissions	❖ Energy and Asset Management Circular Economy and Environment		❖ GHG Emissions ❖ Energy and Asset Management ❖ Circular Economy and Environment			❖ Energy and Asset Management	
Empowering Workforce through	❖ Occupational Health and Safety	❖ Innovation and Technology			❖ Innovation and Technology ❖ Occupational Health and Safety		❖ Innovation and Technology ❖ Human Management		

	1. Regulators and Public Sector	2. Customers and Electricity Users	3. Community and social	4. Press	5. Cooperator	6. Board of directors	7. Employee	8. Affiliate	9. Comparison
Innovation & Technology							❖ Occupational Health and Safety		
Resilient & Customer-Centric Operations	❖ Accessible and Affordable Electricity ❖ Reliability of Distribution System	❖ Accessible and Affordable Electricity ❖ Reliability of Distribution System ❖ Business Resilience & Adaptation ❖ Customer Relationship	❖ Accessible and Affordable Electricity ❖ Reliability of Distribution System	❖ Customer Relationship	❖ Reliability of Distribution System ❖ Business Resilience & Adaptation	❖ Business Resilience & Adaptation	❖ Business Resilience & Adaptation		❖ Accessible and Affordable Electricity ❖ Reliability of Distribution System
Stakeholder Collaborative for Community Wellbeing	❖ Community Health and Safety ❖ Stakeholder Engagement	❖ Community Health and Safety ❖ Stakeholder Engagement	❖ Community Health and Safety ❖ Stakeholder Engagement	❖ Community Health and Safety ❖ Stakeholder Engagement	❖ Community Health and Safety ❖ Stakeholder Engagement	❖ Stakeholder Engagement	❖ Stakeholder Engagement	❖ Stakeholder Engagement	❖ Stakeholder Engagement
Business Conduct & Governance	❖ Corporate Governance and Risk Management ❖ Data Security	❖ Corporate Governance and Risk Management ❖ Data Security	❖ Corporate Governance and Risk Management		❖ Corporate Governance and Risk Management ❖ Supply Chain Management ❖ Data Security	❖ Corporate Governance and Risk Management	❖ Corporate Governance and Risk Management ❖ Data Security		

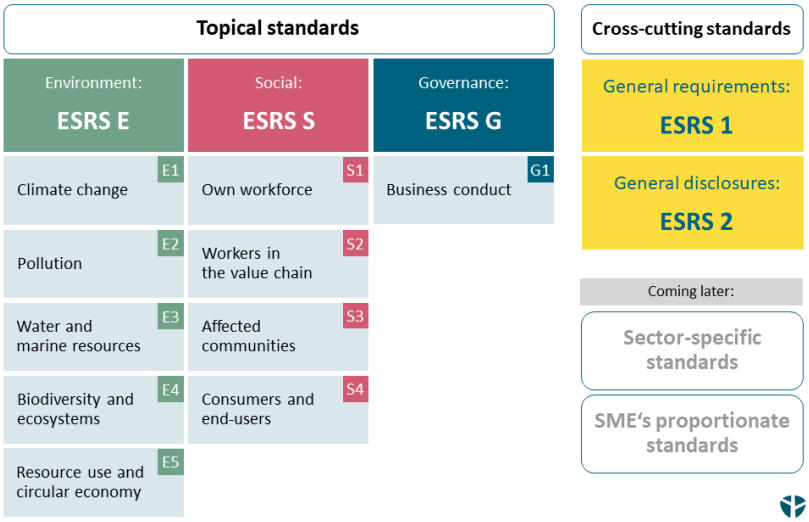
Materiality Assessment [3-1]

PEA conducts an annual assessment and review of its material sustainability issues. This is carried out using the principles of the Double Materiality Assessment by first gathering feedback from stakeholders on their needs and expectations through surveys and stakeholder engagement activities, covering all nine key groups. This is combined with an Impact Assessment, which evaluates both the organization's impacts on society and the environment across all ESG dimensions (Impact Materiality) and the external impacts that could affect the organization's financial value (Financial Materiality). This process allows the organization to determine the significance of its sustainability issues. The steps for assessing and identifying these material sustainability issues are as follows:

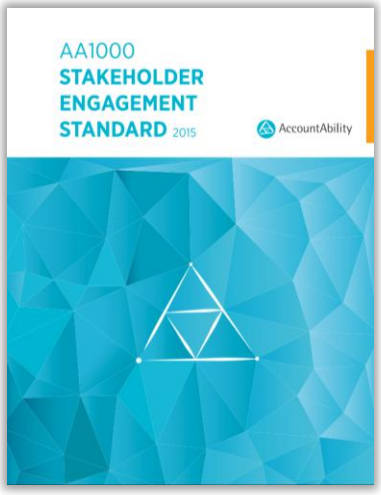
1. **Organization Context for Materiality Revision**
   - Review the material topics identified in the past year by analyzing them within the current context, from the organization's vision, mission, and values to its strategic direction, desired business position for the future, and detailed internal operational results.
   - Study and review information from international sustainability practices regarding the direction and trends of the energy business sector, as well as sustainability topics for the electricity business, independent power producers, and other energy operators, by referencing various data sources, such as:
     - GRI (Global Reporting Initiative) Reporting Framework



- European Sustainability Reporting Standards (ESRS)



- AA1000 Standard Series



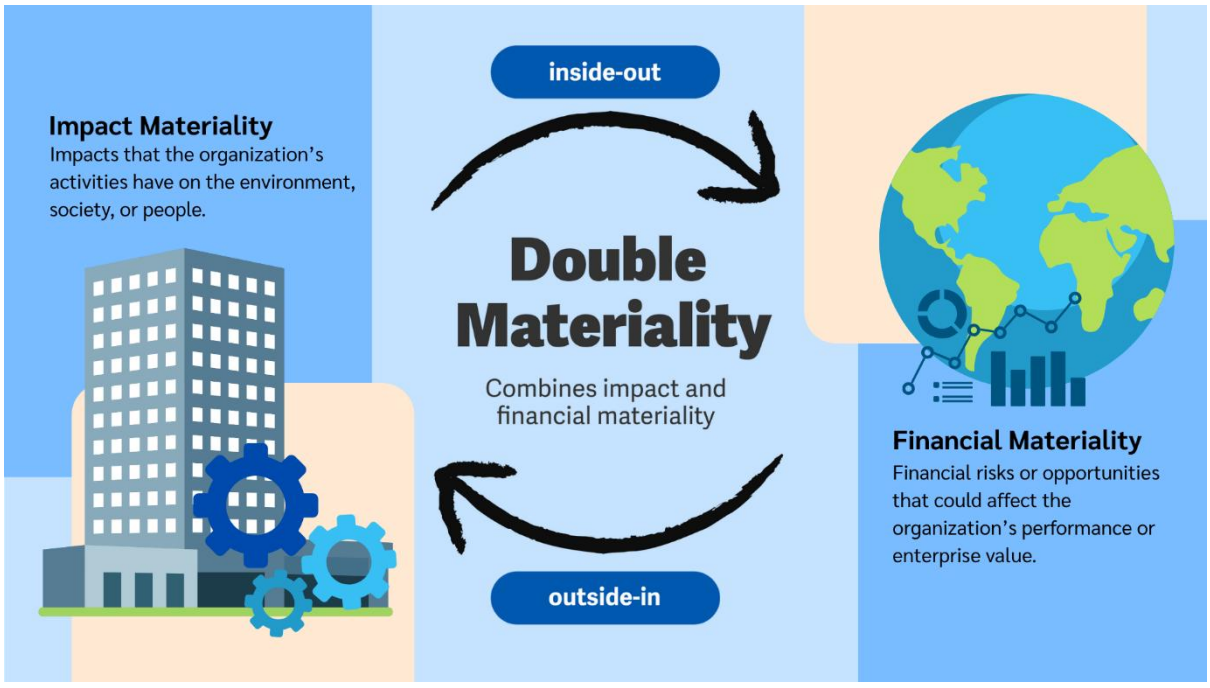
- United Nations Sustainable Development Goals (SDGs)

- Sustainability reports of leading organizations in the same industry

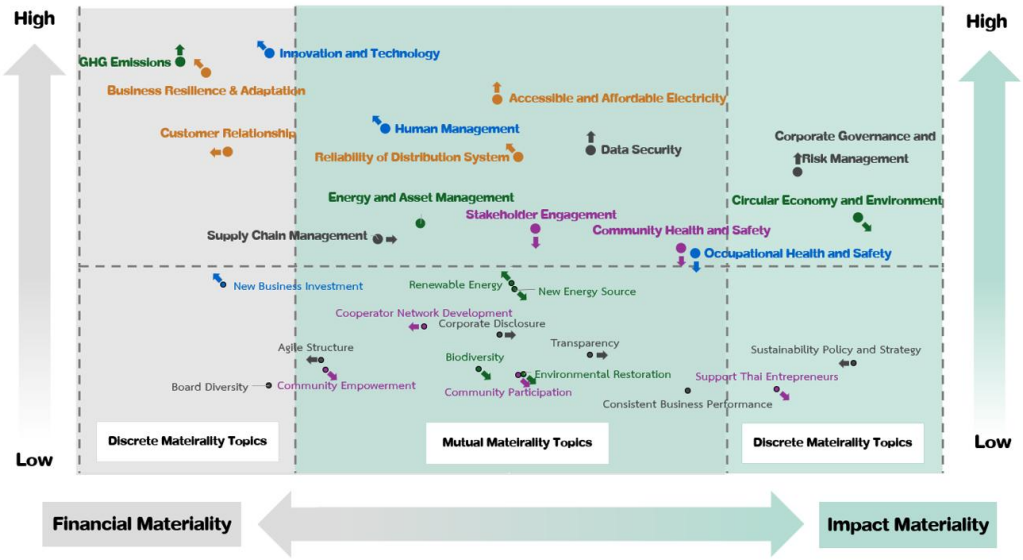
- Survey the opinions of all PEA stakeholder groups to understand the needs and expectations of key stakeholders regarding the organization.
- Compile all the information, then screen and group the topics to create a draft of potential sustainability topics, categorized by ESG dimensions.

2. **Impact Across the Value Chain**
   - Analyze the sustainability topics from the draft in Step 1 to understand their connection to each stage of PEA's value chain and business architecture (BA).
   - Analyze the impact of each topic on the value chain to determine which stakeholder groups are affected by the topics identified in the previous step.

3. **Materiality Assessment & Prioritization**
   - Conduct an Impact Materiality Assessment
   - Conduct a Financial Materiality Assessment



- Create a Materiality Matrix to define the most significant topics.



4. Materiality Topics Validation & Endorsement

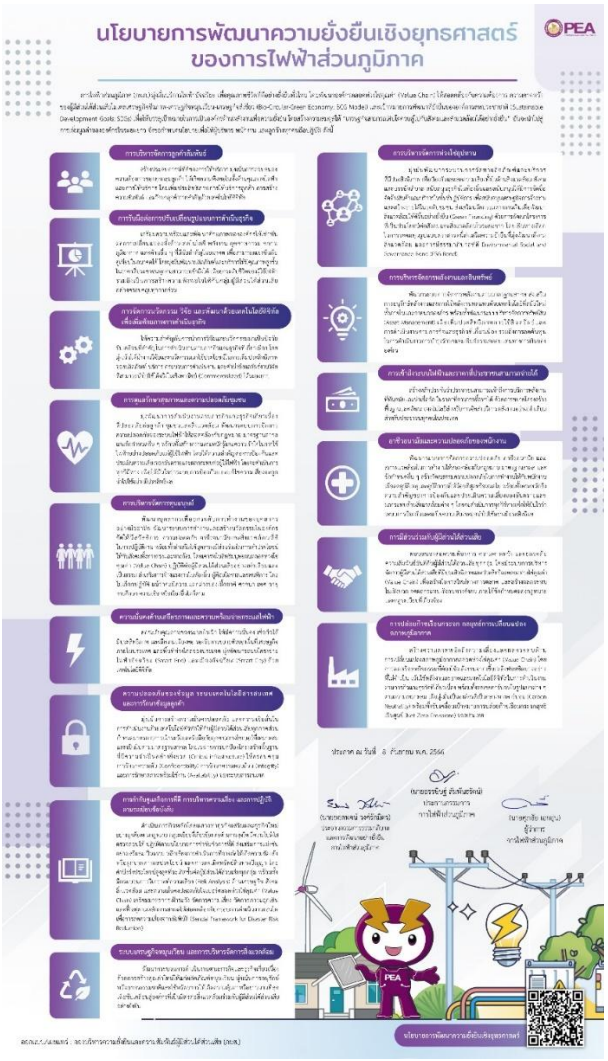
- Present the results of the assessment and topic prioritization to the PEA Sustainable Development Executive Committee for a detailed review and discussion. This is to verify the accuracy and completeness of the sustainability topics and ensure they reflect the organization’s current reality.
- Present the results of the discussion to the Corporate Governance and Sustainable Development Committee for endorsement and approval. This will finalize the set of topics to be officially recognized as PEA's material sustainability issues, which will serve as a guideline for its sustainability operations and an input for preparing or reviewing the organization's strategic plan.

PEA's Materiality Topics [3-2]

Based on the results of the annual Materiality Assessment, the following 15 materiality topics of PEA have been summarized:

Material Topics
Environmental
Climate Action & Resource Efficiency
Topic 1: GHG Emissions
Topic 2: Circular Economy & Environment
Topic 3: Energy and Asset Management
Social
Empowering the Workforce through Innovation & Technology
Topic 4: Innovation and Technology
Topic 5: Human Capital Management
Topic 6: Occupational Health and Safety
Resilient & Customer-centric Operations
Topic 7: Accessible & Affordable Electricity
Topic 8: Reliability of Distribution System
Topic 9: Business Resilience & Adaptation
Topic 10: Customer Relationship
Stakeholder Collaborative for Community Wellbeing
Topic 11: Community Health and Safety
Topic 12: Stakeholder Engagement
Governance
Business Conduct & Governance
Topic 13: Corporate Governance and Risk Management
Topic 14: Supply Chain Management
Topic 15: Data Security

PEA's Strategic Sustainable Development Policy 2024 [2-23]



Integrating PEA's Materiality Topics into the Corporate Strategy

	SO1	SO2	SO3
PEA Strategic Objective 2024-2028	Aspires to be a leader in electricity distribution services through digital technology, innovation, and human capital	Enhance the performance of related businesses and expand into new business opportunities	Become an organization ready to face national challenges and drive sustainable development
UN SDGs			
PEA Strategy 2024-2028	Strategic Direction 1: Improve operational efficiency and service delivery through technology to reduce costs and expenses, while simultaneously developing the organization's and human capital's digital and AI capabilities Strategic Direction 2: Enhance satisfaction and engagement of employees, customers, and stakeholders	Strategic Direction 3: Expand revenue from related businesses	Strategic Direction 4: Prepare system readiness to accommodate future energy transitions Strategic Direction 5: Pursue sustainable growth to develop the organization toward Carbon Neutrality
Relevant Materiality Topics	Topic 4: Innovation and Technology Topic 5: Human Capital Management Topic 6: Occupational Health and Safety Topic 14: Supply Chain Management Topic 15: Data Security	Topic 9: Business Resilience & Adaptation Topic 10: Customer Relationship Topic 12: Stakeholder Engagement	Topic 1: GHG Emissions Topic 2: Circular Economy & Environment Topic 3: Energy and Asset Management Topic 7: Accessible & Affordable Electricity Topic 8: Reliability of Distribution System Topic 11: Community Health and Safety Topic 13: Corporate Governance and Risk Management

Performance Results of the Initiative to Address the Organization's Materiality Topics

SO1 Aspires to be a leader in electricity distribution services through digital technology, innovation, and human capital

- Topic 4: Innovation and Technology
  - The plan for developing use cases and PEA's system structure, along with the digital innovation process in collaboration with startups, has engaged over 5 partner companies, meeting the set target.
  - The plan for innovation development to support organizational scaling has met its target, with over 10 innovations/processes being scaled for use within PEA.
  - The plan for developing innovation to support commercial scaling and focus on creating opportunities for organizational growth has generated 192.29 million Baht in revenue for PEA, exceeding the target of 100 million Baht by 92.29%.
- Topic 5: Human Capital Management
  - The plan to develop a learning system and courses to effectively enhance the digital competence and skills of personnel, in line with PEA's use cases, has met its target.
  - The Employee Experience plan has met its target, with the creation of two pilot projects and event touchpoints for each stage: Pre-Employment, Employment, and Post-Retirement, for all employees.
  - The plan to develop a mechanism to support the career advancement of the new generation of personnel, to align with business direction and fill key positions, has successfully developed talents and successors who have passed potential assessments, meeting the target.
  - The plan to upskill personnel in Big Data Analytics and data utilization has met its target.
- Topic 6: Occupational Health and Safety
  - The plan to elevate safety operations to standard/international levels has met its target, resulting in the PEA Work Permit system for employees and occupational safety officers to enhance accident prevention measures.
  - The Disabling Injury Index (√DI) is 0.1034, meeting the target and keeping the injury rate below the target of 0.1208, an improvement of 16.83%.
- Topic 14: Supply Chain Management
  - The plan for Triple Transformation has been integrated to create business value, promote technology adoption, and enhance personnel capability. It successfully developed a Digital Procurement system that can create value in the core regulated business, meeting the target.

- Topic 15: Data Security
  - The expansion of security management in accordance with the international standard ISO/IEC 27001 was successful, resulting in ISO 27001:2022 Certification by an external auditor.

SO2 Enhance the performance of related businesses and expand into new business opportunities

- Topic 9: Business Resilience & Adaptation
  - The plan to upgrade B2B and B2C business operations met its target, with a total revenue from the B2B business of over 6,708.20 million Baht, exceeding the 5,000 million Baht target by 34.16%. Total revenue from the B2C business was over 1,090.48 million Baht, exceeding the 500 million Baht target by 118.10%.
  - The plan to establish the ThaiSkill BU met its target. TCC was established to support the training business, and it designed, developed, and launched training courses for over 29,700 employees and contractors.
  - The plan to prepare for future changes in the electricity business structure, with a focus on supporting the launch of Third-Party Access (TPA) to accommodate RE100 services, has developed guidelines for UGT rates for UGT 1 and UGT 2. It has also created a business model for registering renewable energy producers under PEA's Registrant list for the Renewable Energy Certificate (REC) trading business.
- Topic 10: Customer Relationship
  - The plan to increase the number of users on the PEA Smart Plus platform met its target. The average monthly active users (MAU) for the year was over 1.47 million, exceeding the target of 1.10 million by 33.63%.
- Topic 12: Stakeholder Engagement
  - The plan to build relationships with stakeholders across all business units met its target. A survey conducted by a third-party agency found that the average stakeholder engagement score for all groups was 84.12, exceeding the target of 80.00 by 5.15%.

SO3 Become an organization ready to face national challenges and drive sustainable development

- Topic 1: GHG Emissions
  - The plan to advance the organization toward Carbon Neutrality included projects to install solar power systems at 154 PEA offices, a Green Office project, and a Low Emission Support Scheme (LESS) project. These activities resulted in a total reduction of over 10,343.40 tCO_2eq, exceeding the target of 10,100.00 tCO_2eq by 2.41%.
- Topic 2: Circular Economy & Environment
  - The plan to prepare a Green Tech Fund to generate investment returns and integrate technology into PEA's operations met its target by studying the guidelines for establishing the company and the feasibility of investing in the fund.
  - The success level of the operations to create Eco-Efficiency was 1,609.55 units/tCO_2eq, with a Factor X value of 1.090577.
- Topic 3: Energy and Asset Management
  - Data collected from the Building Energy Management System (BEMS) allows for real-time and historical monitoring of energy use across the organization. This has enabled the application of this tool to prepare data in compliance with the Energy Conservation Promotion Act of 1992 and the ISO 50001 energy management standard.
  - The plan to analyze power transformer asset data within substations for planning, maintenance, and replacement met its target by establishing a database for long-term asset management within the substations.
- Topic 7: Accessible & Affordable Electricity
  - The plan to increase investment effectiveness through Grid Modernization met its target by completing a feasibility study for Phase 1 of the project to manage distributed power generation systems within PEA's grid.
  - The project to extend the electrical grid to new households (KFM.2) was completed for 179,174 households, exceeding the target of 141,960 households by 26.21%.
  - The electrical grid has been extended to 22,123,367 households nationwide, representing over 99.57% of households with access to electricity.

- Topic 8: Reliability of Distribution System
  - The project to study equipment for 22 kV and 33 kV systems within PEA's grid to apply Voltage Control technology for supporting Electric Vehicles (EVs) and the Energy Market met its target.
  - The plan to expand the AMI system met its target by completing a feasibility study for Phase 1 of the smart meter system project.
  - The plan to develop an energy storage system within the distribution network met its target by completing a feasibility study for Phase 1 of the project to develop an energy storage system to support electricity demand management and renewable energy (KGT. 1).
  - The pilot project and test bed in the Smart Low-voltage Distribution System were executed to prepare for a scale-up, review, and improvement of Grid Modernization, and to prepare for the increase of EVs, Renewable Energy (RE), and Energy Storage Systems (ESS).
- Topic 11: Community Health and Safety
  - The management structure of the Provincial Electricity Authorities was adjusted to expand and ensure comprehensive safety for households in local communities.
  - The plan to develop and elevate electricity safety for communities was implemented to reduce the negative impacts of an unsafe electrical system on users.
- Topic 13: Corporate Governance and Risk Management
  - The plan for GRC integration in 2024 has developed effective tools and mechanisms for monitoring, which are adaptable to rapid change. It also continuously promotes knowledge in ESG risk management and corporate ethics for executives and personnel.
  - The Integrity and Transparency Assessment (ITA) scored 95.58 points. This places PEA at number 3 among state-owned enterprises in the energy sector and number 5 within the Ministry of Interior, maintaining a score above 95 points for the fifth consecutive year.

06. Climate Action & Resource Efficiency

❖ GHG Emissions [3-3]

Amid intensifying global efforts to address the escalating impacts of climate change, Thailand is advancing its transition toward clean and renewable energy as the primary source of fuel. The energy sector stands at the forefront of this transition, playing a pivotal role in realizing the nation's commitments to achieve carbon neutrality by 2050 and net-zero greenhouse gas emissions by 2065. This transformation is further reinforced by the rising demand for renewable energy across business and industrial sectors, coupled with supportive government policies that accelerate the deployment and integration of renewable energy solutions.

PEA is firmly committed to driving organizational transformation toward carbon neutrality in alignment with the PEA Carbon Neutrality Roadmap, with a target year of 2037. Central to this commitment is the substantial reduction of greenhouse gas emissions from internal operations, pursued through a wide range of measures. These include the transition of the vehicle fleet to battery electric vehicles (BEVs), the installation of solar photovoltaic systems on office buildings, and the nationwide adoption of the Green Office initiative. Collectively, these efforts underscore PEA's determination to embed carbon reduction across all dimensions of the organization, while steering toward a sustainable and environmentally responsible energy future.

Objectives [3-3]

- Achieve 100% completion of the organizational development plan toward Carbon Neutrality.
- Achieve an organizational greenhouse gas emission reduction target of 10,100 tCO_2eq

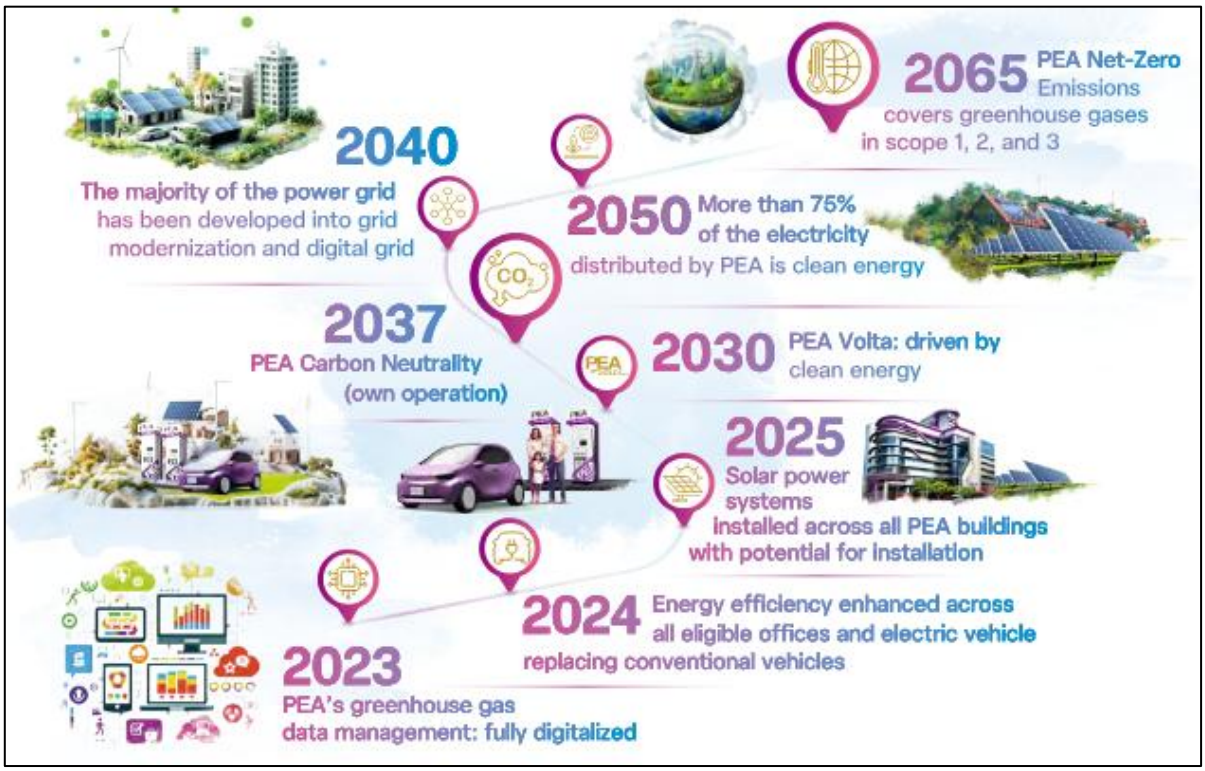
Strategy [3-3]

- To drive progress toward Carbon Neutrality and Net-Zero GHG Emissions, PEA has established the 4D Strategy, aligned with the measures outlined in the PEA Carbon Neutrality Roadmap:
  1) Decarbonize Operation – Reduce greenhouse gas emissions from direct operations (Scope 1) and indirect emissions from electricity consumption (Scope 2) associated with PEA's activities, excluding losses from the electricity network.
  2) Decarbonize Network – Minimize greenhouse gas emissions from indirect network losses (Scope 2) by optimizing and managing the electricity distribution network.

3) Decarbonize Supply – Reduce greenhouse gas emissions from indirect emissions associated with electricity procurement (Scope 3) and network losses (Scope 2) through the sourcing of clean and renewable energy.

4) Decarbonize Growth – Support stakeholders in reducing greenhouse gas emissions beyond organizational boundaries, fostering emission reduction across the wider value chain.

- To establish targets and strategic approaches to advance toward Carbon Neutrality, promoting sustainable environmental management across internal operations and external stakeholder engagement by 2037. Formulate the PEA Carbon Roadmap along with the organizational development plan to achieve Carbon Neutrality.



PEA Carbon Roadmap

- To balances greenhouse gas emissions to advance toward a Low-Carbon Organization by applying greenhouse gas offset standards (GHG Offset) established by the Thailand Greenhouse Gas Management Organization (Public Organization, TGO).
- To educate employees and allies stakeholders to enhance awareness of climate change impacts, promoting behavior change across all organizational and stakeholder levels.

Implementation [3-3]

- Review the PEA Carbon Neutrality Roadmap by analyzing environmental data related to operations aimed at Carbon Neutrality and Net Zero Emissions and compiling organizational greenhouse gas emission and absorption data.
- Establish the organizational GHG baseline and conduct workshops to gather feedback and recommendations to support the PEA Net Zero Emissions target.
- Consult with relevant experts on approaches for calculating the organizational Carbon Footprint (CFO) and developing a platform for carbon footprint computation.
- Install solar photovoltaic systems on PEA office rooftops, covering over 422 buildings nationwide.
- Deploy battery electric vehicles (BEVs) to PEA headquarters and regional offices, totaling more than 226 units.
- Implement Green Office policies to raise awareness among all PEA employees regarding efficient resource and energy use, while enhancing environmental standards within office operations.
- Expand the Green Office program nationwide in collaboration with the Department of Climate Change and Environment, Ministry of Natural Resources and Environment, covering an additional 61 PEA offices across the country.

Performance [3-3]

- For the year 2024, PEA's total organizational greenhouse gas emissions, covering Scope 1, 2, and 3, reached 20,386,487.79 tCO_2eq. The corresponding GHG emission intensity per unit of electricity sold was 0.1300 tCO_2eq/kWh, reflecting a 7.17% decrease from the baseline year 2021.

- **Greenhouse Gas Emissions Data** [305-1] [305-2] [305-3] [305-4]

Scope	Greenhouse Gas (GHG) Emissions (tCO_2eq)				
	2020	2021	2022	2023	2024
Scope 1: Direct emissions	143,435.56	151,671.48	141,947.14	143,182.42	173,839.23
Biogenic CO_2 Emissions	-	-	-	8,775.89	9,038.17
Scope 2: Indirect emissions	4,770,545.90	4,758,454.19	4,901,492.83	4,303,321.38	3,512,650.40
Scope 3: Other indirect emissions	14,070,040.70	14,601,361.59	15,059,560.53	15,559,931.74	16,710,850.50
Total (Scope 1, 2 and 3)	**18,984,022.16**	**19,511,487.26**	**20,103,000.50**	**20,006,435.54**	**20,386,487.79**
GHG Emissions Intensity (Electricity Sold/GHG Scope 1-3)	0.1407	0.1397	0.1390	0.1343	0.1300

Notes: - Organizational Greenhouse Gas (GHG) Emissions refer to the total GHG emissions resulting from the organization's operations, categorized as follows:

Scope 1: Direct Emissions: Calculated from direct activities of the organization, limited to diesel fuel use in electricity generation, fuel consumption in vehicles, maintenance of power stations and electrical systems, and leaks or losses from electricity distribution services.

Scope 2: Indirect Emissions from Energy Use - This is limited to electricity consumption in offices and losses within the transmission and distribution system.

Scope 3: Other Indirect Emissions: Calculated from other indirect emissions for which data can be tracked and collected, including:

Category 1 Purchased goods and services used in distribution service and electricity pole production from concrete products, limited to tap water, paper, transformer oil, steel, stone, cement, and sand.

Category 3 Fuel- and energy-related activities not included in Scopes 1 or 2, limited to electricity purchased from EGAT and very small-scale power producers.

Category 5 Waste generated from operations, limited to municipal solid waste, hazardous waste.

- Emission Factors are sourced from the Thai National LCI Database, TIISMTEC-NSTDA, AR5 (with TGO electricity 2016–2018), and the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (AR4, 2007) and Fifth Assessment Report (AR5, 2014)), in accordance with the requirements of the Thailand Greenhouse Gas Management Organization (TGO).
- Greenhouse gases included in the calculations (Scopes 1, 2, and 3 / Categories 1, 3, and 5) are CO_2, CH_4, N_2O, HFCs, PFC, SF_6, and NF_3.
- The consolidation of greenhouse gas (GHG) emissions data follows the Operational Control approach. This means the organization has direct authority over its operations, which is determined by its ownership and power to set policies and control operations. The scope for assessing and collecting the organization's GHG emissions covers each business unit that it owns and has the authority to control. It does not include emissions from business units where the organization has partial ownership but lacks operational control.
- Further details on organizational GHG emissions please refer to the Greenhouse Gas Emissions Summary table (page 161).

- Solar PV Installations on PEA Office Rooftops: 422 buildings installed with a total capacity of 5,496.64 kWp, resulting in GHG reductions/sequestration of 2,761 tCO_2eq, exceeding the target of 2,600 tCO_2eq by 6.19%.
- Green Office Development Program: Achieved GHG reductions/sequestration of 3,005.48 tCO2eq, slightly above the target of 3,000 tCO2eq by 0.18%.
- Low Emission Support Scheme (LESS) Certified Offices: 126 offices certified under the TGO-supported scheme, achieving GHG reductions/sequestration of 4,576.92 tCO_2eq, surpassing the target of 4,500 tCO_2eq by 1.71%.

- Overall GHG Reduction from 2024 Activities/Projects: Total reduction of 10,343.40 tCO_2eq achieved across all planned activities and programs. [305-5]

GHG Reduction Plans, Projects, and Initiatives within the Organization	Scope	Amount of Greenhouse Gases Reduced or Sequestered (tCO_2eq)
PEA Office Solar Rooftop Installation Project	Scope 2	2,761.00
Green Office Project	Scope 2	3,005.48
Low Emission Support Scheme (LESS)	Scope 2	4,576.92
Total Greenhouse Gases Reduced or Sequestered		**10,343.40**

Upcoming Improvement Action [3-3]

- Prepare the electricity network to accommodate the transition to clean energy, in line with the framework set by the Energy Policy and Planning Office (EPPO). The office has established three main national greenhouse gas reduction action plans, as follows:

  1) Reduce energy intensity

  2) Increase the use of renewable energy

  3) Promote electricity generated from renewable sources

  To effectively advance PEA toward achieving Carbon Neutrality and further develop into a Net Zero GHG Emissions organization in the future.

- To sustain and strengthen PEA's Green Office initiatives at headquarters and regional offices as lowering GHG emissions and contributing to Carbon Neutrality objectives.

❖ **Circular Economy & Environment** [3-3]

Environmental management and circular economy are key priorities for PEA. We focus on developing operational processes aligned with our mission and related businesses by creating added value through continuous recycling of products and materials, minimizing waste, and efficiently reusing any generated waste. PEA emphasizes the conservation of natural resources, balancing resource recovery and utilization to maximize their benefits, thereby supporting the transition toward an environmentally friendly organization and fostering sustainable economic and social development.

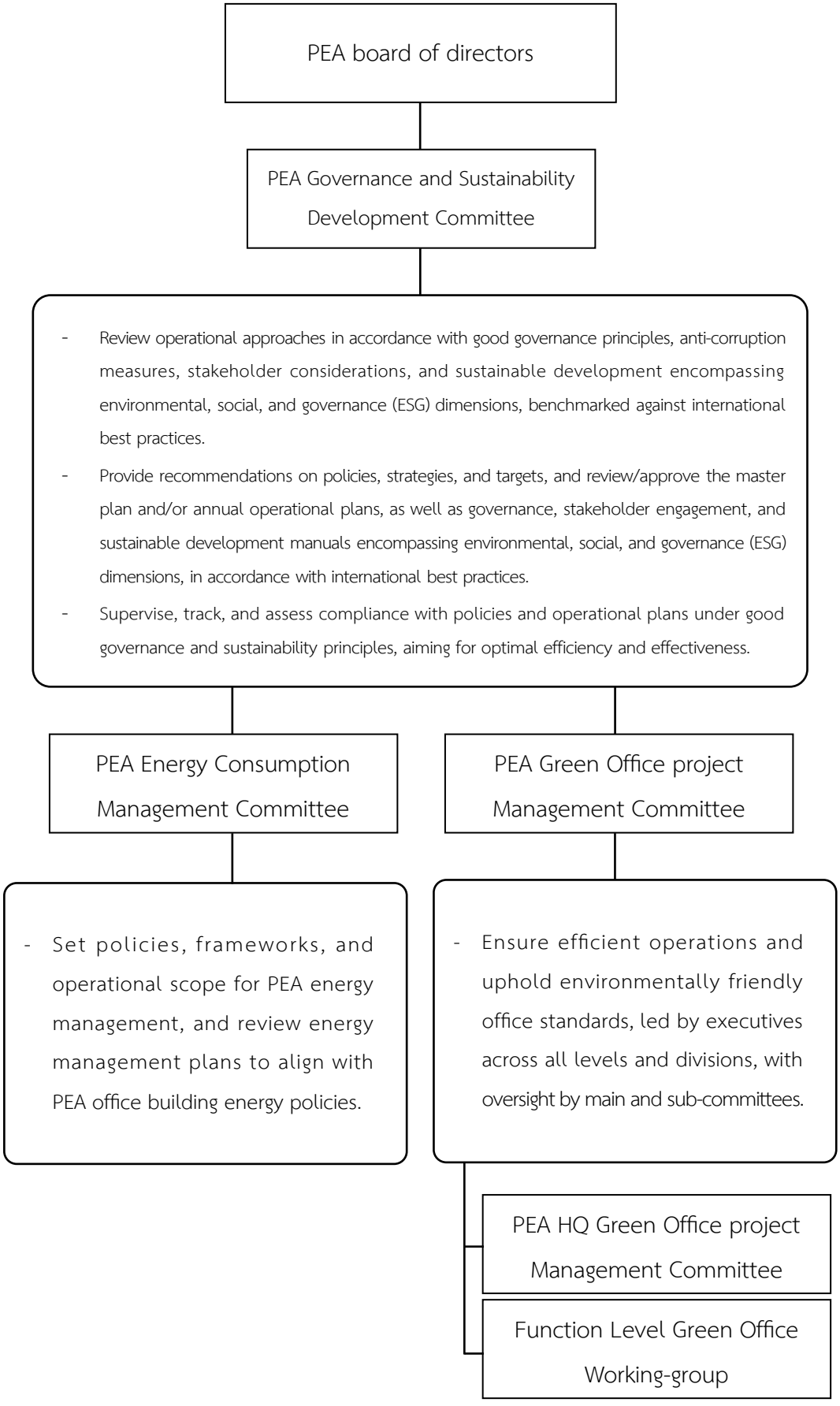
Objective [3-3]

- Eco-efficiency factor (Factor X) per ISO 14045: 1.09055.

Strategy [3-3]

- Promote economic development based on the BCG (Bio-Circular-Green) model, encompassing the Bio Economy and Circular Economy, alongside social and environmental responsibility. This approach aligns with PEA's Carbon Neutrality Roadmap and Thailand's Carbon Neutrality policy, which targets achieving carbon neutrality by 2050.
- Enhance the efficiency of sustainable energy and resource consumption across PEA, business partners, and electricity users. This initiative aligns with greenhouse gas reduction management practices, ISO 14045 Eco-efficiency Assessment standards, and the guidelines established by the State Enterprise Policy Office.

Eco-Efficiency Operations Structure



Implementation [3-3]

PEA implements Eco-efficiency assessments to evaluate the organization's potential in utilizing various resources for business operations while considering the associated greenhouse gas (GHG) emissions relative to economic value and resource consumption, such as electricity, water, paper, and fuel. These assessments enable PEA to manage resources efficiently by establishing plans to monitor and control operational performance, aiming to reduce GHG emissions in line with eco-efficiency criteria set by the State Enterprise Policy Office. For the year 2024, the eco-efficiency level was set at Level 5, with an Eco-efficiency Factor (Factor X) of 1.09055. The results of these assessments are used to identify strategies for improving PEA's eco-efficiency in subsequent periods and to communicate plans to government agencies. The assessment scope covers PEA's direct operations in providing electricity across all 74 provinces, aligning with national policies and strategic objectives.

Establish guidelines for Eco-efficiency assessment in accordance with agreements between PEA and the State Enterprise Policy Office, using organizational resource consumption data categorized into five main activities as follows:

1. PEA Electricity Service Operations
2. Fuel Consumption of PEA Vehicles
3. PEA Electricity Generation
4. Maintenance of Power Stations and Electrical Systems
5. Production and Use of Power Poles

Performance [3-3]

- Eco-efficiency of PEA's five key activities: 1,069.55 kWh/tCO2eq – meaning 1,069.55 kWh of electricity delivery produces 1 tCO2eq GHG emissions, representing climate change impact.
- A comparison of PEA's operational activities between 2021(baseline year) and 2024 shows an Eco-efficiency Factor (Factor X) of 1.09055, meeting the criteria set by the State Enterprise Policy Office for Level 5, which specifies a Factor X of 1.09046.

Upcoming Improvement Action [3-3]

- Leverage Eco-efficiency assessment results to guide operational improvements and GHG reduction plans in line with PEA's Carbon Neutrality Roadmap for the next year.

❖ **Energy and Asset Management** [3-3]

To manage energy and organizational assets efficiently and maximize benefits, PEA encounters the increasing demand in electricity management and asset maintenance for the electrical system, while maintenance employees remain limited. With the growing volume of electricity and its assets to be managed each year, PEA has developed an effective operational plan focusing on preventive maintenance and continuous asset condition monitoring using technology. Key initiatives include the installation of Building Energy Management Systems (BEMS), planning and assigning energy-responsible employees within departments, implementing Enterprise Asset Management (EAM) software to organize electrical wiring within buildings to support energy management systems, and conducting energy conservation activities in PEA offices to raise awareness of energy use within office buildings.

Objective [3-3]

- Achievement in establishing a comprehensive database for long-term asset management of in-station electrical assets reached 100% implementation.
- Implementation of an electrical asset management system with Condition-Based Risk Management (CBRM) for critical assets: power transformers, 115 kV, 33 kV, 22 kV switchgears, underground/submarine cables, and distribution transformers (Phase 1).
- Implement energy-saving measures targeting an annual reduction of 20 million kWh.

Strategy [3-3]

- Develop energy management systems in accordance with international standards, promoting energy conservation and the use of renewable energy through modern technologies both within and outside the organization.
- Analyze, evaluate, plan, and manage organizational assets, beginning with critical main assets, to ensure cost-effectiveness and alignment with the organization’s mission.
- Develop an Asset Management Plan (AMP) with detailed plans for each equipment type, starting with critical main assets, including power transformers, 115 kV, 33 kV, and 22 kV switchgears, underground and submarine cables, and distribution transformers.
- Develop Data Management Strategies, including defining key information and data formats, and establishing storage methods for critical main assets.

- Inventory and spare parts management for maintenance and replacement of key assets.
- Analyze and enhance the quality of electrical equipment, maintenance processes, and repair of electrical devices and tools to improve efficiency, while promoting and developing human resources for maintaining critical main assets.
- Plan and monitor preventive maintenance and condition-based maintenance for critical main assets, in collaboration with responsible departments within PEA to evaluate maintenance performance.

Implementation [3-3]

- Utilize BEMS to monitor departmental energy consumption in real-time and historically; supports reporting under the Energy Conservation Promotion Act 1992 and ISO 50001 standards.
- Select and manage high-value substation assets using a structured asset data management system.
- Plan the management of the electrical grid assets, including implementing Enterprise Asset Management (EAM) software to manage PEA's grid assets, starting with critical main assets such as power transformers, 115/33/22 kV switch gears, underground and submarine cables, and distribution transformers.
- Establish an asset management system for electrical assets with risk-based maintenance planning across the entire asset lifecycle.
- Ensure the accuracy and completeness of data collection, also continuously updating and maintaining data to ensure it remains current.

Performance [3-3]

- 100% completion of power transformer database covering test and maintenance activities for long-term asset management planning.
- Prepared the draft terms of reference (TOR) and established the median price for the procurement of Enterprise Asset Management (EAM) Software for PEA.
- Energy management performance resulted in a total net organizational energy consumption of 1,335,902.23 gigajoules. [302-1]

Internal Energy Consumption [302-1]

Internal Energy Consumption	Usage amount (Gigajoule)			
	2021	ปี 2565	2021	ปี 2567
Electricity usage	501,442.23	528,773.57	544,469.80	556,355.10
Diesel fuel usage	815,575.39	888,345.39	788,445.73	779,547.13
Total energy usage	**1,317,017.61**	**1,417,118.96**	**1,332,915.53**	**1,335,902.23**

Notes: The unit conversion factors are as follows:

- 1 kilowatt-hour (kWh) of electrical energy is equal to 0.00360 gigajoules (GJ).
- 1 liter of fuel (diesel) is equal to 0.03642 gigajoules (GJ).

(Data from the Department of Alternative Energy Development and Efficiency, Ministry of Energy)

- The energy intensity, relative to total electricity distribution volume, is 8.75 GJ/GWh [302-3]

Energy Intensity [302-3]

Annual Energy Intensity	2021	2022	2023	2024
Net internal energy consumption per electricity unit sold (GJ/GWh)	9.43	9.79	8.95	8.75
Net internal energy consumption per employee (GJ/Person)	45.84	50.31	47.67	48.88
Net internal energy consumption per unit of revenue (GJ/MBaht)	2.59	2.34	1.93	1.99

- The results of energy-saving measures in reducing energy consumption within the organization amounted to 2,986.7 GJ, representing a 0.22% decrease compared to 2023 (including electricity and fuel oil). [302-4]

Energy Reduction [302-4]

Initiatives / Measures / Projects for Energy Consumption Reduction	Detail	Consumption Type	Energy reduction in 2024 compared to the base year (GJ)
PEA Governor's Directive on Energy-Saving Measures	Further actions have been undertaken within PEA to reduce energy consumption in order to meet the Cabinet-approved targets.	Electricity Usage	An average increase of 2.18% (11,885.30 GJ) compared to 2023.
		Fuel Oil Consumption (Diesel Fuel)	An average decrease of 1.12% (8,898.60 GJ) compared to 2023.
		Total energy consumption	An average increase of 0.22% (2,986.70 GJ) compared to 2023.

Notes: - Comparison data are derived from direct measurements recorded in the System SAP system.

- The average change was calculated using the formula: [100 × (Total for 2024 – Total for 2023) / Total for 2023].

Upcoming improvement action [3-3]

- Expand the implementation of the Energy Management System to monitor and track overall energy consumption more effectively, in alignment with the PEA Office Building Electricity Usage Master Plan.
- Develop additional measures to reduce PEA's energy consumption in accordance with the Cabinet resolution, which mandates at least a 20% reduction in energy use (including electricity and fuel) across government agencies. These measures cover energy reporting, electricity-saving initiatives, fuel-saving measures, and long-term strategies.
- Utilizes an Asset Management System for electrical equipment that supports maintenance operations using Condition-Based Risk Management (CBRM) to manage all electrical assets, including power generation equipment, substation equipment, control systems, distribution equipment, and transmission systems.
- Expand the asset management approach by updating the existing data of power transformers and continuously applying this process to other key substation assets, such as switchgear and 115 kV, 33 kV, and 22 kV systems.

07. Empowering the Workforce through Innovation & Technology

❖ Innovation and Technology [3-3]

PEA prioritizes the use of innovation and digital technology to create added value for products, services, work processes, and new business concepts. This is being done to increase the organization's operational and business efficiency, support its corporate strategy, and ensure sustainable management.

Objective [3-3]

- Product and service innovation and commercial innovation generated revenue of 100 million Baht.
- The innovation action plan, based on PEA's innovation master plan, was 100% successfully implemented.

Strategy [3-3]

PEA has set its innovation policy, direction, and strategic position in alignment with its corporate strategy and innovation vision: "PEA uses innovation as a key tool to create added value for its products, services, and work processes, and to support the corporate strategy, with the aim of becoming a modern, leading, and regional innovation organization."

The following directions have been set as key targets:

- 2024-2026: To become a Digital and Green Energy Innovation organization.
- 2027-2032: To become a Smart Energy Innovation organization.
- 2033-2037: To become a Sustainable Innovation Organization.

Implementation [3-3]

PEA has prepared the PEA Innovation Master Plan for 2024-2028 (2024 revision) to manage the organization’s advancement in line with international guidelines. It has also developed a Corporate Innovation System (CIS) to enable PEA to systematically develop and create value. The key initiatives to achieve the goal of becoming a Digital and Green Energy Innovation organization are as follows:

- Improve internal processes related to the Core Business by using digital technology developed in collaboration with Tech Partners.
- Develop innovations that meet customer needs and incubate them toward commercialization.
- Study innovation portfolio models that align with the organization's strategy and operational guidelines.

Performance [3-3]

- Performance from product, service, and new business model innovations generated 193.28 million Baht in revenue, exceeding the 100 million Baht target by 93.28%.
- The innovation action plan, in line with PEA's innovation master plan, was 100% successfully implemented, meeting its target.

Upcoming improvement action [3-3]

PEA aims to elevate its innovation management to suit the organization, meet customer needs, and create value from intellectual property. It also focuses on having good management that aligns with international standards by concentrating on the following initiatives:

- Creating an innovation portfolio that is appropriate for the organization.
- Applying for ISO 56001:2024 certification.
- Analyzing customer insights to develop customer- and market-focused innovations.
- Commercializing intellectual property.

❖ Human Rights and Human Capital Management [3-3]

Human capital management is a key factor that drives an organization to achieve its goals. When employees are knowledgeable, skilled, and happy at work, it helps to increase efficiency and productivity, which in turn gives the organization a competitive edge and the ability to create business value. Amidst changes in the environment and technology, PEA is committed to developing its employees' skills and potential to be ready to handle global situations. Furthermore, PEA emphasizes fair treatment, respect for human rights, and non-discrimination, from the recruitment process through to compensation and benefits.

PEA recognizes that sustainable growth comes from developing its people alongside creating a safe environment that promotes a good quality of life. Listening to employees and caring for their needs is a core principle, ensuring that everyone in the organization is happy and has high morale until retirement. This ultimately leads to the development of an organization that can sustainably deliver value to society.

Objective [3-3]

- Develop target groups based on Future Competencies and involve them in Use Case development.
- Achieve key outcomes as defined by the Employee Experience plan.
- Achieve the target percentage of success in developing Talent and Successors.
- Establish management and care measures to ensure that entities in the Supply Chain respect human rights.
- Reduce complaints related to discrimination within the organization’s recruitment and selection process.
- Build employee pride and engagement to reduce the employee turnover rate.
- Provide training and development to personnel to raise awareness of non-discrimination.

Strategy [3-3]

- Establish an integrated organizational structure that is appropriate for internal and external factors to support the strategic plan. This involves preparing the organization and its work systems while considering workforce management that aligns with both current and future missions.
- Enhance the capability of personnel (Human Resource Development: HRD) to ensure they are ready and have sufficient potential to cope with changes in the electricity business structure and the future growth of new and related businesses. This includes keeping up with digital technology, being flexible, and being able to work in an integrated manner.

- Promote respect for human rights throughout the organization as a fundamental virtue for work and social coexistence. This is done by expanding operations and disseminating human rights policies and practices to contractors, electrical system service teams, vehicle/boat driver service teams, who are key contractual partners with PEA, and other outsourced labor.

Corporate Policy [2-23]

PEA Human Right Policy's [2-23]

- Establish projects and action plans to evaluate the performance of contractors providing electrical system and vehicle/boat driving services. This is to ensure that contractors, as partners of PEA, prioritize employee benefits. These include contributing to social security funds, so employees receive legal benefits, providing compensation in case of injury or illness, and arranging accident insurance during work.
- Develop a strategy to reduce discrimination-related complaints in the organization's recruitment and selection process. This aims to build confidence, fairness, and attract genuinely talented individuals by ensuring transparency in the process.
    - **Announce Clear Criteria and Procedures:** Publicly disclose detailed information about the recruitment and selection process, such as required qualifications, evaluation criteria, test formats, and timelines, through easily accessible channels.
    - **Provide Feedback:** Consider giving feedback to unsuccessful applicants (when feasible and without compromising organizational secrets) so they understand areas for improvement.
    - **Establish a Channel for Inquiries:** Provide a convenient channel for applicants to ask questions about the process and receive clear answers.

- Launch the Outstanding Employee and Contractor of PEA project to elevate human capital management. This project focuses on recognizing PEA employees and contractors who are creative, have outstanding work, and have developed projects that bring reputation or value to PEA. This is done by awarding and honoring them to encourage these individuals to become role models, share their positive experiences, and help other PEA personnel improve and develop themselves. It also aims to build a sense of ownership and engagement among PEA personnel, driving the organization toward sustainable growth.
- Announce a declaration of intent to prevent and solve problems of sexual harassment or abuse at work. This is done by creating an organizational culture and instilling values in all executives, employees, and contractors to treat each other with respect and dignity.

Corporate Policy [2-23]

Declaration of Intent for the Prevention and Resolution of Sexual Harassment in the Workplace [2-23]

- Establish policies on benefits and welfare for employees and contractors. This includes monitoring and improving related regulations to ensure that the benefits received by PEA employees and contractors are no less than the standards set by the announcement of the State Enterprise Labor Relations Committee, as stated in the PEA Labor Relations Policy. This includes not supporting forced labor, opposing child labor, monitoring and adhering to international standards, and respecting employees' right to express opinions.

Implementation [3-3]

PEA promotes and drives respect for human rights throughout the organization as a fundamental value for working and coexisting in society. This ensures that all stakeholder groups receive fair and equal respect for their basic rights. The following initiatives serve as a principle for consistent practice and inform all stakeholders of these operations:

- **Respect for Human Rights Principles:** We adhere to and follow our human rights policy in business operations, which is in alignment with the United Nations Universal Declaration of Human Rights (UNDHR) and The International Labor Organization (ILO) Declaration on Fundamental Principles and Rights at Work. As a result, 100% of all PEA employees are aware of the human rights policy. (412-2)

Proportion of Employees Protected or Covered Under the Human Rights Policy [412-2]

Number and percentage of employees and contractors covered by human rights policy.			
Employees		Contractors	
Persons	Percentage	Persons	Percentage
27,330	100	5,591	100

- **Human Rights Training:** PEA organizes human rights training for all new employees. As part of the Onboarding Program, a course on "Laws on Sexual Harassment" is conducted in an e-Learning format. Of the 859 new employees, 703 participated, representing 81.83%.
- **Non-violation:** PEA conducts business activities without violating the human rights of rights holders, including employees, society, communities, and stakeholders throughout the direct and indirect Business Value Chain.
- **Non-discrimination:** PEA treats everyone equally, without discrimination, in line with human rights principles. This is driven by PEA's commitment to ensuring that people in urban, rural, specific, or remote, hard-to-reach areas have universal access to electricity. PEA believes that access to this basic public utility is a key factor that will lead to widespread prosperity in regional society. This, in turn, supports the important goal of creating income opportunities, boosting the national economy, and providing a good quality of life for all citizens equally.

- **Human Rights Due Diligence (HRDD):** PEA conducts a comprehensive review of human rights topics from its business operations and verifies the impacts caused by all stakeholders throughout the Business Value Chain.
- **Communication, Dissemination, and Education:** PEA promotes awareness and understanding of human rights for all stakeholders throughout the Business Value Chain, covering every group.
- **Support for People with Disabilities:** PEA has launched a project to provide sales spaces for goods and services for people with disabilities or their caregivers. The "1 Electricity Authority, 1 Support for People with Disabilities" project aims to create careers and income, enabling them to earn sufficient living for themselves and their families.

A plan is in place to support and care for personnel, enabling them to grow in their careers effectively. It also involves providing fair benefits and welfare and creating channels for personnel to communicate and express opinions, allowing for a survey of their diverse needs and expectations based on their roles and duties.

- Workforce Management: The workforce is managed by providing equal employment opportunities and utilizing a transparent selection process that considers the knowledge, abilities, and qualifications set by the organization. A Recruit, Replace, Reskill, Upskill guideline has been established to ensure the workforce is suitable and aligned with the move towards becoming a digital organization. This also includes analyzing workforce needs, recruitment, and selection to acquire personnel that match the organization’s requirements.
- Benefits and Welfare: Benefits and welfare are improved to appropriately and effectively meet employee needs and expectations. This includes the development of the PEA Life application as a digital channel to support work and create a comprehensive, positive employee experience.

Benefits Provided to Personnel [401-2]

Personnel Benefits and Welfare	Personnel		Notes
	Employees	Contractors	
Severance Pay or Retirement Allowance	✓		For retired employees only / Based on salary rate
Overtime and Holiday Work Pay	✓		Based on salary rate
Welfare Fund Contribution	✓		For member employees only
Funeral Expenses	✓		Based on salary rate
Medical Expenses and Income Compensation	✓		
Child Support Allowance	✓		
Statutory Paid Leave	✓		
Social Security Contributions	✓		For member employees only
Domestic/International Travel Expenses	✓		For approved employees only
Housing Allowance	✓		Requires approval for housing allowance
Uniform Allowance	✓		For certain employee positions only
On-call Duty Allowance for Power Outages	✓		For certain employee positions only
Special Allowance for Shift Workers	✓		Based on salary rate
Overtime and Holiday Pay for Employees in Small Power Plants	✓		Based on salary rate
Special Allowance for Hotline Operators	✓		For hotline technician employees only
Special Allowance for Bus or Trailer Drivers	✓		For certain employee positions only
Special Allowance for Drivers	✓		For technician positions only
Salary Increment	✓	✓	
Special Area Allowance	✓		For approved areas only
Medical Expenses (Self, Parents, Spouse, Children)	✓		Contractors (Self, Spouse, Children)
Children's Tuition Fees	✓		
Childbirth Allowance	✓		For female employees
Ordination Allowance	✓		For male employees
Financial Aid for Fire or Other Disaster Victims	✓		

Personnel Benefits and Welfare	Personnel		Notes
	Employees	Contractors	
Electricity Bill Allowance	✓		Based on salary rate
Hazard Pay (Southern Region)	✓	✓	For the 3 southern border provinces only
Loans	✓		
Funeral and Cremation Welfare	✓		For member employees only
Commuter Shuttle Service	✓	✓	
Loan for Children's Tuition Fees	✓		
Medical Care at PEA Hospitals	✓	✓	
Telephone Allowance for Executives	✓		Based on position
Company Car	✓		Based on position
Combat Allowance	✓		Received prior to joining PEA
Professional Allowance	✓		For certain positions only
Legal Assistance for Criminal Cases from Duties	✓	✓	
Uniform Entitlement	✓		
Royal Decoration Entitlement	✓		For section head level and above
Right to Use PEA's Child Care and Development Center	✓		
Various Recreational Activities	✓	✓	
Disability and Incapacity Coverage	✓		
Childcare Leave	✓		

- Provide opportunities for employees to form groups to act as representatives in negotiations with management to protect their welfare and benefits. This also includes offering consultation to members who have been treated unfairly. The organization officially announces its labor relations policy to all personnel to build their confidence that PEA prioritizes a good relationship between management, employees, and all other stakeholder groups.
- Promote local employment, which helps boost economic benefits for local communities and improves the organization's ability to understand local needs. Additionally, PEA provides employment opportunities for people with disabilities without discrimination, offering them the same benefits and welfare as general employees to promote a better quality of life.

Ratio of Standard Wages by Gender Compared to Local Minimum Wage [202-1]

List	2021	2022	2023	2024
Percentage of Employees Receiving an Initial Wage at/Above the Minimum Wage Rate				
Male	100.00	100.00	100.00	100.00
Female	100.00	100.00	100.00	100.00
Ratio of Initial Wage (Calculated from the lowest-paid employee in each area) by Gender at Key Work Locations to the Minimum Wage Rate				
Head Office				
Male	1.28	1.20	1.20	1.17
Female	1.28	1.20	1.20	1.17
Northern Region				
Male	1.33	1.27	1.27	1.24
Female	1.33	1.27	1.27	1.24
Northeastern Region				
Male	1.32	1.26	1.26	1.23
Female	1.32	1.26	1.26	1.23
Central Region				
Male	1.30	1.23	1.23	1.21
Female	1.30	1.23	1.23	1.21
Southern Region				
Male	1.32	1.26	1.26	1.23
Female	1.32	1.26	1.26	1.23
Percentage of Contractors Receiving an Initial Wage at/Above the Minimum Wage Rate				
Male	100.00	100.00	100.00	100.00
Female	100.00	100.00	100.00	100.00

Notes: The minimum wage rate at key work locations in each area is derived from the initial salary of an employee (12,690 Baht / 30 days) and the average minimum wage rate (according to the Cabinet resolution approving the minimum wage rate) of the affiliated provinces.

Northern Region: Chiang Mai, Mae Hong Son, Chiang Rai, Lamphun, Lampang, Phayao, Phrae, Nan, Uttaradit, Tak, Sukhothai, Phitsanulok, Kamphaeng Phet, Phichit, Phetchabun, Lopburi, Uthai Thani, Chai Nat, Nakhon Sawan.

Northeastern Region: Kalasin, Roi Et, Khon Kaen, Chaiyaphum, Nakhon Phanom, Nakhon Ratchasima, Buriram, Maha Sarakham, Mukdahan, Yasothon, Loei, Sisaket, Sakon Nakhon, Surin, Nong Khai, Nong Bua Lamphu, Udon Thani, Ubon Ratchathani, Amnat Charoen, Bueng Kan.

Central Region: Pathum Thani, Phra Nakhon Si Ayutthaya, Saraburi, Sing Buri, Ang Thong, Prachin Buri, Sa Kaeo, Nakhon Nayok, Chonburi, Rayong, Chanthaburi, Trat, Chachoengsao, Kanchanaburi, Suphan Buri, Nakhon Pathom, Samut Sakhon.

Southern Region: Samut Songkhram, Prachuap Khiri Khan, Phetchaburi, Ratchaburi, Chumphon, Trang, Nakhon Si Thammarat, Surat Thani, Krabi, Narathiwat, Pattani, Phang Nga, Phatthalung, Phuket, Yala, Ranong, Songkhla, Satun.

Percentage of Senior Management Hired from the Local Community [202-2]

List	2021	2022	2023	2024
Senior Management	64.53	65.96	63.96	69.13

Notes: Management (Executives), including Deputy Governors, Assistant Governors / Department Directors / Managers Level 1, Deputy Department Directors, Division Directors, Center Directors, Electric Vocational School Directors, Managers Level 2-3 or equivalents, Deputy/ Assistant Division Directors, Deputy / Assistant Center Directors, Deputy / Assistant Electric Vocational School Directors, Deputy Managers Level 1-2, Branch Managers, Assistant Managers Level 3, Section Heads, Sub-Branch Managers, and Assistant Section Heads

- PEA promotes and develops personnel through both upskilling and reskilling for all employees, at every level and in every position. The holistic Human Resource Development (HRD) Blueprint is used as a guideline to develop the competencies of internal personnel (PEA Competency Model) for all employee levels. This is supported by the creation of an Individual Development Plan (IDP) that covers both executives and employees at every level.

Training Courses for Employee Skill Development and Transition Support Programs [404-2]

Course/Program	Course Type		Number of Courses	Number of Participants (persons)
	Hard Skill	Soft Skill		
1. Training Courses for Skill Development				
1.1 Internal Training Courses				
1.1.1 Management	✓	✓	40	11,350
1.1.2 Overseas Training	✓	✓	4	268
1.1.3 Scholarships	✓	✓	6	77
1.1.4 Engineering & Technical	✓	✓	66	5,082
1.1.5 Executive Development	✓	✓	7	5,090
1.1.6 Knowledge Management	✓	✓	6	15,450
1.1.7 Digital	✓	✓	28	26,792
1.1.8 Statutory / Legal	✓	✓	14	29,212
1.1.9 New Business	✓	✓	7	1,511
1.2 Academic Leave with Guaranteed Reinstatement				
No requests for academic leave during the year.	✓	-	-	-
2. Transition Support Programs for Employees Approaching Retirement or Whose Employment is Terminated				
2.1 Pre-Retirement Planning Courses for Those Intending to Retire				
2024 Happy Retirement Project - Smart Retirement Activities	-	-	Encourage retirees to develop skills, gain knowledge, and create post-retirement careers.	994

Notes: Hard Skills: These are the skills or abilities used for work in each profession, which can be concretely measured and evaluated.
Soft Skills: These are the social skills used for interacting with people, including habits, personality, attitudes, and mindsets necessary for coexisting with others in society, which help to make collaboration smooth.

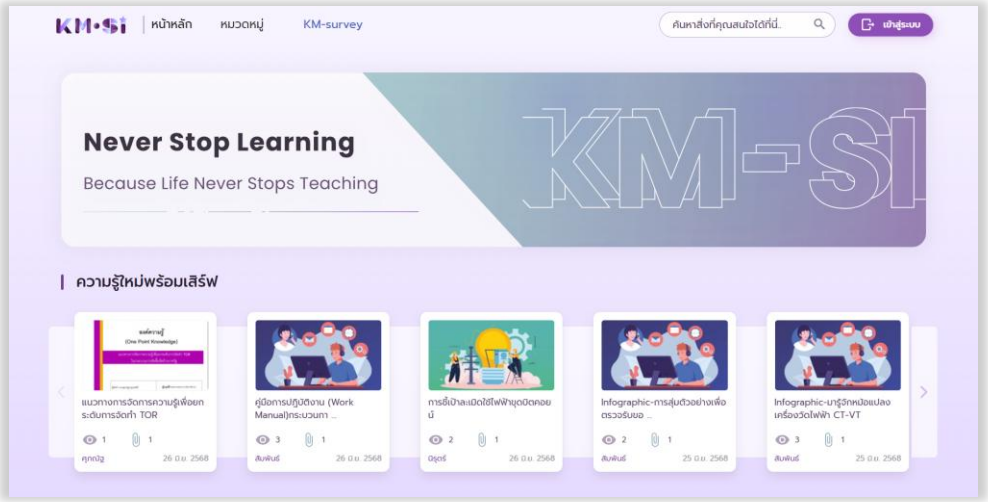
- PEA manages employee performance based on the principles of Human Capital Management, placing a strong emphasis on its Performance Management System. This system is designed to create value at the individual, departmental, and organizational levels. PEA has developed the PEA Performance Appraisal System (PEATA-PMS) to support its new organizational structure. This online platform allows both employees and contractors to appraise their performance anytime, anywhere. The results are used for considering annual salary increments, as well as appointments and promotions.

Percentage of Employees Receiving Regular Performance and Career Development Reviews [404-3]

Employees Who Received a Performance Review	Review Details / Performance Review Criteria			
	Work according to policy / assigned by a supervisor	Work according to job responsibilities	Work based on creativity	Behavior aligned with values and work behavior
By Gender (Percentage)				
Male	98.06	98.06	98.06	98.06
Female	98.88	98.88	98.88	98.88
By Employee Group (Percentage)				
Management	98.19	98.19	98.19	98.19
Specialists	98.35	98.35	98.35	98.35
Operations	98.29	98.29	98.29	98.29

Notes: Management (Executives), including Deputy Governors, Assistant Governors / Department Directors / Managers Level 1, Deputy Department Directors, Division Directors, Center Directors, Electric Vocational School Directors, Managers Level 2-3 or equivalents, Deputy/ Assistant Division Directors, Deputy / Assistant Center Directors, Deputy / Assistant Electric Vocational School Directors, Deputy Managers Level 1-2, Branch Managers, Assistant Managers Level 3, Section Heads, Sub-Branch Managers, and Assistant Section Heads
Specialists including Experts Level 12-13, Researchers Level 9-11, Specialists Level 9, Specialists Level 8, Researchers Level 7-8, and Professional Officers Level 7
Operations including Researchers/Professional Officers Level 4-6 and Professional Officers Level 2-3.

- Knowledge Management (KM) is managed throughout the entire process, from identifying important knowledge for the organization's current and future business operations to storing both Explicit Knowledge and Tacit Knowledge. This also includes disseminating and sharing the knowledge among departments, divisions, and work groups to improve the organization's operational efficiency and effectiveness through the KM-SI system.



Performance [3-3]

- Development of Target Groups: The development of target groups based on Future Competencies and their involvement in Use Case development achieved 100% of its planned operational results. The mechanism for supporting the career advancement of new-generation personnel was successfully developed to align with business directions and to replace employees in key positions. This resulted in the successful development of Talents and Successors who passed the potential assessment, meeting the target.
- Employee Experience Plan: The key outcomes of the Employee Experience plan achieved 100% of its planned operational results. This included the launch of two pilot projects, along with Event Touch Points for each stage: Pre-Employment, Employment, and Achievement (post-retirement) for all employees.
- Supply Chain Management: Measures for managing and caring for entities within the Supply Chain to respect human rights were successfully established, meeting the target.
- Training Hours: The number of training hours per person per year was 42.30 hours/person/year. [404-1]

Upcoming improvement action [3-3]

- Enhance the variety of public relations formats for human rights, non-discrimination, and sexual harassment in the workplace.
- Incorporate data from focus groups or in-depth interviews with personnel and related stakeholders into satisfaction assessments. This information will be used to develop a plan to enhance organizational engagement and to further create a positive employee experience.

❖ **Occupational Health and Safety** [3-3]

PEA has established an Occupational Health and Safety (OHS) management system and developed comprehensive hazard prevention measures to ensure employee safety in compliance with Thai laws, regulations, national safety agency strategies, and international safety operational standards. The organization also has a Safety and Occupational Health Master Plan to monitor and evaluate performance against its targets. PEA is committed to creating a suitable working environment and a PEA Safety Culture that fosters a good quality of life and safety for all personnel. The goal is to minimize or eliminate accidents and incidents by focusing on reducing health and environmental factors that affect employees' lives and property. PEA considers the safety, occupational health, and working environment of its personnel as key factors that impact both employees and the organization's operational efficiency.

Objective [3-3]

- Measure the Disabling Injury Index (√DI) and reduce the injury rate by 5% annually.
- Reduce the number of work-related injuries and fatalities among employees and contractors compared to the previous year.
- Reduce the number of work-related injuries and fatalities among non-employee contractors and/or outsourced workers whose work and/or workplaces are controlled by the organization, compared to the previous year.
- Promote a safety culture to achieve Zero Accidents. The Disabling Injury Index (√DI) is used as the measurement criterion, and accident statistics are collected from all PEA offices, provincial electricity authorities, and head office departments. This data is used for prevention and to avoid repeated accidents.
- Launch a health promotion project to raise awareness of physical and mental healthcare, create healthy behaviors, and foster positive psychological learning experiences.

Strategy [3-3]

In line with its Strategic Objective related to Safety, Security, Health, and Environment (SSHE), PEA's Strategic Objective (SO1) aims to be a leader in electricity distribution services through digital technology, innovation, and human capital.

To achieve this, PEA has implemented two key human capital management strategies:

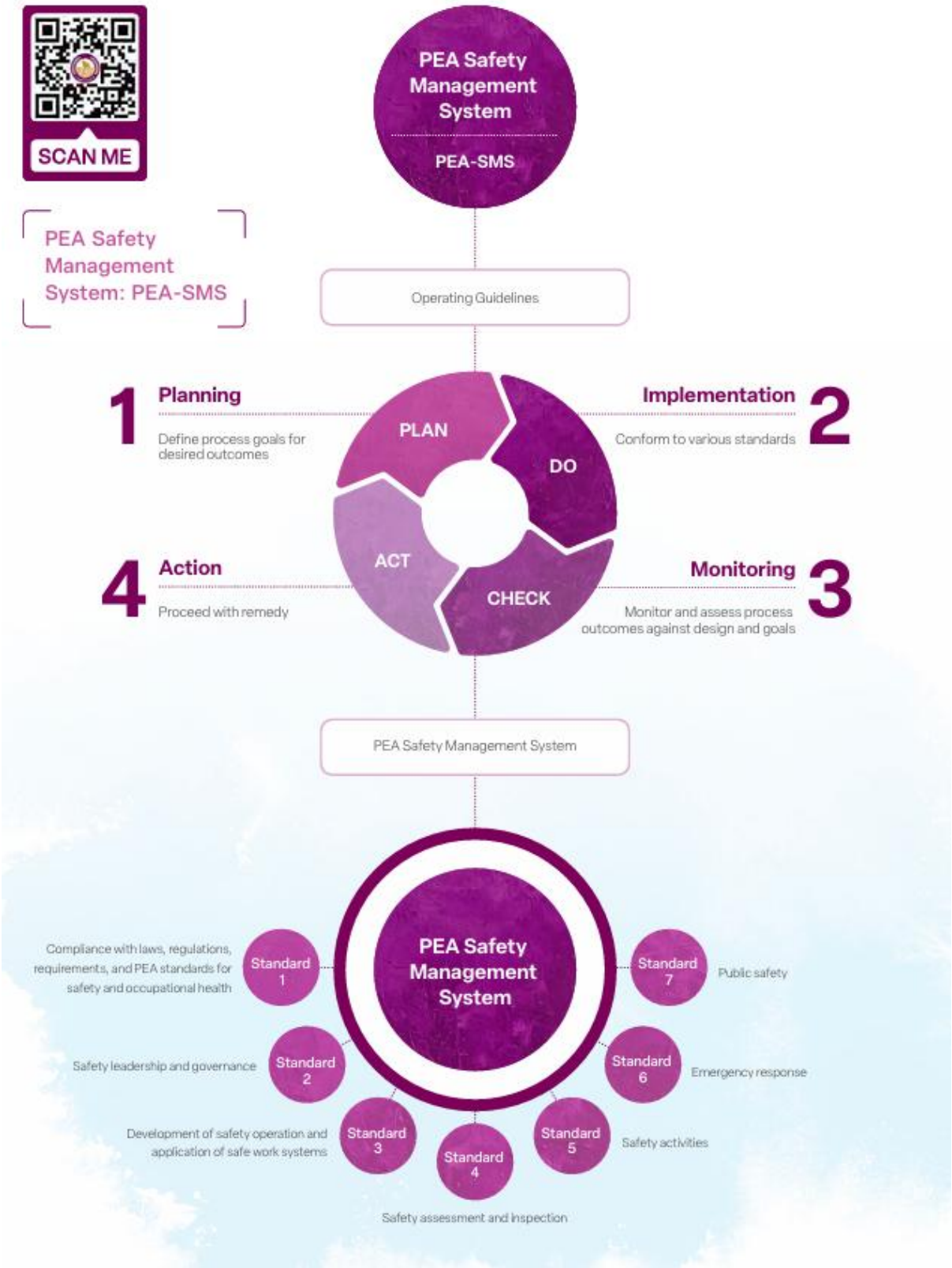
- **HCM1: Developing Personnel Competencies** This strategy focuses on developing a learning system to reskill and upskill personnel to align with Industry 5.0, Electricity 5.0, and Building 5.0. The goal is to develop knowledgeable employees who can work efficiently, comply with relevant SSHE laws and regulations, and reduce time loss from accidents. Continuous learning and development will also help foster a strong safety culture within the organization.
- **HCM2: Enhancing Employee Satisfaction and Engagement** This strategy recognizes that continuous learning and personnel development also contribute to building a safety culture. Highly satisfied and engaged employees are more likely to work effectively in teams and generate new innovations that continuously raise SSHE standards. This, in turn, builds trust with customers and stakeholders.

To support these goals, PEA has launched its Human Resources Master Plan for 2024-2028. This plan aims to further promote the role of human resources as Business Partners and is aligned with PEA's future operational direction.

Implementation [3-3]

PEA has established and implemented its safety strategy by creating a detailed Action Plan. This plan fully defines responsibilities, targets, and timelines for each activity to support the operational goals of the PEA Safety, Occupational Health, and Working Environment Master Plan for 2020-2024 (2nd review of 2022). PEA has also developed the PEA Safety Management System (PEA-SMS) in compliance with the Occupational Safety, Health and Environment Act B.E. 2554 (2011). This system is designed to facilitate the application for ISO 45001 certification and to manage accident prevention efforts that protect employees, contractors, and the public.

PEA Safety Management System (PEA-SMS) [403-2, 403-3, 403-7]



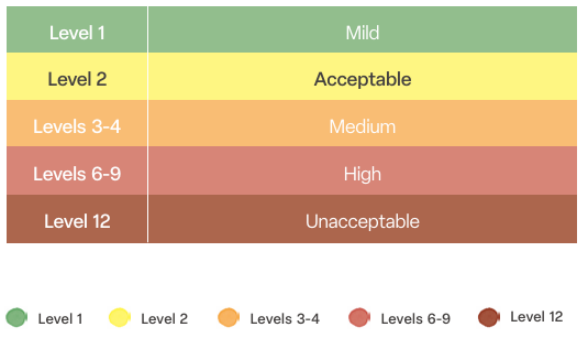
Process for Managing Risks of Work-Related Injuries and Illnesses [403-2, 403-7]

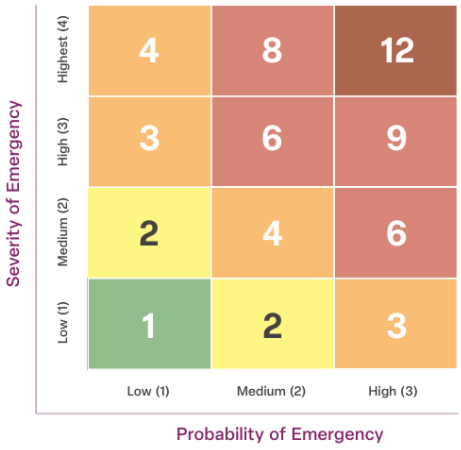
PEA uses its PEA Safety Management System (PEA-SMS) to manage the risks of work-related injuries and illnesses. An annual emergency risk assessment report form is used to evaluate and measure risk levels, which helps in prioritizing risks from highest to lowest. The risk level assessment is based on an agreed-upon risk assessment criteria that considers the relationship between severity and the likelihood of an event occurring. The risk level can be calculated using the formula: Risk Level = Likelihood of Occurrence x Severity, based on the following considerations:

Level	Severity	Detail
1	Low	No work stoppage, or property damage valued at less than 50,000 Baht.
2	Medium	Work stoppage of no more than 3 days, or property damage valued from 50,000 to 250,000 Baht.
3	High	Work stoppage of more than 3 days, or property damage valued from 250,000 to 500,000 Baht.
4	Highest	Loss of a body part / permanent disability / death, or property damage valued at more than 500,000 Baht.

Level	Severity	Detail
1	Low	A low likelihood of danger or unlikely to occur.
2	Medium	A moderate likelihood of danger.
3	High	A high likelihood of danger.

Risk prioritization involves setting conditions for ranking risks and organizing them from highest to lowest. This is used to identify critical emergency situations for which to create an emergency response plan. Risk levels are divided into five tiers as follows:





The risk levels outlined above are used to determine whether risk management or preventive control measures are needed. This includes deciding to eliminate the likelihood of an event, reduce its likelihood or severity, or both. It also involves setting the timeframe for implementing preventive controls, which is directly related to the risk level, as shown in the table below.

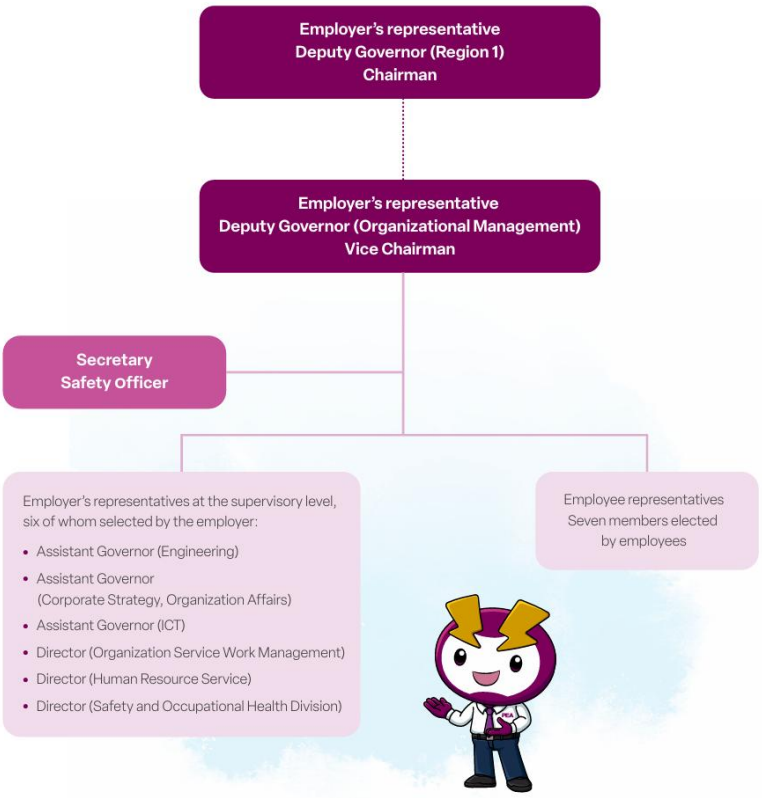
Risk Level	Required Action and Timeframe	Risk Management	
Unacceptable	Work cannot begin or continue until the risk is reduced. If the risk cannot be reduced despite full effort, work must be stopped immediately.	**Reduce**	The organization must implement appropriate risk control measures, with a primary focus on reducing the likelihood of occurrence, and develop an emergency response plan to handle the risk event.
High	The risk must be reduced before work can begin. Sufficient resources and measures must be allocated to mitigate the risk. If the risk is related to ongoing work, it must be addressed urgently.	**Plan**	The organization must create an emergency response plan and conduct regular drills.
Medium	Efforts should be made to reduce the risk, but the cost of prevention should be carefully considered and budgeted. Risk reduction measures must be implemented within a defined timeframe. If a medium-level risk has the potential for serious damage, an additional assessment should be conducted to determine a more accurate probability of harm as a basis for deciding if control measures need improvement.	**Control**	The organization must implement appropriate risk control measures. If measures are already in place, they should be applied consistently, with a primary focus on reducing the likelihood of occurrence.
Acceptable	No additional controls are needed. The risk may be re-evaluated when it is deemed worthwhile or when improvements can be made at no extra cost. Monitoring must continue to ensure that controls remain in place.	**Accept**	The organization can accept the risk. If control measures are already in place, they should be applied consistently.
Minor	No additional corrective action is required.	**None**	-

In addition, PEA has defined types of high-impact work-related injuries that can result from work processes, such as electric shock, being struck by objects/vehicles, falls from height, burns, slips, structural collapse, falling objects, cuts, being caught/pinched, and exposure to chemicals/poisonous animals. The organization studies and reviews these incidents to define appropriate risk control measures.

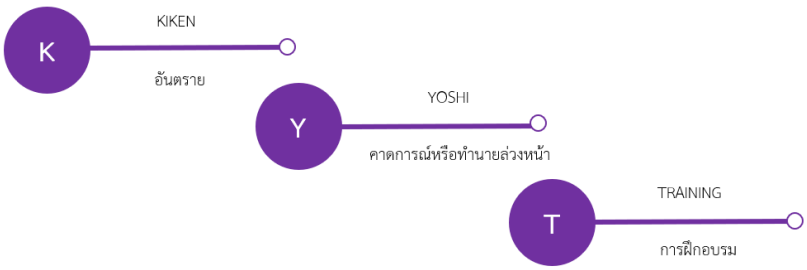
Currently, PEA is analyzing risks that may cause work-related illnesses. The analysis found a risk of chemical exposure in the corporate support division. In response, PEA has acted in accordance with the Ministerial Regulation on Safety Management System Standards, 2022, by requiring at-risk employees to undergo health checks as mandated by law and PEA's own practices.

Occupational Health and Safety Committee Structure [403-4]

The committee's structure is responsible for creating a system to supervise work processes in accordance with laws, regulations, and practices related to occupational health and safety. The committee includes employees, trading partners, contractors, and subcontractors, or a Safety, Occupational Health, and Working Environment Committee.



PEA promotes a safety culture through weekly Safety Talks before work begins. It also uses the KYT (Kiken Yochi Training) system to prevent work-related accidents. KYT is a method for analyzing or predicting potential hazards from a task and then defining measures or methods to manage those hazards to ensure safety. Furthermore, PEA conducts training and develops courses to promote safety, which it then monitors and evaluates to ensure continuous improvement.



Communication with Employees to Drive Safety Management [403-4]

Communication Channel	Communication Frequency	Stakeholders Involved
Employees		
Meeting to report the Disabling Injury Index (√DI)	Once per quarter	Regional Electricity Authority Safety Department
Safety Subcommittee Meeting	At least once per quarter	The Assistant Governor for Corporate Administration is the Chairman.
Accident Prevention Committee Meeting	Once per quarter	The PEA Governor is the Chairman, with the Deputy PEA Governor and the Assistant PEA Governors from 12 regions, as well as other relevant departments, serving as committee members.
Safety, Occupational Health, and Working Environment Committee (KPA.) Meeting	Once a month	1) Head Office: The Deputy Governor for Corporate Administration is the Chairman. 2) Regional Offices: The Assistant Governor for the Regional PEA is the Chairman. 3) Provincial Electricity Authority Offices: The Provincial PEA Manager is the Chairman. For all three (1-3), a Professional Safety Officer is appointed as the secretary.
Contractors		
Awareness-building training for operational safety	4 events per month	Professional Safety Officer

Promotion and Support for Non-Work-Related Medical and Health Services [403-6]

The Health Promotion Project is a program designed to help PEA personnel recognize the importance of their physical and mental well-being and learn appropriate self-care methods. This initiative encourages behavioral changes that foster good physical and mental health, enhance employee competency, and improve their quality of life. The organization supports these activities through policy and budget, aligning with its strategic plan to create a human capital management and development system that maximizes employee potential. The project also incorporates up-skilling and re-skilling programs, creates a suitable and relaxing work environment, and fosters a happy, collaborative atmosphere. Executives act as Role Models and employees are encouraged to have a sense of ownership, so that everyone in the organization becomes a PEA Citizen.

Performance [3-3]

- PEA has achieved ISO 45001 certification.
- The overall operational success rate for safety and occupational health is 100%, meeting the target of level 5.
- The Disabling Injury Index (√DI) is 0.1034, which is a level 5 score.
- 1,000 employees and contractors participated in safety and occupational health training, representing 3.04% of the total workforce. [403-5]
- 30,000 employees and contractors attended basic fire-fighting and fire evacuation drills, which is 91.13% of the total workforce. [403-5]
- The organization ran a health promotion project to raise awareness of physical and mental well-being, foster healthy habits, and provide positive psychological learning experiences.
    - **Happy Mind Project:** This initiative aimed to raise awareness of mental health, promote self-acceptance, and encourage positive psychological experiences. 943 people participated in both onsite and online activities. 65.17% of the Happy Pilot group achieved their expected outcomes.
    - **PEA Smart Health Project:** This project was designed to help personnel adopt sustainable physical health habits, with a focus on proper nutrition and beneficial food choices. Out of 208 participants, their BMI decreased as follows:
        - At-risk group: BMI decreased by 77.8%.
        - Pre-retirement group (ages 50-60): BMI decreased by 50%.
        - Healthy group: BMI decreased by 66.6%.
        - Overall, participants reported a 94% satisfaction rate, and their knowledge increased by 96% after the training.

Upcoming improvement action [3-3]

- Improve the Work Permit system by developing a digital (E-Permit) version to meet the needs of employees and safety officers and enhance operational efficiency.
- Raise awareness among all operational employees about the importance of the safety management system, covering every aspect of the Safety Transformation project.

08. Resilient & Customer-centric Operations

❖ Accessible & Affordable Electricity [3-3]

Electrical energy is a fundamental driver of the economy and a key factor in improving people's quality of life. Widespread and comprehensive access to electricity for the public, business, and industrial sectors not only stimulates economic growth and employment but also serves as a crucial mechanism for reducing income and quality-of-life disparities. It helps to distribute development to remote and rural areas, leading to a sustainably better life for residents.

Although expanding the electrical grid brings immense benefits to economic and social development, such operations must be carried out under strict management. Extending the electrical system to areas with various limitations, especially environmentally sensitive areas, restricted zones, and national parks, could potentially cause negative impacts. Therefore, PEA emphasizes meticulous inspection and impact assessment for its expansion projects, coupled with defining appropriate mitigation measures. This ensures that every step of the process is efficient, aligns with the needs of electricity users, and adheres to all relevant legal requirements and sound principles.

Objective [3-3]

- Project to Expand Electricity Access for Households (KFM. 2): Extend the electrical grid to 141,960 households that currently lack electricity.
- Accelerated Household Expansion Project: Swiftly expand the grid to an additional 10,000 households without electricity.
- Consumer Assistance: Implement measures in 2024 to help electricity users impacted by various external situations.

Strategy [3-3]

- Grid Expansion: Focus on expanding the electrical grid to meet the demands of the public, distributing power to all remote areas, including rural regions, islands, and off-grid locations.
- Enhance Accessibility: Develop additional projects to increase electricity access, such as initiatives aimed at reducing the financial burden of electricity bills.
- Smart Grid Development: Enhance the capacity of the distribution system on the Smart Grid to effectively meet the needs of electricity users at all levels.

Implementation [3-3]

PEA has developed a plan to use renewable energy (RE) or microgrids to generate electricity for households located in restricted areas, remote islands, or off-grid areas where conventional grid expansion with poles and wires is not feasible. PEA has categorized these households into two groups:

1. Households are not in a Class 1 watershed: These will be provided with electricity using a renewable Mini Grid.
2. Households in a Class 1 watershed: These will be provided with electricity using a Solar Home System.

The organization also helps low-income or vulnerable groups gain greater access to electricity through various projects, such as the free electricity measure and the non-disconnection measure for households with bedridden patients. To ensure effectiveness, all regional electricity authorities are required to report on the status and results of these initiatives. In the event of complaints or requests for grid expansion, the relevant regional authorities are contacted to expedite action.

Measures to Assist Electricity Users Affected by Various Situations

- Measures to Assist Electricity Users Affected by Rising Energy Prices

  Due to the rise in energy prices and increased electricity demand from the recovering post-COVID-19 economy, coupled with a persistent increase in electricity generation costs, the price of electricity has been affected. To alleviate the burden on citizens' cost of living and support the country's economic recovery, the Cabinet passed a resolution to assist affected electricity users. In accordance with this resolution, PEA has implemented measures to help the public.

- Measures to Assist Electricity Users Affected by Floods

  Following the flood situation in September and October 2024, the Cabinet approved in principle a measure to provide electricity bill assistance to users in areas officially declared as flood disaster zones. For the electricity bills of September and October 2024, PEA will provide assistance to residential users and small businesses (excluding government agencies and state enterprises).

Performance [3-3]

Access to the Electrical System Development Project [EU6]

Project in Progress	Objective	Implementation Details	Project Target	Operational Results	Investment (Million Baht)
Phase 2 Electricity Grid Expansion Project for New Households	To provide comprehensive electricity access to new households, in line with government policy.	- Construct and expand electricity services to 141,960 new households.	Implemented nationwide, excluding areas under the jurisdiction of the Metropolitan Electricity Authority, to provide electricity to households that do not yet have it.	- Constructed and expanded electricity services to 179,174 new households. - Project progress is 126.21% (as of December 2024).	6,565
Total Investment					**6,565.00**

- Completed the Electricity Grid Expansion Project for Households without Electricity (KFM. 2), serving 179,174 new households. This exceeds the target by 37,214 households, representing 26.21% above the target.
- Completed the accelerated grid expansion plan for households without electricity, serving 16,114 new households. This is 6,114 households above the target, representing 61.14% above the target.

❖ The number of households with electricity is 22,123,367 compared to the total number of households in the country, 22,218,069. This represents an electricity access rate of 99.57%.	❖ The number of households without electricity is 94,702, representing an inaccessibility rate of 0.43% [EU26]. These are households that do not meet the criteria for consideration, such as those located in national parks or restricted areas where conventional pole and wire installation is not feasible.

Notes: Criteria for selecting households without electricity to implement the project

1) The household must be a permanent, genuinely inhabited residence.
2) The household must have a house number and a permanent or temporary house registration. The relevant electricity authority may verify and request additional documents for the electricity application, as follows:
   I. Temporary registration for unpermitted construction: A certification from the registrar must be provided, stating that the temporary house registration was issued for an unpermitted construction.
   II. Temporary registration for a building on public land or in a forest reserve: A letter of consent from the government agency, state enterprise, or state body that holds the land title must be provided.
   III. Building on private land with no legal ownership/possession: A letter of consent for land use from the landowner who holds the title must be provided.
3) The household must not be located in a housing development, row house, or commercial building, as the developer is responsible for providing the electrical system in such cases.
4) The household must not be located in a government-restricted area and must not pose construction problems (e.g., located in a forest reserve, an irrigation zone, or a military area).
5) There must be public transportation access to allow for convenient service year-round.
6) The household must be part of a community established or supported by a government agency, such as a Royal Initiative Project village, a Baan Mankong (Secure Housing) project, a Thai Khem Khang (Strong Thailand) project, or a village under other government programs.

- **Measures to Assist Electricity Users Affected by Various Situations in 2024**
  - Measures to Assist Users Affected by Rising Energy Prices

    To alleviate the impact of high energy costs on the public, electricity bill assistance was provided to residential users consuming no more than 300 units per month.

Billing Month	Electricity Discount (Satang/unit)	Amount (excl. VAT) (Million Baht)
January – April 2024	21.00	1,311.23
May – August 2024	19.05	1,185.76
September – December 2024	19.05	1,223.63
Total		**3,720.62**

  - Measures to Assist Users Affected by Floods
    1) Electricity charges for September 2024 were waived as a pre-VAT discount.
    2) A 30% pre-VAT discount was applied to electricity charges for October 2024.

Billing Month	Amount (excl. VAT) (Million Baht)
September 2024	351.94
October 2024	122.42
Total	**474.36**

Upcoming improvement action [3-3]

- Pilot Renewable Energy Project: Implement a pilot project to extend electricity access to households without power in remote areas of Mae Hong Son Province. The project will target five communities (Ban Huai Hung, Ban Sao Hin, Ban Mae Sa Mong Tai, Ban Sla Chiang Tong, and Ban Sa Pheng Tai) with a budget of 60 million Baht.
- Remote Area Expansion: Expand the project to extend electricity access to remote, unpowered households with renewable energy sources from 2022 to 2025. The goal is to reach 238 community groups (approximately 18,659 households) with a total budget of 3,200 million Baht.
- Solar Home System Expansion: Expand the Solar Home System to target 178 community groups (approximately 16,860 households) located in Class 1 watersheds from 2022 to 2024. This will require funding from various sources.
- Phase 3 Household Grid Expansion: Implement the third phase of the electricity grid expansion project for new households from 2024 to 2028. The project targets 128,000 households with a total budget of 6,500 million Baht.
- Phase 3 Agricultural Land Grid Expansion: Implement the third phase of the electricity grid expansion project for agricultural land from 2023 to 2028. The project targets 60,000 households with a total budget of 4,500 million Baht.

❖ **Reliability of Distribution System** [3-3]

Electrical energy is a fundamental utility and a key mechanism for driving the economy and society. As an electricity provider, PEA places the highest importance in enhancing the capacity of its electricity distribution system to be efficient, stable, and capable of meeting continuously increasing demand. This ensures the full potential of electricity use is realized and promotes sustainable economic and social development.

PEA is committed to mitigating the risks that power disruptions pose to people's quality of life. To this end, it is developing a Smart Grid and Smart City using digital technology to support the expansion of economic zones in both urban and remote areas nationwide. This initiative aligns with the 13th National Economic and Social Development Plan (2023–2027) and the country's energy policies and strategies, including the Energy 4.0 Policy, the Power Development Plan (PDP), and the Alternative Energy Development Plan (AEDP). All of these efforts underscore PEA's commitment to building a strong energy foundation for Thailand's sustainable growth.

Objective [3-3]

- System Average Interruption Frequency Index (SAIFI): 1.22 times/customer/year
- System Average Interruption Duration Index (SAIDI): 21.44 minutes/customer/year
- Percentage of Distribution System Loss: 5.40%
- Industrial Estate SAIFI: 0.510 times/customer/year
- Industrial Estate SAIDI: 9.350 minutes/customer/year
- Industrial Estate Customer Satisfaction: 4.47 (out of 5)
- Low Voltage Distribution System SAIFI: 0.749 times/customer/year
- Low Voltage Distribution System SAIDI: 57.513 minutes/customer/year

Strategy [3-3]

- Risk Management and Maintenance: Review relevant risks and create a risk management plan, an annual system maintenance plan, and a preventive maintenance plan to increase the efficiency and reliability of the electrical distribution system.
- Substation Construction: Build and monitor substations according to the plan to ensure sufficient and reliable electricity supply that can support increasing demand.

- Grid Modernization: Improve and connect electrical distribution systems in business and critical areas to support economic expansion.
- Smart Grid Development: Develop the Smart Grid infrastructure to support renewable energy and future technologies.
- Consumer Assistance: Implement a policy to avoid disconnecting electricity for households with bedridden patients.

Implementation [3-3]

- Load Forecasting: Forecast future electricity demand using a forecasting model, statistical methods, and various assumptions about factors that influence future electricity consumption. The resulting data is then analyzed to plan the location of new substations and transmission lines to support future energy needs.
- System Analysis: Analyze ways to enhance the stability of the electrical system in both the short-term (2023-2024) and long-term (2022-2028). The primary tool used is the DIgSILENT Power Factory software, which can analyze the generation, transmission, and distribution systems under both steady and transient states. It is crucial for analyzing various issues such as power flow, short-circuit current, and stability problems.
- Loss Reduction: Implement a clear plan to reduce both Technical and Non-Technical Losses and improve the efficiency of electrical system maintenance, with a focus on Preventive Maintenance.
- Substation Projects: Expedite the construction of substations to meet deadlines and provide electricity to customers, and execute the plan to improve the reliability of the electrical system.
- Performance Evaluation: Evaluate SAIFI & SAIDI indices and analyze power outages to improve system reliability.
- Maintenance and Replacement: Implement a plan for inspecting and maintaining the electrical system, as well as a plan for replacing damaged or deteriorated equipment and transmission lines, along with a plan to improve the low-voltage distribution system.
- Digital Tools: Utilize the Smart Patrol application (Mobile Job Management (MJM) & Mobile for Field Operation (MFO)) to support maintenance work.
- SCADA System: Implement 13 SCADA centers with an automated Fault Isolation and System Restoration function that can pinpoint the location of faults, isolate the affected area, and automatically restore power. This effectively helps reduce the SAIDI index.

Performance [3-3]

- System Average Interruption Frequency Index (SAIFI): 1.17 times/customer/year, which is 4.10% better than the target. [EU28]
- System Average Interruption Duration Index (SAIDI): 21.03 minutes/customer/year, which is 1.91% better than the target. [EU29]
- Distribution System Loss: 5.03%, which is 0.37% better than the target.
- Industrial Estate SAIFI: 0.190 times/customer/year, which is 62.75% better than the target.
- Industrial Estate SAIDI: 2.200 minutes/customer/year, which is 76.47% better than the target.
- Industrial Estate Customer Satisfaction: 4.64 out of 5, which is 3.80% better than the target.
- Low Voltage Distribution System SAIFI: 0.594 times/customer/year, which is 20.69% better than the target.
- Low Voltage Distribution System SAIDI: 26.027 minutes/customer/year, which is 54.75% better than the target.

Notes: The data for calculating the SAIFI (System Average Interruption Frequency Index) and SAIDI (System Average Interruption Duration Index) for 2024 was collected as follows:

1) Outage information is gathered from various grid devices, including fuses, breakers, reclosers, and switches, across the low-voltage (220V/380-400V), medium-voltage (22kV, 33kV), and high-voltage (115kV) distribution systems.
2) PEA's district and provincial offices send outage data from devices like Drop Out Fuses. This information is then compiled by the 12 regional PEA offices nationwide and sent to the head office using FTP (File Transfer Protocol) to process the SAIFI and SAIDI indices and generate a reliability report.
3) The head office uses the JF.3 program to process the data, including outage statistics, grid network databases, customer numbers, and departmental relationships, to produce the final SAIFI and SAIDI reports.

- For more details on the SAIFI and SAIDI calculations, please refer to the Electricity Outage Indices (SAIFI and SAIDI) table (page 150).

Electricity Demand Forecast Results

In 2024, PEA's total electricity sales growth was 5.28% for the year, which was 0.54% higher than the forecast. When broken down by customer type [EU10]:

- **Residential customers:** Growth was 1.42% higher than the forecast.
- **Medium-sized business customers:** Growth was 1.90% higher than the forecast.
- **Large-sized business customers:** Growth was 0.52% lower than the forecast.

Total electricity demand was 156,838 GWh, serving 22,062,761 customers.

Upcoming improvement action [3-3]

- Policy and Regulation: Revise policies and regulations to support the development of a smart grid and enable PEA to invest in infrastructure development.
- Low-Voltage System Upgrade: Enhance the quality of the low-voltage distribution system to improve stability and reliability, especially in areas with anticipated growth in electric vehicles.
- Data Quality: Improve data quality to meet the ISO/IEC 25012: Data Quality Model standard. This will ensure data reliability for various applications, such as grid analysis, and is crucial for planning network expansion and integrating distributed energy resources (DERs).
- Network Integration: Improve and connect distribution systems in key business, industrial, and strategic areas to ensure comprehensive, sufficient, stable, and standardized electrical infrastructure. This will support economic and strategic expansion.
- Service Reliability: Improve power supply quality and stability to reduce the frequency and duration of outages, especially in industrial and urban areas.
- Outage Management System (OMS): Expand the use of the OMS, an RTU-based system for managing and tracking outages, to cover all 12 regions nationwide.

❖ **Business Resilience & Adaptation** [3-3]

In the current environment, various factors are changing rapidly and continuously. These include evolving consumer behavior, the emergence of digital and AI technologies that create new innovations affecting work processes, business models, and lifestyles, as well as global political situations that impact energy costs. The growing emphasis on clean energy and government policies also directly affects PEA.

Therefore, to ensure that the organization's management and operations are always prepared, able to adapt and effectively handle changes in business models, and responsive to the needs and expectations of stakeholders, PEA is prioritizing systematic management, design, and review of its work systems. This focus is aimed at ensuring the organization is ready to face any changes, remain competitive, and achieve its stated goals.

Objective [3-3]

- Enhance B2B and B2C business operations.
- Achieve 5 billion Baht in total revenue from B2B business.
- Achieve 500 million Baht in total revenue from B2C business.
- Prepare the ThaiSkill business, including personnel for the ThaiSkill Launchpad BU.
- Upskill 3,000 employees with job-relevant training.
- Achieve 10 billion Baht in total revenue from related businesses.

Strategy [3-3]

To expand its business, PEA is leveraging its resources and expertise in various fields to support its core electricity service. This includes offering a range of services such as construction, electrical system installation, repair and maintenance, specialized consulting, equipment sales and rentals, and energy management. In addition, PEA is developing new asset management businesses. To meet customer needs, PEA systematically reviews its work processes and feasibility studies to improve and change both its core and related business operations.

- Business Architecture Review: Continuously review the Business Architecture (BA) to align with changing internal and external factors. This provides a framework and data for developing and improving work systems, processes, organizational structure, and roles and responsibilities.
- Stakeholder Analysis: Study and analyze the needs and expectations of stakeholders. A Gap Analysis is performed to identify areas for improvement and to develop operations that meet these needs.

Implementation [3-3]

- Sales and Marketing: Establish dedicated Sales & Marketing and Funnel Management teams. Create manuals and tools to support these teams and provide training courses to develop the skills of sales and marketing personnel.
- Product Development and Procurement: Create a Product Design and Procurement team to find competitive solutions. This team will also develop a Business Model Canvas for B2B ventures, such as electrical system construction/installation and repair/maintenance businesses.

- Digital Tools: Develop digital tools and systems for managing customers from lead generation, sales, on-site surveys, installation, billing, and services.
- Workflow Management: Create a workflow for the B2B construction business for electricity users and for the B2C rooftop solar installation business.
- ThaiSkill: Define the structure and guidelines for the ThaiSkill Business Unit (BU) Head and select pilot training courses for employees.
- Renewable Energy Certificates (REC): Launch a new service for obtaining Renewable Energy Certificates (REC).

- Future Business Structure: Implement a plan to prepare for future changes in the electricity business structure, aiming to support Third-Party Access (TPA) to provide RE100 services. This includes developing guidelines for establishing UGT rates for UGT 1 and UGT 2, along with a business model for registering renewable energy producers under the PEA seller account (Registrant) for the Renewable Energy Certificate (REC) trading business.

- PEA Solar Services: Develop the service process for the PEA Solar business to make operations more convenient and agile. Prepare and enhance employee skills for installing PEA Solar systems, ensuring they have up-to-date knowledge of changing technology to support the energy transition.
- Solar Installation Services: Improve the system for providing solar power installation services across all 74 provinces nationwide by developing a PEA Solar Management System for the organization's customer service employees.

Performance [3-3]

- The plan to enhance B2B and B2C business operations achieved 100% completion.
- The solar power installation service plan also reached 100% completion, with 1,320 PEA Solar systems installed.
- Total revenue from B2B businesses was 6,708.20 million Baht, which is 34.16% higher than the 5 billion Baht target.
- Total revenue from B2C businesses was 1,090.48 million Baht, an impressive 118.10% higher than the 500 million Baht target.
- The plan to establish the ThaiSkill Business Unit was successfully executed, and training has been provided to over 29,700 employees and contractors cumulatively.
- Total revenue from related businesses reached 10,923 million Baht, exceeding the 10 billion Baht target by 9.23%.

Upcoming improvement action [3-3]

- Policy Adaptation: Continuously monitor changes in government policies to review and improve work systems and processes. This ensures efficient planning for anticipated future changes.
- Organizational and Personnel Restructuring: Plan a transition to adjust the organizational structure and personnel management to prepare for change. This includes providing up-skilling, re-skilling, and new-skilling opportunities for affected employees.
- Service Enhancement: Elevate service quality to support the development of the electricity distribution system and promote clean energy use. This involves updating regulations and criteria to enable sustainable business expansion.

❖ **Customer Relationship** [3-3]

PEA is committed to elevating the quality of its electricity services with a customer-centric approach. To meet the needs and expectations of all customer groups and achieve satisfaction, the organization has continuously developed its customer relationship management. By leveraging digital technology, PEA has created platforms to support its services, foster customer relationships, and enable effective communication. This is combined with in-depth data analysis to improve the efficiency of existing systems and develop new business opportunities. These efforts allow the organization to adapt to changing circumstances, meet customer expectations, and simultaneously drive sustainable development for the organization, the economy, society, and people's quality of life.

Objective [3-3]

- Customer Satisfaction with Digital Technology (Residential Customers): 4.5000
- Monthly Active Users (MAU) of the PEA Smart Plus Platform: At least 1.1 million users
- Major Customer Satisfaction Level: 4.5000
- Government Sector Customer Satisfaction Level: 4.5000
- Engagement Score for At-Risk Key Customers: 3.6060
- Net Promoter Score (NPS) for Customers Using PEA's Digital Channels: 45.0
- Registered Users of PEA Smart Plus: At least 6.185 million users
- Registered Users of e-Bill Service: At least 250,000 users

Strategy [3-3]

To define its customer relationship strategy, PEA has conducted a PESTEL analysis of external factors and a study of internal factors from the PEA Strategic Plan 2024-2027 and the Customer and Market Master Plan 2021-2025 (3rd Revision, 2024). This information was then used in SWOT and TOWS Analysis. PEA's goal is to build customer satisfaction and trust in its services to ensure long-term stability. This is pursued through the following strategies:

- **Proactive Strategy: Creating Sales Opportunities and Business Profit**

This strategy aims to attract target customers, helping them recognize and remember PEA's products and services. The goal is to build interest and trust to effectively close sales. The focus is on encouraging customers to purchase products and services that are suitable, valuable, and cost-effective.

- **Corrective Strategy: Creating and Managing a Positive Experience**

This strategy focuses on building brand loyalty by analyzing customer experiences, needs, and expectations. These insights are then used as input to create even better experiences. This involves developing every stage, from raising awareness to fostering brand loyalty.

- **Preventive Strategy: Enhancing Engagement and Customer Retention**

This strategy is designed to enhance customer engagement and retain the customer base. The focus is on providing excellent service, building good relationships through consistent communication, and continuously offering value that directly meets customer needs. It also emphasizes responding quickly to customer problems and feedback to build long-term loyalty.

- **Reactive Strategy: Customer Data Management**

The goal is to create an accurate and up-to-date customer database that includes in-depth analysis. This information will be used to support the development of strategies, operational plans, marketing activities, and efforts to create a positive customer experience. Ultimately, it will help in making effective business decisions.

Implementation [3-3]

PEA has developed various plans and projects to achieve its objective of building strong customer relationships. These initiatives are driven by the Customer Service and Marketing Master Plan 2021-2025 (2nd Revision, 2023). A summary of each plan and project, both in progress and completed, is provided below.

Proactive Strategy: Creating Sales Opportunities and Business Profit

- **Project to Develop Guidelines for Comprehensive Customer Consultation on Electrical Systems and Clean Energy**

This initiative provides guidelines and expertise to sales staff and customer service representatives, enabling them to offer consultations and recommend appropriate PEA products and services to individual customers. This effort is supported by engineering and service experts from various PEA units.

Corrective Strategy: Creating and Managing a Positive Experience

- **Project to Manage the Brand Image of Products and Services**

The goal is to create a distinct brand image for PEA that stands apart from other state enterprises, highlighting modernity, convenience, speed, and value. This strategy aligns with sales opportunities, creating a positive experience, and fostering long-term customer engagement.

Preventive Strategy: Enhancing Engagement and Customer Retention

- **WATT – D Point Rewards System Management Project**

This project is designed to create an effective tool for delivering exclusive privileges to target customers. It aims to influence customer behavior, encourage the use of PEA's digital channels, enhance customer engagement, and create opportunities for offering related business services.

- **Project to Build Relationships to Retain Key Accounts and Use a Digital CRM System to Support Customer Service**

A clear process is defined for building relationships with key customers through PEA staff. This includes service coordination, listening to customer feedback, and providing customized benefits. An information system will support staff operations, ensuring service that exceeds expectations and meets the needs of key customers while also increasing PEA's business opportunities.

- **Project to Develop Employee Potential in Customer Relationship Building and Service**

This initiative aims to develop the necessary skills for key account managers, who are crucial to building customer relationships. It will enable employees to properly care for key accounts and address their problems appropriately. It also includes creating a database for these employees and a dashboard for the overall performance of the customer care plan, allowing for efficient evaluation and operational planning.

- **Project to Build Relationships and Retain High-Value Customers**

PEA organizes events for high-value customers to create a sense of exclusivity, impression, participation, and engagement. This is achieved by providing useful knowledge and fostering positive shared experiences.

Reactive Strategy: Customer Data Management

- **Customer Scoring Project**

This project integrates databases, analyzes data, sets criteria, and creates a customer prioritization dataset. This will serve as a central data source for PEA units to use in defining strategies for future customer-related plans.

Performance [3-3]

- Customer Satisfaction with Digital Systems (Residential): 4.6436, which is 3.19% above the target.
- Monthly Active Users (MAU) of PEA Smart Plus: 1.465 million users, 33.18% above the target.
- Major Customer Satisfaction: 4.6118, which is 2.48% above the target.
- Government Sector Customer Satisfaction: 4.5780, which is 1.73% above the target.
- At-Risk Key Customer Engagement Score: 4.5385, a significant 25.86% above the target.
- Net Promoter Score (NPS) for Digital Channel Users: 67.41, a notable 49.80% above the target.
- Registered PEA Smart Plus Users: 6.704 million users, 8.39% above the target.
- e-Bill Service Subscribers: 294,223 users, 17.69% above the target.

Upcoming improvement action [3-3]

PEA plans to build on its success by focusing on strategic partnerships and technological advancements.

- Partnerships and Marketing: Collaborate with partners, especially brands that PEA's customers frequently encounter in their daily lives, to increase customer recognition and engagement with PEA.
- CRM Implementation: Acquire a Customer Relationship Management (CRM) system to enhance PEA's operations across all dimensions. By developing a platform that provides a 360-degree customer view, PEA can better understand and meet customer needs and expectations. This system is crucial for the sustainable management of customer relationships.
- Personalized Service: Proactively develop and deliver personalized offerings to major customers on a one-on-one basis through PEA's digital channels. This will also expand service capabilities and increase sales opportunities for related digital businesses.

09. Stakeholder Collaborative for Community Wellbeing

❖ Community Health and Safety [3-3]

PEA recognizes that the safety of electricity users is of the utmost importance. We are committed to fulfilling our mission by prioritizing the safety, security, and stability of the electrical system. This is to prevent dangers that may arise from unsafe electricity use for our customers, communities, and the environment. We achieve this by developing an electrical safety management system that strictly adheres to international legal standards and relevant regulations. Additionally, we place great importance on raising awareness and understanding of safe electricity use among consumers. Our focus is on preventing and assessing risks and impacts to ensure that our risk prevention and mitigation systems are effectively implemented to care for the health and safety of all electricity users

Objective [3-3]

- The administrative restructuring of all our provincial branches was successfully implemented, achieving 100% completion.
- The program to develop and enhance community electrical safety achieved 100% completion

Strategy [3-3]

- Proactively monitoring electrical systems in all service areas through a planned "Safety Patrol" schedule.
- Applying the ISO 45001 Occupational Health and Safety Management System to continuously monitor, inspect, and improve operational safety for the public.
- Modifying and correcting power lines located near buildings and structures to ensure they meet PEA’s standards.
- Utilizing the PEA Safety Management System (PEA-SMS) in accordance with the authority's master plan for safety, occupational health, and the working environment.

PEA has established a clear policy on the health and safety of electricity users within its comprehensive Safety, Occupational Health, and Working Environment Policy. Driven by the "PEA Safety for All" concept, we are elevating the PEA Safety Management System (PEA-SMS) to become a universal standard across our entire organization. This includes enhancing the safety of the public who use our electricity. Our aim is to consistently and seriously improve safety performance, striving to become an organization with a world-class safety management system. To achieve this, every executive, employee, and contractor at PEA must be aware of and actively participate in promoting and supporting these efforts.

Implementation [3-3]

To effectively manage the safety of electricity users, PEA has implemented the following operational guidelines:

- Risk Assessment: We inspect and assess 100% of risk-prone areas that may impact electricity users.
- Standard and Quality Assurance: We inspect and evaluate the design, quality, and safety standards for the installation of all electrical transmission and distribution equipment. This is done for 100% of our products and services, with yearly planning and quarterly reporting on corrective actions from each regional office.[416-1]
- Regular Audits: We conduct regular spot checks in each service area. If an index does not meet our guidelines or standards, we promptly implement improvements and corrective action plans. Progress is then reported to the safety department.
- Adherence to PEA's Safety Policy: The Occupational Health and Safety Division monitors and improves our distribution system based on findings from surveys and public complaints. This is done through the PEA Safety Management System (PEA-SMS), specifically Standard 7 (Public Safety), and the master plan for safety, occupational health, and the working environment.
- Data-Driven Improvements: We survey, improve, and record data on public and user safety, including information on accidents caused by PEA’s electrical system (e.g., broken poles, fallen lines, cables on buildings, electrical explosions, and short circuits). This data is used to continuously improve our electrical system and operations.
- Public Reporting Channels: We encourage electricity users to report unsafe conditions in our distribution system. Channels for reporting include:
    - 1129 Contact Center
    - LINE Application
    - PEA Website
    - Local PEA offices or through safety promotion events
- Knowledge Sharing: We educate electricity users through various projects, such as the "Safe Community Electricity Use" initiative in each region. We provide guidance on the safety of PEA's electrical system and the use of electrical equipment, and we share information through free TV programs.

- Compensation and Remediation: We have guidelines for evaluating and compensating those harmed by accidents involving our electrical system. We also use these incidents as a basis for improving system safety and enhancing the health and safety of our customers and the community in our service areas.

Performance [3-3]

- The full-scale administrative restructuring of our provincial branches was successfully implemented, achieving 100% completion in line with our target.
- The program to enhance and upgrade community electrical safety was executed flawlessly, also reaching 100% completion as planned.

Upcoming improvement action [3-3]

- Increasing the frequency of reporting on safety incidents. High-level executives in each region will now report directly to the PEA Governor during monthly management meetings. This helps identify flaws in the problem-solving process and allows for continuous improvement.
- Increasing the frequency of risk assessments. We are accelerating efforts to modify and correct power lines located near buildings and structures to ensure they meet PEA's standards and are completed according to the established plan.

❖ **Stakeholder Engagement** [3-3]

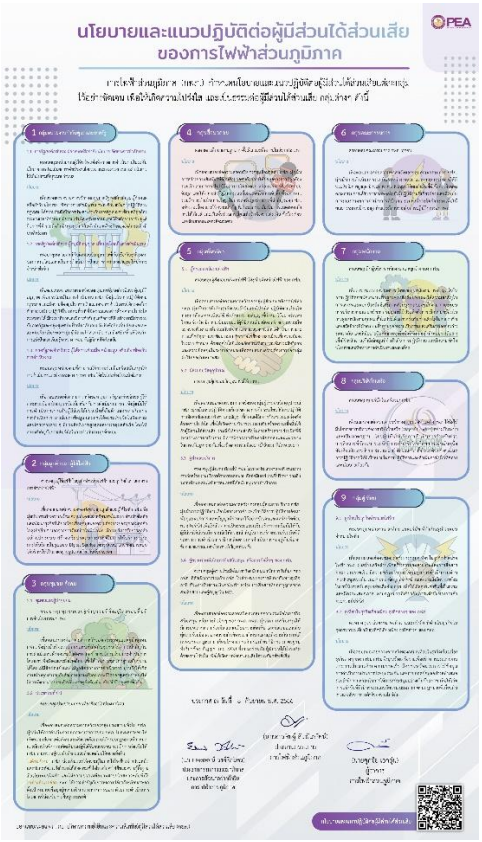
PEA operates with a strong commitment to caring for all stakeholder groups, both internal and external. We are dedicated to the effective management of our stakeholders by continuously reviewing, improving, and developing our operations. This approach is designed to build business confidence and encourage support from all sectors. Our objective is to elevate the relationship between PEA and its stakeholders to achieve the organization's strategic goals. This strategy covers our core stakeholders across the business structure to promote collaboration in creating new market opportunities, generating positive impacts, and mitigating negative impacts at every stage of our operations. By fostering this trust and building strong relationships, we establish a fundamental foundation for PEA to grow while delivering sustainable value to the community and society.

Objective [3-3]

- Percentage of engagement of all stakeholder groups is more than 80.00%.

Strategy [3-3]

Stakeholder Management Policy [2-23]



Implementation [3-3]

- PEA has established a clear governance structure for managing stakeholder engagement:
  - The PEA Board of Directors and the Governance and Sustainable Development Committee are responsible for providing policy and strategic oversight. They also monitor quarterly performance to ensure adherence to principles of good governance.
  - The Sustainable Management and Corporate Communications Department (Strategic Division) is tasked with collecting and analyzing stakeholder feedback, including their needs, expectations, and concerns. This information is then synthesized into organizational and departmental issues and linked to our corporate strategic operations. The department also sets guidelines, and monitors and evaluates stakeholder management policies and strategies on a quarterly basis.
  - All PEA departments are responsible for managing issues at the departmental level and cascading stakeholder management policies and strategies to their respective teams. This is done to build relationships with stakeholders and to track the progress of these relationships.
- PEA conducts an annual review of its stakeholder policies and practices, as well as its sustainability and stakeholder management framework. This ensures they align with the needs, expectations, and concerns of all stakeholder groups. Our goal is to maintain an appropriate mechanism and process for engaging with our stakeholders and to systematically define the objectives and scope of these relationships. This approach allows us to manage our relationships with stakeholders to achieve our strategic goals.

Performance [3-3]

Average Engagement Percentage Of All Stakeholder Groups	2021	2022	2023	2024
Target	≥ 75.00	≥ 76.00	≥ 76.50	≥ 80.00
Actual Performance	76.90	80.20	86.10	84.12

Upcoming improvement action [3-3]

- The results from monitoring and evaluating stakeholder management are continuously used to develop and improve our operations. Furthermore, we report on our performance to stakeholders through both the annual Sustainability Report and the Stakeholder Engagement Report.

10. Business Conduct & Governance

❖ Corporate Governance and Risk Management [3-3]

Due to the volatility and changes from significant factors such as operational costs, energy prices, technological shifts, and natural disasters, the organization's business operations are impacted. This affects both its operational efficiency and competitiveness, as well as its ability to drive the business to deliver quality products and services to society and the environment.

Therefore, PEA places a high priority on enterprise-wide risk management. It manages risk according to the international standard COSO ERM 2017 (Enterprise Risk Management Integrating with Strategy and Performance). PEA also promotes a shared awareness among executives and employees for proactive risk management. This involves identifying and assessing risks through an analysis of opportunities and impacts, as well as defining risk management processes for prevention and mitigation. This ensures that the organization can manage risks effectively, at an acceptable level, in a timely manner, and in a way that is appropriate for the ever-changing environment.

Objective [3-3]

- PEA can operate its business efficiently and effectively, keeping pace with changes in economic, social, and environmental factors. This allows the organization to achieve its strategic objectives and operational goals while maintaining an acceptable level of risk.
- The organization maintains a balance between risk and returns to meet the needs and expectations of stakeholders, ensuring operations comply with relevant laws and regulations and use resources efficiently.
- PEA is focused on building stability and reliability in the quality and service of its electrical system. This adds value to the organization and is aimed at meeting the needs of stakeholders.
- PEA provides continuous electricity service and business operations, even when a disruptive incident occurs, in line with its set goals.
- PEA's Business Continuity Management System (BCMS) aligns with the international standard ISO 22301:2019. The focus is on continuously planning, implementing, maintaining, and improving the BCMS.
- The Recovery Time Objective (RTO) is met as defined.

Strategy [3-3]

- PEA has defined its strategic positioning in three phases to align with its long-term vision:
  - Short-term (2024–2026): Digital and Green Grid
  - Mid-term (2027–2028): Smart Energy Solution
  - Long-term (2029 onwards): Sustainable Energy Utility for ALL

To achieve these strategic positions, goals, and business objectives in each phase, PEA conducts Intelligent Risk analysis linked to its desired future direction. This process involves a strategic positioning analysis for each phase and a risk analysis based on corporate strategic objectives. These risks are categorized into four areas: Strategic Risk, Operational Risk, Financial Risk, and Compliance Risk, in addition to opportunities identified through SWOT analysis.

- PEA manages risk in accordance with the international standard COSO ERM 2017 and the SE-AM risk management performance assessment framework from the State Enterprise Policy Committee and the Ministry of Finance.
- A proactive, enterprise-wide risk management approach is implemented by defining a risk management policy and corporate objectives. This includes identifying risk types, assessing risks through an analysis of opportunities and impacts, establishing risk management measures, and monitoring risk management reports.
- PEA developed and executed its 2024 corporate risk management plan to reduce the likelihood and impact of potential damages. Performance is measured quarterly and reported to the Risk and Internal Control Committee.

Implementation [3-3]

PEA places importance on risk management and carries it out on a continuous basis. Its enterprise risk management process aligns with the international standard COSO ERM 2017 to ensure the effective implementation of its defined strategies and operational plans. This enables the organization to achieve its mission and objectives. PEA reports on its risk management results quarterly and reviews its performance at least once a year. It gathers input from both internal and external factors that affect the organization and uses the results from the previous year's risk management plan as a factor in its annual risk considerations. Risks are also assessed annually through surveys of stakeholders and the Executive Committee.

PEA has established a governance structure for risk management. The Provincial Electricity Authority's Board of Directors is responsible for overseeing and supporting the risk management policy. The Risk and Internal Control Committee and PEA's top management are responsible for overseeing, controlling, and monitoring the implementation of the policy and risk management framework. They also coordinate with GRC subcommittees and teams across all departments and with Risk Owners to ensure adherence to the processes defined in the risk management policy and manual. The details of the risk management structure are as follows:

Board of Directors
- Monitor risk management
- Approve risk management issues

Risk Management and Internal Control Committee
- Supervise / assign policies/ frameworks / monitor and report the results of risk management / communicate with the Audit Committee and Board of Directors

Audit Committee
- Audit risk management and internal control and advise the Risk Management and Internal Control Committee

Internal Audit Bureau
- Review PEA risk management and internal control against the risk-based audit plan

PEA Governor

Policy and Strategy Committee
- Contribute to the development of the enterprise risk management plan with observations, opinions, and advices.

Governance Risk and Compliance (GRC) Committee
- Define / review / improve the GRC policy to align with the prevailing enterprise context and standards
- Define directions for objective executions and work integration, including related systems
- Plan, control, monitor, and report the execution of GRC work
- Oversee the development of GRC manuals/guidelines and ensure alignment with PEA's context and SE-AM criterion
- Execute other works related to GRC.

Deputy Governor (Corporate Strategy)

Governance Risk and Compliance (GRC) Subcommittee/Work Team

Pilot unit: PEA 1-3/ Function /Division/Department
- Administer the assessment of internal control
- Set directions for internal control assessment and directions for compliance with PEA's regulations
- Initiate the planning and report of internal control
- Conclude results of internal control and compliance with PEA's regulations

Corporate Governance and Internal Control Committee
- Set directions for driving GRC integration
- Execute GRC integration under the guidelines
- Monitor and report the results of GRC integration
- Initiate communication among personnel to forge knowledge, understanding, and recognition of GRC

Corporate Governance and Risk Management Department
- Set directions/manuals for risk management and internal control
- Coordinate with committees and subcommittees in the development and monitoring of risk management and internal control plans
- Administer the meetings of the Risk Management and Internal Control Committee
- Initiate communication on risk management and internal control for public understanding
- Assess risks and manage corporate risks.

Risk Management and Internal Control Training

PEA places a high priority on enterprise-wide risk management. To this end, it provides knowledge and skills development to enhance risk management and internal controls. The goal is to build awareness and understanding of risk management, enabling employees to manage risks in their respective departments or roles and ultimately foster organizational innovation. This is achieved through various communication channels, such as:

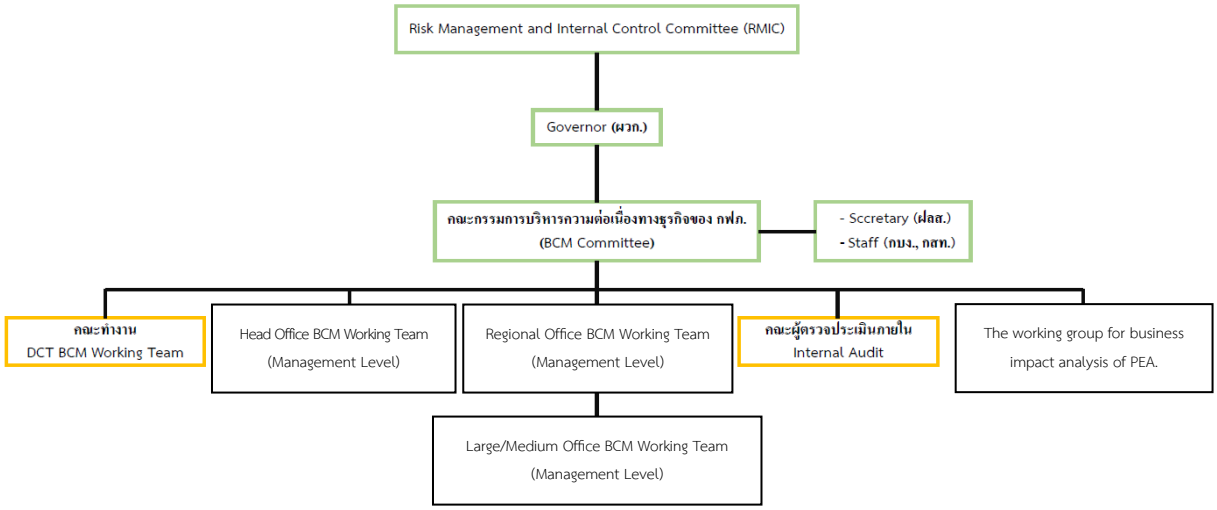
- Workshops on enterprise risk management based on the COSO-ERM 2017 standard.
- Promoting a risk management culture and awareness through an annual outstanding risk management award.
- Cascading organizational risk factors to individual departments and developing departmental risk management plans, which include pre- and post-training assessments to measure understanding and improve future training.

Business Continuity Management and Crisis Management

The Provincial Electricity Authority's business operations face several significant risks today, including the continuous rise in cybersecurity threats, natural disasters, and the increasing demand for electricity and system stability. Therefore, PEA needs to implement effective business continuity and crisis management plans in line with the international standard ISO 22301:2019. This will help mitigate the impact of threats on business operations and build the organization's resilience. The goal is to respond to and protect the interests of stakeholders, the organization's reputation and image, and its effective value-creating activities.

- Define guidelines for prevention, risk reduction, preparedness, emergency response, and recovery to normalcy.
- Focus on managing risks from threats that could disrupt business. This includes continuous review and improvement of plans and regular drills to embed these practices into the organizational culture.
- Encourage personnel at all levels to gain knowledge, understanding, and awareness of business continuity management and to participate in implementing the business continuity policy.
- Monitor, track, and evaluate the effectiveness of the PEA Business Continuity Management System (PEA BCMS).

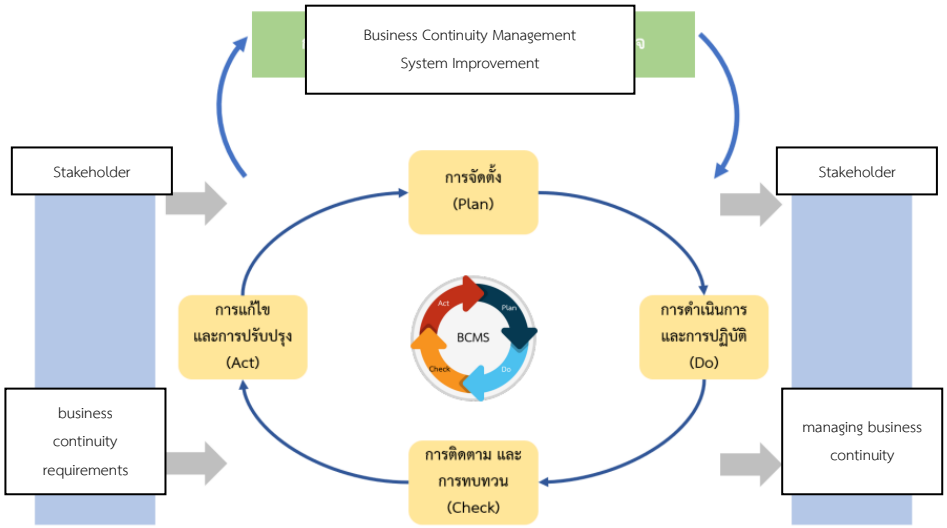
Governance Structure for Business Continuity and Crisis Management



PEA has appointed a Business Continuity Management Committee to oversee these functions. Its key duties are:

1. To align the Business Continuity Management Policy with guidelines from the Energy Regulatory Commission and the State Enterprise Policy Committee, as well as with the organization's Operational Risk Management Policy. This policy is then submitted to the Governor for approval.
2. To approve critical missions, define target recovery times, establish strategies, and approve the implementation of the Business Continuity Plan (BCP).
3. To designate personnel responsible for executing the BCP, as well as for emergency prevention and resolution.
4. To report on the progress of the BCP and emergency response to the Governor.
5. To establish a communication plan to inform employees about the Business Continuity Management Policy and BCP.
6. To set guidelines for crisis communication to both internal and external parties during a crisis that could affect business operations or the organization's reputation.
7. To appoint sub-committees and define their authority under the framework of the Business Continuity Management Committee (BCM Committee) to ensure the successful implementation of the business continuity policy and the committee's objectives.
8. To have the authority to summon relevant individuals or request additional documents from departments to achieve the committee's objectives.

PEA's Business Continuity Management System (BCMS) is based on the international standard ISO 22301:2019. This ensures an effective and efficient crisis management system that can respond to incidents and restore critical business processes within an appropriate timeframe. The system aims to ensure the continuous delivery of electricity services to customers and effectively mitigate the impact of various threats. PEA's business continuity management process is as follows:



PEA's BCMS is divided into the following response phases:

Pre-Crisis	During-Crisis	Post-Crisis
Prevent and Prepare • Every unit assesses the likelihood of future crises (low/high/very high) based on past and current disaster/crisis data. • Develop crisis response (ERP BCP RP) and crisis communication plans. • Establish a risk monitoring and alert mechanism. • Assign to respective personnel roles for crisis management. • Implement crisis response plan drills.	**Manage During Crisis** • Manage and monitor crisis by the guidelines. • Request support from external agencies. • Communicate crisis measures to the workforce and the public. • Adapt methods based on the actual situation.	**Business Continuity, Restore, and Review** • Continue to operate the business as planned. • Restore the business to normalcy. • Review and evaluate the efficiency of relevant plans. • Improve crisis management plans and processes. • Communicate plans to relevant functions to comply.

Notes: ERP: Emergency Response Plan, BCP: Business Continuity Plan, RP: Recovery Plan

Management and Operational Results of Economic, Social, and Environmental Risk Factors [205-1]

Risk Factors	Significance to PEA	Risk Mitigation Measures	Outcome
Economic Risks			
Government Policy and Business Cost Volatility	➢ The increase in the FT rate during 2022-2023 directly impacted PEA's performance. The main cause was a significant rise in fuel costs from importing Spot LNG to replace a substantial decline in natural gas from the Gulf of Thailand and Myanmar. This, combined with global natural gas price volatility due to the Russia-Ukraine war, led to a continuous increase in electricity generation costs. ➢ Additionally, the Energy Regulatory Commission (ERC) resolved to delay a new electricity tariff structure, while the government introduced electricity bill subsidies for residential users. This forced PEA to bear an additional 15,910 million Baht in electricity purchase costs from Very Small Power Producers (VSPP) that differed from the baseline. ➢ Given this situation, PEA must consider comprehensive risk management measures. The focus is on reducing costs and increasing revenue to maintain long-term financial stability and organizational sustainability.	1. Triple Transformation Plan: This plan integrates business benefits, technology utilization, and human resource capability enhancement. 2. Digital Procurement Plan: A plan to use digital procurement to create added value for the core business. 3. Digital Asset Plan: A plan to use O&M and asset management to create digital assets that add value to the core business. 4. Policy Impact Analysis Plan: This plan monitors and analyzes the impact of government policies on electricity subsidies, which affects PEA's gross profit. 5. Regulator Relationship Plan: A plan to build relationships with regulators and create key business partnerships. 6. Key Account Management Plan: A plan to build relationships and retain key customer accounts, using a digital CRM system to support customer service.	Added value to the core regulated business by improving management and operational efficiency.

Risk Factors	Significance to PEA	Risk Mitigation Measures	Outcome
		7. High-Risk Customer Analysis Plan: A plan to analyze and evaluate high-risk customer groups. 8. Industrial Estate Outage Plan: A plan to monitor and resolve power outage issues in industrial estates. 9. Network Improvement Plan: A plan to improve the transmission and distribution network. 10. Future Business Structure Plan: A plan to prepare for changes in the future electricity business structure. 11. PBR Transition Plan: A plan to transition from a Cost-plus to a Performance-Based Remuneration (PBR) mechanism. 12. Hackathon and Shark-Tank Plan: A plan to establish Hackathon and Shark-Tank processes to boost creativity and business innovation at PEA. 13. Organizational Restructuring Plan: A plan to restructure the organization to support new business units.	

Risk Factors	Significance to PEA	Risk Mitigation Measures	Outcome
New Business Opportunities During the Clean Energy Transition	➢ While Thailand has significant potential for renewable energy production, it lacks sufficient RE100 services. This limits its appeal to multinational corporations seeking to relocate their manufacturing bases. At the same time, rising electricity costs are driving up demand for clean energy solutions, but consumers still lack affordable and easily accessible options. ➢ Technological changes are creating a need for a more highly skilled workforce, but the Thai education system is not yet sufficiently prepared to meet this demand. In response, PEA is developing three core businesses: B2B RE Solution, which provides comprehensive RE100 services, including long-duration batteries; PEA ECO (a B2C business), which offers solar energy solutions, EV batteries, and grid-connected systems; and ThaiSkill, a digital training platform for workers developed in partnership with global allies. PEA must actively manage risks and expand its clean energy businesses to increase revenue and achieve its strategic objectives.	1. Plan to enhance B2B and B2C business operations. 2. Plan to establish the ThaiSkill BU. 3. Review of the Business Portfolio Implementation plan. 4. Establish a subsidiary for energy technology business and investment, including an analysis of supporting regulations. 5. Plan for talent acquisition and compensation models for new business units. 6. Define Hackathon and Shark-Tank processes for innovation. 7. Restructure the organization to support new business units.	- The proportion of revenue from new and related businesses (B2B/B2C) exceeded targets. - Employee upskilling through appropriate courses (ThaiSkill BU Head) met targets.

Risk Factors	Significance to PEA	Risk Mitigation Measures	Outcome
Investment in Growth and Value-Adding Technology	➢ Green Technology is a technology developed to promote resource efficiency and environmental friendliness. Examples include recycling materials and producing clean energy from natural sources like solar, wind, and water. These energy sources help reduce the combustion of fossil fuels and the resulting environmental pollution. ➢ Therefore, PEA must prepare by establishing a Green Tech Fund to support investments in clean technology and energy start-ups. This fund will also allow investors to participate as a General Partner (GP), who sets the fund's direction, or a Limited Partner (LP), who focuses on financial returns. The goal is to accelerate the clean energy transition and create new business opportunities.	1. Plan to establish the Green Tech Fund to generate returns and apply new technologies. 2. Plan to advance the organization toward Carbon Neutrality. 3. Establish a subsidiary for energy technology business and investment, including an analysis of supporting regulations. 4. Plan for talent acquisition and compensation models for new business units. 5. Restructure the organization to support new business units.	The list of investment use cases and start-ups met targets.
Regulations and Policies Facilitating Competition	➢ To navigate regulatory and policy risks that could hinder its performance and new ventures during the clean energy transition, PEA must manage several key initiatives. These include establishing a Green Tech Fund to generate returns and integrate new technologies, transitioning from a Cost-plus to a Performance-Based Remuneration (PBR)	1. Study the feasibility of listing PEA ENCOM International Co., Ltd. on the Stock Exchange of Thailand. 2. Plan to enhance legal preparedness. 3. Plan for legal support for establishing subsidiaries according to PEA's strategic plan and business processes. 4. Transition from Cost-plus to PBR.	The success of the plan to establish a subsidiary and analyze supporting regulations met targets.

Risk Factors	Significance to PEA	Risk Mitigation Measures	Outcome
	mechanism, creating a subsidiary for energy business and investment (Launch Pad), and managing the Green Tech Fund. These are crucial strategies that will help PEA overcome regulatory limitations and achieve their business goals.	5. Establish a subsidiary for energy technology business and investment, including an analysis of supporting regulations.	
Social Risks			
Culture and Human Resource Management for Business Promotion	➢ PEA faces a challenge in attracting a new generation of employees due to the highly competitive labor market and more appealing options in the private sector. These include higher salaries, flexible work models, and better work environments, as well as compensation structures linked to company value (equity-linked), which create a disincentive for growth in new businesses. ➢ The transformation of the digital energy industry requires personnel with skills in technologies such as Cloud Computing, Big Data, AI, and Cybersecurity. Therefore, PEA must manage its human resource risks by developing a learning system to enhance digital skills, creating incentives through an appropriate compensation structure, and defining a talent acquisition strategy to support new businesses and future growth.	1. Plan to develop a learning system and courses to effectively enhance digital skills that align with PEA's use cases. 2. Implement an Employee Experience plan. 3. Plan for talent acquisition and compensation models for new business units.	- The target group developed their Future Competency and participated in use case development. - The allocation of personnel in each BU was completed as planned.

Risk Factors	Significance to PEA	Risk Mitigation Measures	Outcome
Environmental Risks			
Operational Structure Supporting Investment and Competition in the Energy Business	➢ To prepare for the clean energy transition and support the Green Tech Fund, PEA must restructure its organization to accommodate new business units (B2B, B2C, ThaiSkill, and the Green Tech Fund). PEA needs to manage the risks of this transition and establish a creative and innovative process, such as Hackathons and Shark-Tank, to support the Triple Transformation Capability Center (T3CC). This will enable knowledge exchange and the development of necessary technologies for a leap forward in new business operations.	1. Develop a plan for use cases and PEA system structure, along with a digital innovation process in collaboration with start-ups (Strategy Division: T3CC) in the 2024 Corporate Action Plan. 2. Define Hackathon and Shark-Tank processes to boost innovation. 3. Restructure the organization to support new business units.	- The number of start-up or technology company networks that co-developed use cases met targets. - The success of the organizational restructuring plan to support new business units met targets.

Performance [3-3]

- PEA Headquarters successfully maintained its ISO 22301:2019 standard certification.
- PEA developed its Business Continuity Management System to align with international standards by applying the requirements of ISO 22301:2019 to its operations. This information was shared with 48 PEA regional and joint offices in 2024.
- Various Business Continuity Plan (BCP) drills were conducted for critical operations to prepare for potential threats. The number of drills, from most to least frequent, is as follows:

Threats Drilled For	Number of Drills (times)			Drill Duration (minutes)
	Tabletop	Full-Scale	Total	
Submarine cable damage	14	1	15	75
Tsunami	0	0	0	0
Earthquake	1	3	4	71
Network failure	4	2	6	48
Computer virus	21	5	26	53
Chemical leak	3	3	6	86
Contractor unavailability	13	14	27	194
Vehicle hitting power pole	29	27	56	161
Flood	30	15	45	130
Riot / Blockade	14	14	28	92
Sabotage	27	20	47	76
Epidemic	2	2	4	65
Typhoon / Storm	48	30	78	199
Fire	24	25	49	74
Other	27	3	30	130
Total	**257**	**164**	**421**	**1,454**

- A Full BCP Exercise was conducted to test the Emergency Response Plan (ERP), Business Continuity Plan (BCP), and Recovery Plan (RP). The drill simulated an act of sabotage on the ground floor of Building 51 near a water pump, which caused partial damage to a fiber optic cable and the building's structure. This resulted in partial damage to the communications system and a risk of total failure. The drill successfully moved core systems to the Data Recovery Center (DRC), and services were restored within the defined RTO timeframe.
- Training on the Business Continuity Plan (BCP) for 2024 was provided to the secretaries of the BCM working committee from PEA headquarters, regional offices, and large/medium-sized PEA offices. This ensures they can effectively apply the plan and respond to the needs and expectations of stakeholders in a timely manner.

Upcoming improvement action [3-3]

PEA's future plans are focused on a continuous cycle of review, enhancement, and expansion of its risk and continuity management systems.

- Risk Management Review: The organization will review its 2024 risk plan and identify residual risks to create its 2025 risk plan. This will include developing new measures to address these risks.
- Strategic Alignment: Risk management plans will be analyzed and presented to the committee overseeing PEA's strategy and business operations. Their feedback will be used to improve the overall risk management and internal control framework.
- BCMS Scope Expansion: The scope of the PEA Business Continuity Management System (BCMS) will be expanded to include critical systems like the Automated Meter Reading (AMR) and Advanced Metering Infrastructure (AMI) systems. This will make the BCMS more comprehensive.
- Standardization and Training: The PEA BCMS standard and manual will be tested and updated to ensure all units can use them as an effective operational guideline.
- Auditor Development: PEA will train and develop internal auditors to support the expansion of its PEA BCMS certification scope.
- Certification Audits: Internal auditors will conduct audits to certify units under the PEA BCMS standard. External auditors will also perform audits to confirm compliance with the ISO 22301 standard.

❖ **Supply Chain Management** [3-3]

PEA is committed to developing an efficient process for sourcing products and services to prevent and reduce environmental, social, and governance (ESG) impacts. The organization is focusing on promoting Green Financing to support long-term environmental and social projects. To this end, PEA is expanding its funding options through Sustainability Bonds or ESG Bonds. This form of fundraising broadens PEA's investor base to new groups, particularly those who use sustainability factors in their investment decisions. It also helps prepare the organization to comply with future, stricter national and international environmental and social regulations and to respond to pressure from stakeholders within its business ecosystem.

Objective [3-3]

- Successfully raise funds by issuing Sustainability Bonds.
- Create Green Finance innovations to align with and support the organization’s PEA Carbon Neutrality Roadmap.
- Increase access to basic utilities in remote areas to reduce inequality and enhance the quality of life for people in disadvantaged areas.
- Prepare the organization to comply with future, stricter national and international environmental regulations.

Strategy [3-3]

- Promote ESG Bond Fundraising: Actively support fundraising through ESG Bonds, which include Green Bonds, Social Bonds, or Sustainability Bonds. This aligns with government policy and demonstrates a commitment to social and environmental responsibility, which supports sustainable development goals and national strategies.
- Integrate Data: Use the Grid Model Data Management (GMDM) system to integrate data for network and asset management. This will improve the efficiency of the delivery system and help with asset classification and data recording.
- Develop Distribution Systems: Advance the distribution system according to the Grid Modernization Roadmap to meet customer needs and create opportunities for integrating other organizational products.

Implementation [3-3]

- Sustainable Finance Framework: Established a Sustainable Finance Framework with the Asian Development Bank (ADB) as a consultant. This framework is certified to be in compliance with the ASEAN Taxonomy for environmentally friendly economic activities.
- ESG Bond Working Committee: Created a working committee to consider ESG Bond fundraising. This ensures that PEA's issuance of ESG Bonds is efficient, achieves its goals, and aligns with national sustainable development strategies.
- Project Selection: Chose projects that provide clear and sustainable social and environmental benefits for investment, including:
    - The undersea cable construction project to Koh Tao, Surat Thani, to enhance energy security and reduce reliance on diesel generators.
    - The Micro Grid development project on Koh Pha Luai, Surat Thani, to promote the use of clean energy in a remote area.
- Broaden Investor Base: Expanded fundraising options to attract new investors, particularly those who use sustainability factors in their investment decisions (ESG Investors).
- Oversight: The Public Debt Management Office (PDMO) under the Ministry of Finance managed the loan acquisition, and Bangkok Bank Plc. acted as the lead underwriter.
- Verification and Certification: The issuance of the Sustainability Bond was certified by the Asian Development Bank (ADB). DNV (Thailand) Co., Ltd. provided an independent external review (Second Party Opinion), assessing that the bond issuance complied with social and environmental finance standards in terms of fundraising objectives, project selection, fund management, and reporting.

Performance [3-3]

- Successfully issued the first PEA Sustainability Bond, a 5-year bond worth 1 billion Baht with a fixed interest rate of 2.67% per year.
- Received an overwhelmingly positive response from investors, with subscriptions over 6 times the amount offered. This demonstrates institutional investor confidence in PEA's environmentally friendly projects.
- Became the first energy state enterprise to create a Sustainable Finance Framework that aligns with the ASEAN Taxonomy. This supports government policies on driving sustainable development and national climate goals.

Upcoming improvement action [3-3]

- Sustainable Growth: Continue to move toward a role in sustainable energy development. The goal is to consistently raise funds and invest in projects that align with a sustainable growth concept.
- Green Finance Innovation: Continuously develop and create green financial innovations, such as issuing more ESG Bonds, to fund projects that prioritize the environment, society, and good governance, all for the benefit of the nation and the world.
- Investor Relations: Maintain strong relationships with investors by engaging with interested parties and promoting future bond issuance plans through various channels to continuously attract new investors.

❖ **Data Security** [3-3]

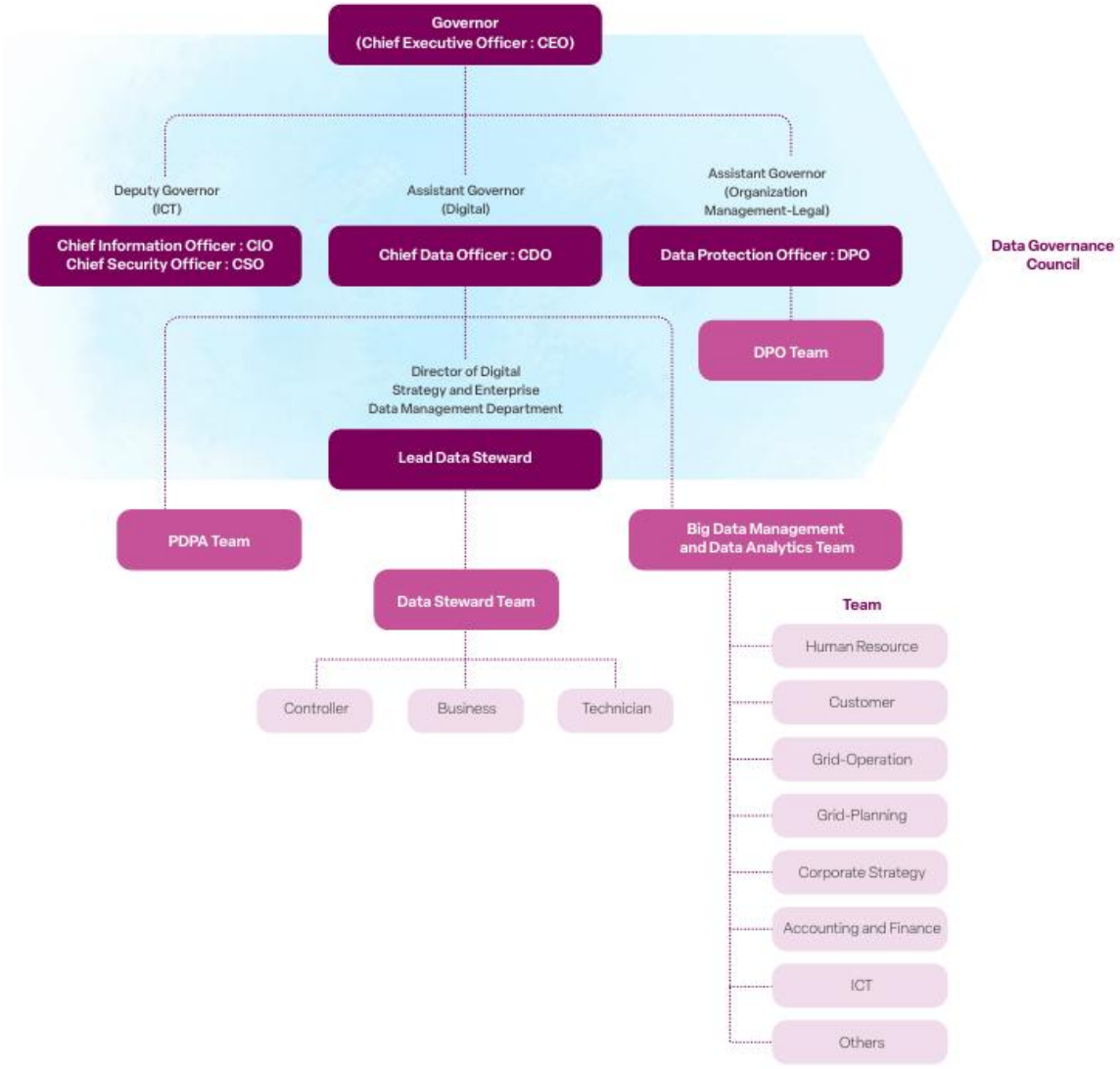
PEA places great importance on building a corporate culture of cybersecurity. It has established a policy and guidelines for information and cyber security to support the management of its information technology, ensuring compliance with laws, regulations, and business requirements. The objective is to uphold the principles of Confidentiality, Integrity, and Availability. The organization has also been certified with the ISO/IEC 20000 standard for IT service management and the ISO/IEC 27001 standard for information security management.

Objective [3-3]

- Efficient Threat Response: Effectively respond to threats and enhance the capability to prevent, manage, and mitigate risks from cyber threats.
- Increased Digital Security: Improve the security of digital systems by strengthening the protection of all of PEA's information and operational technologies.
- Compliance with International Standards: Develop and maintain a comprehensive cyber security system that aligns with the ISO/IEC 27001:2022 standard.
- Elevated Staff Awareness: Enhance knowledge, understanding, and appropriate behavior among all personnel to protect information systems from cyber threats.
- Secure Development Platform: Establish a centralized platform for the secure development and delivery of software (DevSecOps).

Strategy [3-3]

- Since the Personal Data Protection Act (PDPA) B.E. 2562 (2019) was announced in the Royal Gazette on May 27, 2019, PEA has implemented measures for personal data protection within the organization. It has established related policies, regulations, and practices to ensure PEA's operations comply with the PDPA and relevant guidelines. The organization has also raised awareness and understanding of personal data protection among its employees and contractors. This includes creating a data governance structure, appointing responsible individuals, departments, and working groups for data protection, and appointing a Data Protection Officer (DPO) to provide consultation on personal data protection operations.
- Determine the Data Governance Structure:



Personal Data Protection Policy (Privacy Policy) 2023 [2-23]

Personal Data Protection Policy (Privacy Policy) 2023

To ensure that all personal data subjects—including employees, contractors, service users, and partners of the Provincial Electricity Authority (PEA), as well as those who are permitted to work or provide services for PEA—are aware of and understand PEA's policy regarding the collection, use, disclosure, and management of personal data, which is in compliance with the Personal Data Protection Act 2019 and related laws. This is to ensure effective personal data protection and build confidence for all data subjects.

By virtue of the powers under Section 29 and Section 31 of the Provincial Electricity Authority Act 1960, the Provincial Electricity Authority hereby sets forth the following policy and guidelines on personal data protection.

Scope

As an organization responsible for the generation, acquisition, transmission, and distribution of electricity, as well as managing electricity-related and other beneficial businesses, PEA is a critical part of the nation's and the public's infrastructure. Given the large amount of personal data under its responsibility, PEA has established a policy that outlines the conditions and methods for collecting, using, or disclosing personal data from data subjects in accordance with the Personal Data Protection Act 2019 and all related laws.

The policy is based on the following five core principles:

1. Personal Data Collection, Use, or Disclosure
2. Data Security
3. Rights of the Data Subject
4. Reservation of Rights
5. Personal Data Protection Policy Updates

Implementation [3-3]

- Established and expanded the scope of the PEA Security Operations Center (SOC) to act as a central hub for threat monitoring and response, integrated with legal and standard compliance.
  - Established the PEA SOC, which operates 24/7.
  - Expanded the monitoring scope to cover both information technology and operational technology.

- Mandated that all internally developed applications undergo a Vulnerability Assessment (VA) and are remediated before deployment. They are also re-assessed regularly to maintain security levels.
    - Conducted Penetration Testing to find system vulnerabilities and weaknesses.
    - Performed Vulnerability Assessments (VA) for all internally developed applications, remediating all found vulnerabilities before deployment and re-assessing every 6 months.
    - Collected Digital Forensics data to analyze and respond to incidents.
- Developed systems in accordance with the Cybersecurity Act and the international standard ISO/IEC 27001:2022, including continuous auditing and certification.
    - Developed the cybersecurity system according to the ISO/IEC 27001:2022 standard.
    - The certification scope covers critical infrastructure at headquarters, all regional offices (12 PEA regions), the headquarters WAN system, the software for the PEA core business, Phase 2 (RCT. Phase 2), and has been expanded to the backup computer center (DR Site) in Rangsit.
- Continuously built awareness of information security among personnel.
    - Organized e-learning training for all executives and employees.
    - Conducted Phishing Mail tests by sending malicious emails to executives and staff to raise awareness and teach them how to identify threats.
    - Disseminated information security awareness materials in various formats to employees.
- Developed a secure software development and delivery platform (PEA DevSecOps Platform) to serve as a central hub for creating standard software, especially regarding security. This helps increase the speed, security, and efficiency of system development.

Performance [3-3]

- ISO/IEC 27001:2022 Certification: PEA successfully passed an external audit by a Certification Body for its Information Security Management System, earning certification for the ISO/IEC 27001:2022 international standard.
- Employee Training: PEA provided an Onboarding Program for new employees to build an understanding of the organization's security culture. E-learning was used for all employees across all levels.
  - Over 90% of employees participated in the "Information Security Awareness" training, meeting the target.
  - Over 90% of employees who attended the training successfully passed the post-course assessment, meeting the target.
- Continuous Awareness: PEA continuously built cybersecurity awareness across the organization through internal emails and communication channels nationwide. The materials were collected in the company's Knowledge Management system for easy access.
- Personal Data Incidents: PEA received 15 notifications regarding personal data issues from external parties. The company coordinated with its Data Protection Officer (DPO) to assess the risk and impact on data subjects. No high-risk personal data leaks or privacy violations that could have affected data subjects were found.

Customer Privacy Violations and Loss of Customer Data Case [418-1]	2022		2023		2024	
	From External	From Internal	From External	From Internal	From External	From Internal
Number of confirmed complaints regarding customer privacy violations or loss of customer data.	6	0	8	2	14	1
Number of data leaks, data theft, or data loss incidents.	0	0	0	0	0	0
Total	**6**	**0**	**8**	**2**	**14**	**1**

Upcoming improvement action [3-3]

- Elevate PEA SOC: Enhance the proactive capabilities of the PEA Security Operations Center (SOC) and expand its integration with other key technologies and systems.
- Maintain and Expand ISO/IEC 27001:2022 Certification: Retain and broaden the scope of the ISO/IEC 27001:2022 certification to include all critical systems and units within the organization.
- Invest in New Technology: Invest in new technologies and processes to strengthen the prevention, detection, and response to increasingly complex cyber threats.
- Cybersecurity Awareness Program: Implement a continuous, modern cybersecurity awareness program for employees to ensure they remain the first and strongest line of defense.
- Develop PEA DevSecOps Platform: Continuously advance the PEA DevSecOps Platform to make it a crucial tool for building secure software from the very beginning and throughout the entire system lifecycle.

11. Sustainability Performance Data

Forecasting the Number of Electricity Customer by Tariffs [EU10]

Group	Actual	Forecast (No. of Customers)						
	2024	2024	2025	2026	2027	2028	2029	2030
Residential	19,310,869	19,314,627	19,355,809	19,457,465	19,648,300	19,893,077	20,184,619	20,500,775
Percent increment	-0.28	-0.26	0.21	0.53	0.98	1.25	1.47	1.57
Small General Service	1,870,456	1,855,126	1,915,182	1,979,720	2,047,999	2,118,061	2,191,375	2,267,493
Percent increment	4.27	3.42	3.24	3.37	3.45	3.42	3.46	3.47
Medium General Service	99,777	99,210	104,416	108,734	112,955	117,100	120,799	124,620
Percent increment	7.53	6.91	5.25	4.14	3.88	3.67	3.16	3.16
Large General Service	8,233	8,316	8,595	8,827	9,047	9,269	9,495	9,722
Percent increment	3.22	4.26	3.35	2.70	2.49	2.45	2.44	2.39
Specific Business Service	16,009	16,078	17,161	17,938	18,632	19,337	20,069	20,809
Percent increment	8.06	8.53	6.74	4.53	3.87	3.78	3.79	3.69
Non-profit Organization	1,010	1,011	1,028	1,041	1,049	1,058	1,066	1,075
Percent increment	-3.53	-3.44	1.68	1.26	0.77	0.86	0.76	0.84
Agricultural Pumping	5,811	5,798	5,885	5,982	6,087	6,197	6,312	6,437
Percent increment	1.70	1.47	1.50	1.65	1.76	1.81	1.86	1.98
Temporary Service	447,359	442,050	457,350	475,486	493,350	511,869	531,071	549,570
Percent increment	3.11	1.89	3.46	3.97	3.76	3.75	3.75	3.48
Total Excluding Free-of-charge Electricity	**21,759,524**	**21,742,216**	**21,865,426**	**22,055,193**	**22,337,419**	**22,675,968**	**23,064,806**	**23,480,501**
Percent increment	**0.21**	**0.13**	**0.57**	**0.87**	**1.28**	**1.52**	**1.71**	**1.80**
Free-of-charge Electricity	303,237	297,958	304,070	311,615	322,193	333,263	344,778	356,759
Percent increment	3.72	1.91	2.05	2.48	3.39	3.44	3.46	3.47
Total	**22,062,761**	**22,040,174**	**22,169,496**	**22,366,808**	**22,659,612**	**23,009,231**	**23,409,584**	**23,837,260**
Percent increment	**0.25**	**0.15**	**0.59**	**0.89**	**1.31**	**1.54**	**1.74**	**1.83**

Notes: Large general services include stand-by electricity and interruptible electricity supply

Forecasting the Electricity Energy Consumption by Tariffs [EU10]

Group	Actual	Forecast (No. of Customers)						
	2024	2024	2025	2026	2027	2028	2029	2030
Residential	44,375	43,744	44,293	45,177	46,090	47,028	47,992	48,991
Percent increment	7.93	6.40	1.26	1.99	2.02	2.04	2.05	2.08
Small General Service	16,109	15,956	16,354	16,960	17,556	18,141	18,744	19,391
Percent increment	5.78	4.78	2.50	3.71	3.51	3.33	3.32	3.45
Medium General Service	25,040	24,565	25,126	25,904	26,772	27,706	28,720	29,814
Percent increment	6.26	4.25	2.28	3.10	3.35	3.49	3.66	3.81
Large General Service	60,544	60,860	62,727	64,832	67,032	69,261	71,473	73,792
Percent increment	2.33	2.87	3.07	3.36	3.39	3.33	3.19	3.24
Specific Business Service	4,999	4,967	5,318	5,622	5,837	6,051	6,286	6,599
Percent increment	13.62	12.89	7.07	5.72	3.83	3.67	3.88	4.97
Non-profit Organization	85	85	86	88	88	88	88	88
Percent increment	2.98	3.23	1.37	1.63	0.00	0.00	0.00	0.00
Agricultural Pumping	476	487	491	495	507	524	536	554
Percent increment	-1.81	0.53	0.65	1.10	2.39	3.03	2.49	3.38
Temporary Service	1,113	1,085	1,109	1,140	1,200	1,246	1,286	1,332
Percent increment	10.33	7.67	2.11	2.79	5.27	3.86	3.18	3.61
Total Excluding Free-of-charge Electricity	**152,741**	**151,749**	**155,504**	**160,218**	**165,082**	**170,045**	**175,125**	**180,561**
Percent increment	**5.31**	**4.62**	**2.47**	**3.03**	**3.04**	**3.01**	**2.99**	**3.10**
Free-of-charge Electricity	4,097	4,089	4,319	4,534	4,717	4,898	5,079.00	5,271
Percent increment	4.20	3.99	5.63	4.97	4.04	3.83	3.71	3.78
Consumption in PEA Areas	**156,838**	**155,838**	**159,823**	**164,752**	**169,799**	**174,943**	**180,204**	**185,832**
Percent increment	**5.28**	**4.61**	**2.56**	**3.08**	**3.06**	**3.03**	**3.01**	**3.12**

Group	Actual	Forecast (No. of Customers)						
	2024	2024	2025	2026	2027	2028	2029	2030
IPS-Solar Rooftops		236	472	708	944	1,181	1,416	1,652
Percent increment			100.00	50.00	33.33	25.00	20.00	16.67
Consumption in	**156,838**	**155,602**	**159,351**	**164,044**	**168,855**	**173,762**	**178,788**	**184,180**
PEA Power Systems								
Percent increment	**5.28**	**4.45**	**2.41**	**2.95**	**2.93**	**2.91**	**2.89**	**3.02**
High-speed Train (Station)						159	159	159
Percent increment							0.00	0.00
High-speed Trains (rails)						288	296	305
Percent increment							2.87	2.79
Mass Transit Trains for 6 key Cities							9	18
Percent increment								92.31
Eastern Economic Corridor		395	1,541	1,930	2,277	4,416	4,497	4,527
Percent increment			290.08	25.24	17.97	93.97	1.84	0.66
Electric Vehicles			270	650	1,156	1,738	2,410	3,670
Percent increment				140.02	77.84	50.27	38.65	52.33
Total New Demand		395	1,811	2,580	3,433	6,601	7,371	8,679
Percent increment			358.67	42.41	33.06	92.26	11.67	17.74
Total Consumption in Systems	**156,838**	**155,997**	**161,162**	**166,624**	**172,288**	**180,363**	**186,159**	**192,859**
Including Future Projects								
Percent increment	**5.28**	**4.71**	**3.31**	**3.39**	**3.40**	**4.69**	**3.21**	**3.60**

Notes: Large general services include stand-by electricity and interruptible electricity supply

Forecasting the Electricity Energy Purchases [EU10]

Data	Actual	Forecast (GWh)						
	2024	2024	2025	2026	2027	2028	2029	2030
Purchased from EGAT								
Electrical power (GWh)	153,259	152,325	157,304	159,705	161,813	168,593	173,305	178,780
Peak power (MW)	25,683	25,683	26,178	26,752	27,463	28,659	29,620	30,753
Purchased from VSPPs								
Electrical power (GWh)	11,602	11,913	12,688	16,046	19,910	21,645	23,021	24,598
Peak power (MW)	983	983	987	1,308	1,522	1,584	1,584	1,586
Purchased from Solar PV Rooftops								
Electrical power (GWh)	101.68	104.67	109.72	110.01	110.30	110.59	110.88	111.18
Peak power (MW)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Purchased from DEDE								
Electrical power (GWh)	56.10	97.79	113.82	126.61	139.23	157.81	194.72	222.15
Peak power (MW)	3.47	3.47	10.91	11.46	11.92	14.00	15.28	15.89
PEA-generated								
Electrical power (GWh)	119.38	95.60	95.60	95.60	95.60	95.60	95.60	95.60
Peak power (MW)	10.98	10.98	7.60	7.60	7.60	7.60	7.60	7.60
Total Electrical power (GWh)	**165,139**	**164,536**	**170,311**	**176,083**	**182,068**	**190,602**	**196,727**	**203,807**
Percent increment	4.90	4.52	3.51	3.39	3.40	4.69	3.21	3.60
Total Peak power (MW)	**26,680**	**26,680**	**27,184**	**28,079**	**29,004**	**30,265**	**31,227**	**32,362**
Percent increment	6.04	6.04	1.89	3.29	3.29	4.35	3.18	3.63

Notes: - Peak power (MW) : The Coincident PEAK is the combined total of power purchased from EGAT, VSPPs, solar rooftops, other generators, and PEA's own power generation. This value is measured at the time of the highest power demand (MW) in the PEA electrical system.

- 2024–2030 Forecasts: These are short-term electricity demand forecasts used for PEA's 2025-2026 annual budget preparation (data set dated September 26, 2024).

The scope and assumptions used for these electricity demand forecasts are as follows:

Forecast of Energy Sold (GWh) and PEA System's Peak Power Demand (MW)

1) Cumulative Electricity Sales: Data from January to July 2024.
2) Gross Domestic Product (GDP): Estimated using data from the Office of the National Economic and Social Development Council (NESDC), data set dated September 5, 2024.
3) Load and Generation Profiles: Load Profile data from May 2023 and Generation Profile data from 2021 were used. This is the same data set used for the draft PDP2024 plan.
4) Percentage of Loss (% Loss):
   - 2024: 5.19%, based on seven months of actual data and a three-year historical average for the remaining five months.
   - 2025-2030: 5.37%, based on the five-year historical average.
5) Future Projects (New Demand): This data is from the same set used for the draft PDP2024 plan. Only investment projects and government policies with clear implementation plans are considered, and these have not yet been factored into the GDP estimation. Projects include High-speed trains (HST), Mass transit trains for 6 key cities, Eastern Economic Corridor (EEC): Data for this project was obtained from the EEC working group, which surveyed electricity demand in the area. Electric Vehicles (EVs): Data has been updated to align with new vehicle registrations from the Department of Land Transport. The target for EVs in 2037 remains consistent with the draft PDP2024 plan.
6) Off-Grid Electricity Demand: This considers only solar rooftop projects. Off-grid electricity demand is estimated using the Plant Factor and Generation Profile of new solar rooftops, with data from the Energy Policy and Planning Office (EPPO) from the same data set used for the draft PDP2024 plan.
7) PEA Model: PEA's internal model is used to forecast the Peak Power Demand in the PEA system (MW).

Scope and Assumptions for Forecasting the Number of Electricity Users

1) Historical Data: We have used historical data on the number of electricity users from 2014 to 2023, along with a nine-month status update for 2024
2) Forecasting Method: We use a Multiple Linear Regression Model for forecasting. The key variables in this model include the year, electricity sales units, and electricity consumption per user.

During 2022-2023, a survey of unoccupied homes or those with overdue bills (more than three months) found a significant increase in the number of residential users whose electricity supply was cut and meters were removed. This aligns with the decrease in the number of electricity users during this period, which showed a significant drop in the growth rate. Consequently, the current user forecast (which aligns with the electricity demand forecast dated September 26, 2024) shows a relatively low growth rate. This is because the data has been adjusted from 2022 onwards, with the residential sector being the most affected.

Electricity Outage Indices (SAIFI and SAIDI) [EU28] [EU29]

Type of Index	2021	2022	2022	2023	2024
System Average Interruption Frequency Index (SAIFI) [EU28]					
Target SAIFI	2.74	2.25	1.83	1.48	1.22
Actual SAIFI	2.65	2.19	1.76	1.46	1.17
Target SAIFI for Industrial Estates	0.72	0.51	0.51	0.51	0.51
Actual SAIFI for Industrial Estates	0.51	0.36	0.22	0.30	0.19
Target SAIFI for Low Voltage Distribution System	-	-	-	0.78	0.75
Actual SAIFI for Low Voltage Distribution System	-	-	0.78	0.71	0.59
System Average Interruption Duration Index (SAIDI) [EU29]					
Target SAIDI	57.58	44.80	35.25	27.74	21.44
Actual SAIDI	57.52	44.51	34.98	27.58	21.03
Target SAIDI for Industrial Estates	12.80	9.35	9.35	9.35	9.35
Actual SAIDI for Industrial Estates	9.35	6.49	5.19	2.92	2.20
Target SAIDI for Low Voltage Distribution System	-	-	72.21	72.21	57.51
Actual SAIDI for Low Voltage Distribution System	-	-	-	42.81	26.03

Notes:

- These targets for the System Average Interruption Frequency Index (SAIFI) and System Average Interruption Duration Index (SAIDI) are evaluation criteria agreed upon with the State Enterprise Policy Committee (SubPAC) and the State Enterprise Policy Office (SEPO).
- PEA's SAIFI and SAIDI excluded the three southernmost provinces.
- PEA's SAIFI and SAIDI excluded events resulting from severe accidents, force majeure, catastrophes, and severe interruptions from power generation sources.
- SAIFI and SAIDI for Industrial Estates excluded the Pattani Industrial Estate.
- SAIFI and SAIDI for Low Voltage Distribution System only include power outages and scheduled emergency shutdowns.
- SAIFI and SAIDI for Low Voltage Distribution System excluded the three southernmost provinces.
- SAIFI and SAIDI for Low Voltage Distribution System excluded events resulting from severe accidents, force majeure, catastrophes, and severe interruptions from power generation sources.
- Calculation of SAIFI and SAIDI is based on the IEEE 1366-2022 standard. The details of the calculations are as follows:

$$\text{SAIFI} = \frac{\text{Total number of affected customers (in each outage)}}{\text{Total number of customers}}$$

$$\text{SAIDI} = \frac{\text{Total sum of affected customers} \times \text{outage duration (in each outage)}}{\text{Total number of customers}}$$

Distribution Loss

Type	Percent of Loss to Total Energy				
	2020	2021	2022	2023	2024
Total Target Loss	5.54	5.40	5.40	5.40	5.40
Total Loss	5.47	5.45	5.21	5.36	5.03
Technical Loss	4.10	4.02	4.01	4.26	4.36
Non-Technical Loss	1.37	1.43	1.20	1.10	0.67

Notes: 1) Technical loss consists of loss through 115-kV transmission lines, 22-33 kV transformers, distribution system transformers, and low-voltage distribution systems

2) Total target loss refers to the state enterprise assessment criteria.

Economic Performance [201-1]

Direct Economic Value Generated and Distributed	2020	2021	2022	2023	2024
(1) Direct Economic Value Generated					
Revenues	490,109.53	509,368.53	606,395.53	690,391.42	672,932.10
(2) Direct Economic Value Distributed					
Operating Costs	453,831.40	469,500.88	567,446.02	649,059.04	615,784.33
Employee Wages and Benefits	22,264.78	21,961.61	23,124.37	22,405.18	24,811.61
Payments to Providers of Capital	2,740.18	3,061.99	3,628.43	3,926.07	4,628.69
Payments to Government	7,300.00	7,853.85	9,355.00	8,145.00	13,604.50
Community Investment	777.17	235.97	248.12	283.17	315.76
Economic Value Retained ((1) – (2))	**3,196.00**	**6,754.23**	**2,593.59**	**6,572.96**	**13,787.20**

Hiring of New Employees and Employee Turnover Rate. [401-1]

New Hires

Item		2021		2022		2023		2024	
		Persons	%	Persons	%	Persons	%	Persons	%
Change		1,168	100.00	1,165	100.00	870	100.00	758	100.00
Sex	Male	909	77.83	906	77.77	583	67.01	589	77.71
	Female	259	22.17	259	22.23	287	32.99	169	22.29
Age Span	Under 30 years	695	59.50	905	77.68	712	81.84	607	80.08
	30 - 50 years	467	39.98	260	22.32	156	17.93	151	19.92
	50 years and over	6	0.514	0	0	2	0.23	0	0.00
Work Area	Head Office	185	15.84	221	18.97	147	16.90	113	14.90
	Northern	251	21.49	164	14.08	167	19.20	134	17.68
	Northeastern	258	22.09	206	17.68	124	14.25	182	24.01
	Central	258	22.09	343	29.44	268	30.80	182	24.01
	Southern	216	18.49	231	19.83	164	18.85	147	19.39

Turnover

Item		2021		2022		2023		2024	
		Persons	%	Persons	%	Persons	%	Persons	%
Change		1,365	100	1,240	100	1,062	100	1,318	100
Sex	Male	994	72.82	880	70.97	769	71.71	967	73.59
	Female	371	27.18	360	29.03	293	28.29	351	26.41
Age	Under 30 years	22	1.61	43	3.47	37	5.43	21	2.37
	30 - 50 years	44	3.22	58	4.68	50	7.10	57	6.26
	50 years and over	1,299	95.16	1139	91.85	975	87.48	1,240	91.37
Work Area	Head Office	152	11.14	149	12.02	131	13.36	126	9.90
	Northern	300	21.98	287	23.15	232	21.07	270	20.52
	Northeastern	321	23.52	304	24.52	267	24.33	384	28.31
	Central	327	23.96	281	22.66	217	20.56	276	20.63
	Southern	265	19.41	219	17.66	215	20.68	262	20.64

Dismissed Personnel by Cause

Cause	Persons	
	2566	2567
Retirement before 60	-	197
Retirement at 60	922	990
Death	54	69
Discharge	13	8
Resignation	64	43
Expulsion	6	9
Layoff	3	2
Employment termination	-	-
Total	1,062	1,318

Employees Returning to Work and Retention Rates after Newborn Care Leave [401-3]

Type of Leave	2021			2022			2023			2024		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Employees eligible for newborn care leave	20,870	7,298	28,168	20,893	7,197	28,090	20,704	7,182	27,886	7,003	20,327	27,330
Employees exercising the right to apply for newborn care leave	457	209	666	506	233	739	574	228	802	586	196	782
Employees returning to work after newborn care leave	440	163	603	483	176	659	558	194	752	567	145	712
Employees returning to work after newborn care leave and continuing to work for 12 months	408	157	565	453	209	662	505	232	737	573	228	801
Return-to-work rate (1) after newborn care leave at the end of the leave (%)	96.28	77.99	90.54	95.45	75.54	89.17	97.21	85.09	93.77	96.76	73.98	91.05
Retention rate (2) after newborn care leave at the end of the leave (%)	99.76	100	99.82	99.13	100	99.40	99.80	99.57	99.73	99.83	100	99.86

Notes: (1) Return-to-work rate means the ratio between the number returning to work after the newborn care leave period to the number exercising their rights to newborn care leave times 100

(2) Retention rate means the ratio between the number returning to work after the newborn care leave period and still continuing to work 12 months after returning to the number returning to work at the end of such period in the previous reporting cycle times 100

Average Annual Employee Training Hours [404-1]

Training Hours	2020	2021	2023	2024
Average training hours (hours/person/year)	57.84	35.04	48.10	42.30
Average Training Hours by Gender (hours/person/year)				
Male	47.74	20.41	45.00	38.26
Female	86.72	77.52	57.04	54.01
Average Training Hours by Group (hours/person/year)				
Executives	96.40	60.71	138.86	41.81
Experts	140.47	118.75	84.75	57.86
Practitioners	36.48	19.13	7.71	41.45

Notes: - Executives: Deputy Governors, Assistant Governors, Department Directors/Managers Level 1, Deputy Department Directors, Division Directors, Center Directors, Electric Vocational School Directors, Managers Level 2-3 or equivalents, Deputy/Assistant Division Directors, Deputy/Assistant Center Directors, Deputy/Assistant Electric Vocational School Directors, Deputy Managers Level 1-2, Branch Managers, Assistant Managers Level 3, Section Heads, Sub-Branch Managers, and Assistant Section Head

- Experts: Experts Level 12-13, Researchers Level 9-11, Specialists Level 9, Specialists Level 8, Researchers Level 7-8, and Professional Officers Level 7
- Practitioners: Researchers/Professional Officers Level 4-6 and Professional Officers Level 2-3

Number and Proportion of the Workforce by Diversity [405-1]

Item		Persons (Percent)				
		Board of Directors	Personnel			Total*
			Executives	Experts	Practitioners	
Total		**15**	**7,916**	**4,365**	**15,049**	**27,330**
Sex	Male	15 (100%)	5,576 (27.43%)	2,886 (14.20%)	11,865 (58.37%)	20,327 (100%) (74.38%)
	Female	0 (0%)	2,340 (33.41%)	1,479 (21.12%)	3,184 (45.47%)	7,003 (100%) (25.62%)
Age	Under 30 years	0 (0%)	2 (0.05%)	0 (0.00%)	3,793 (99.95%)	3,795 (100%) (13.89%)
	30 - 50 years	0 (0%)	4,509 (26.12%)	2,055 (11.91%)	10,696 (61.97%)	17,260 (100%) (63.15%)
	50 years and over	15 (100%)	3,405 (54.26%)	2,310 (36.81%)	560 (8.93%)	6,275 (100%) (22.96%)
Nationality	Thai	- (-%)	7,456 (29.72%)	4,058 (16.18%)	1,3569 (54.10%)	25,083 (100%) (91.78%)
	Chinese	- (-%)	274 (51.89%)	175 (33.14%)	79 (14.96%)	528 (100%) (1.93%)
	Others	- (-%)	13 (29.55%)	5 (11.36%)	26 (59.09%)	44 (100%) (0.16%)
	Unspecified	- (-%)	173 (10.33%)	127 (7.58%)	1,375 (82.09%)	1,675 (100%) (6.13%)

Notes: * Excluding the Board of Directors

Ratio of Female to Male Basic Salary and Compensation [405-2]

Item	2021	2022	2023	2024
Ratio of Female to Male Employee Compensation by Employee Type				
Executives	0.92	0.91	0.91	0.91
Experts	1.00	1.00	1.01	0.99
Practitioners	1.01	1.01	1.00	1.00

Notes: Average Annual Female Employee Salary / Average Annual Male Employee Salary

Collection of Data for Contractors under the Safety, Occupational Health, and Work Environment System [403-8]

Employees and Contractors under the Safety, Occupational Health, and Work Environment System					
Employees		Contractors		Contractor Employees	
Persons	Percent	Persons	Percent	Persons	Percent
27,330	100	5,591	100	-	-
Employees and Contractors under the Safety, Occupational Health, and Work Environment System Who Underwent Internal Audit					
Employees		Contractors		Contractor Employees	
Persons	Percent	Persons	Percent	Persons	Percent
27,330	100	5,591	100	-	-
Employees and Contractors under the Safety, Occupational Health, and Work Environment System Who Underwent External Audit / Certification					
Employees		Contractors		Contractor Employees	
Persons	Percent	Persons	Percent	Persons	Percent
128	0.46	319	5.40	-	-

Work Injuries [403-9]

Fatalities and Injuries of Employees and Contractors Whose Work or Operating Sites (or Both) are PEAcontrolled	Injury Type (/)											Total Persons Involved in Events for √DI Calculation	Total Persons Involved in Events Excluded from √DI Calculation	Total (persons)	Work Hours	Fatality/Injury Rate (Calculated for 200,000 work hours)
	Electrocution	Collision with	Vehicle	Fall from High	Burn	Slipping / Sliding	Collapsing	Crumbling/Falling	Material cuts or	Squeezing /	Chemical /					
Employees' Fatalities and Injuries																
Fatalities from work injuries	11	2	2	2	-	-	-	-	-	-	-	14	3	17		0.20
High-impact work injuries (excluding fatalities)	13	8	3	11	1	-	1	2	2	1	-	40	2	42	146,441,828	0.50
Recordable work injuries	2	5	10	4	1	-	1	2		1	-	8	18	26		0.31
Fatalities and Injuries of Contractors Whose work / Operating Sites (or both) are PEA-controlled																
Fatalities from work injuries	5	-	-	2	-	-	2	-	-	-	-	-	9	9		-
High-impact work injuries (excluding fatalities)	3	1	-	-	-	-	-	-	-	-	-	-	4	4	-	-
Recordable work injuries	1	-	-	1	-	-	1	-	-	-	-	-	3	3		-

Notes: - Work-related injuries encompass incidents involving permanent employees, contract workers, and contractors operating within PEA's premises. The causes of these incidents and near-misses are analyzed and categorized into three levels of severity, as follows:

Assess the severity of the accident	
Number of days lost	Property damage (estimated)
Level 1: no time off work	or has a value of less than 50,000 baht
Level 2: No more than 3 days off work	or has a value of 50,000 - 250,000 baht
Level 3: Absence from work for more than 3 days, loss of limbs/death	or has a value exceeding 250,000 baht

- Recordable work injuries include all work injuries along with deaths, high-impact injuries, lost and no-lost workdays
- Fatality/work injury rates are based on 200,000 man-hours
- To arrive at employees' and contractors' work hours, use "number of employees x number of workhours per day x number of workdays per week x number of weeks per year" and include the outcome with the hours worked by employees and contractors on duty as of 31 December 2023
- To arrive at contractors' work hours, use "number of contractors x number of workhours per day x number of workdays per week x number of weeks per year" as of 31 December 2023
- Computation of DI represents PEA's reporting. Disabling Injury Index (D.I.I) = IFR x ISR /1000 under ANSI (the US national standard), representing the relationship between the number of accidents in PEA's operation and the severity of PEA's work accidents, compared with the work hours of those who work for PEA. In other words, DI measures the quality of safety among state enterprises engaging in the same business (PEA, MEA and EGAT). It originated with a value designated by the State-Owned Enterprise Poli

PEA's Resource Consumption [301-1]

Indicator	Item	Unit	Volume				
			2020	2021	2022	2023	2024
PEA's electricity generation	Diesel firing	Liters	11,709,758.00	8,122,485.33	7,914,815.00	14,925,418.00	18,126,625.00
Substation, electricity system, and engineering maintenance	SF6 consumption	Kg	820	480	360	200	360
	CO2 Fire Extinguisher Leakage	Kg	-	-	-	84	81
	Volume of Transformer Oil Purchased	Liters	1,641,600	1,683,400	1,571,800	937,400	854,200
Loss units in distribution	Loss units in power distribution	kWh	7,809,717,354.10	8,049,384,018.10	7,939,860,740.40	8,443,469,915.00	6,840,060,000.00
PEA's services	Methane (CH_4) from Toilets in Offices	Persons	34,435	33,837	33,775	33,889	32,921
	Electricity consumption in offices (302-1)	kWh	143,544,716.00	142,813,195.00	146,708,695.00	164,894,521.15	186,646,132.44
	Volume of tap water consumption	m^3	1,513,664	1,580,738	1,682,742	1,432,837.28	1,378,804.78
	Volume of A3 paper consumption	Reams	-	-	-	504	607
	Volume of A4 paper consumption	Reams	127,498	132,538	131,547	142,704	148,182
	Volume of Thermal paper consumption	Kg	6,133,184	6,351,278	1,682,879	1,465,722	1,398,365
	Volume of Municipal Solid Waste	Kg	-	-	-	25,478	22,575
	Volume of Hazardous Waste	Kg	-	-	-	16,987	13,655
	Units purchased from EGAT	GWh	131,557.94	136,254.72	140,684.42	145,381.26	153,259.35
	Units purchased from VSPP	GWh	10,887.41	11,231.77	11,554.05	11,793.97	11,602.44

Indicator	Item	Unit	Volume				
			2020	2021	2022	2023	2024
Fuel consumption by vehicles	Diesel	Liters	20,882,952.00	19,780,029.00	18,627,208.00	32,135,722.00	31,445,316.65
	Biodiesel	Liters	-	-	-	3,317,464.26	3,412,605.31
	Gasoline	Liters	-	-	-	291,479.89	1,156,310.59
	Ethanol	Liters	-	-	-	92,814.82	91,393.12
Refrigerant leaks	R-22 consumption	Kg	1,454.00	956.76	1,057.19	960.26	0.00
	R-410A consumption	Kg	44.00	-	31.00	9.00	0.00
	R-134A consumption	Kg	32.00	-	20.00	0.00	216.78
	R-32 consumption	Kg	39.00	-	38.90	682.19	432.23
Electricity pole production from concrete products	Diesel	Liters	-	-	-	26,463.02	3,338,855.11
	LPG	Kg	-	-	-	5,410.00	5,119.50
	Iron	Kg	8,969,515.52	9,289,747.21	10,521,531.40	10,355,732.75	10,848,837.99
	Cement	Kg	27,269,741.35	29,368,324.13	32,575,580.45	26,858,715.82	53,583,080.50
	Sand	Kg	55,986.73	58,362.84	59,855.49	52,689.82	66,236,557.00
	Gravel	Kg	19,835,741.82	84,397.32	87,072.81	75,286.60	92,279,501.00

Notes: The significant increase in the procurement of raw and construction materials in 2024, including steel, cement, sand, and stone, is a direct result of our ongoing infrastructure investment. These materials are essential to produce concrete poles for our power system expansion projects and the construction of new substations. This strategic investment demonstrates our proactive approach to meeting the anticipated growth in electricity demand in the future.

Greenhouse Gas Emissions Summary [305-1][305-2][305-3][305-4][305-5]

Item	Unit	2020	2021	2022	2023	2024
Emissions Scope 1						
Biogenic CO_2 Emissions	tCO_2eq	-	-	-	8,775.89	9,038.17
Fuel Consumption for Stand-Alone Diesel Power Plants	tCO_2eq	-	-	-	28,941.25	35,867.78
Fuel Consumption for Standby Diesel Power Plants	tCO_2eq	-	-	-	8,644.61	9,779.50
Fuel Consumption from Vehicles	tCO_2eq	-	-	-	88,734.12	88,806.79
Fuel Consumption from Concrete Products Factory	tCO_2eq	-	-	-	73.32	9,251.13
LPG Consumption within the Concrete Products Factory	tCO_2eq	-	-	-	16.84	15.94
SF_6 Leakage from Electrical Equipment	tCO_2eq	-	-	-	4,701.40	8,462.52
Refrigerant Leakage (R-22 R-32 R-134A and R-410A)	tCO_2eq	-	-	-	2,170.69	674.15
CO_2 Fire Extinguisher Leakage	tCO_2eq	-	-	-	175.39	169.13
Methane (CH4) from Toilets in Offices	tCO_2eq	-	-	-	948.89	921.79
Total Emissions Scope 1	**tCO_2eq**	**143,435.56**	**151,671.48**	**141,947.14**	**143,182.42**	**162,986.90**
Emissions Scope 2						
Electricity Consumption in Offices	tCO_2eq	-	-	-	82,430.77	93,304.40
Electricity Loss in the Distribution System	tCO_2eq	-	-	-	4,220,890.61	3,419,345.99
Total Emissions Scope 2	**tCO2eq**	**4,770,545.90**	**4,758,454.19**	**4,901,492.83**	**4,303,321.38**	**3,512,650.40**

Item	Unit	2020	2021	2022	2023	2024
Emissions Scope 3						
Category 1: Purchased Goods and Services (Tap water, paper, transformer oil, steel, gravel, cement, and sand for concrete pole production)	tCO_2eq	9,426.15	44,445.03	33,623.54	46,695.95	438,957.53
Category 3: Fuel- and Energy-Related Activities (not included in Scope 1 or Scope 2) (Units of electricity purchased from EGAT and units of electricity purchased from Very Small Power Producers)	tCO_2eq	14,059,356.05	14,556,916.56	15,025,936.99	15,513,195.20	16,271,858.67
Category 5: Waste Generated in Operations (General waste and hazardous waste)	tCO_2eq	1,258.50	-	-	40.60	34.29
Total Emissions Scope 3	tCO_2eq	**14,070,040.70**	**14,601,361.59**	**15,059,560.53**	**15,559,931.74**	**16,710,850.50**
GHG Emissions Intensity (Electricity Sold/GHG Scope 1-3)	kCO_2e/kWh	0.1407	0.1397	0.1390	0.1343	0.1300
Percent increment	Percent	-	-	(0.47%)	(4.01%)	(7.22%)
Total (Scope 1 2 & 3)		**18,984,022.16**	**19,511,487.26**	**20,103,000.50**	**20,006,435.54**	**20,386,487.79**

Notes:
- 2023 GHG Emissions: The greenhouse gas emission figures for 2023 that were presented in the 2023 Sustainability Report have been reviewed and revised to align with the latest data used in the 2024 Sustainability Report. The differences are due to an update of the Emission Factor (EF) and a revision of the fuel calculation formulas (including the proportions of pure oil and biogenic components in each diesel and gasohol blend), in accordance with regulations from the Ministry of Energy. The new figures are the most accurate and up-to-date
- Increased Scope 3, Category 1 Emissions: The significant increase in Scope 3, Category 1 emissions (Purchased Goods and Services) in 2024 is a result of a major increase in the procurement of raw and construction materials, including steel, cement, sand, and stone. These materials are being used to manufacture concrete poles for power system expansion projects and to build new substations. This represents a continuous infrastructure investment by the organization to accommodate future growth in electricity demand

12. GRI Content Index

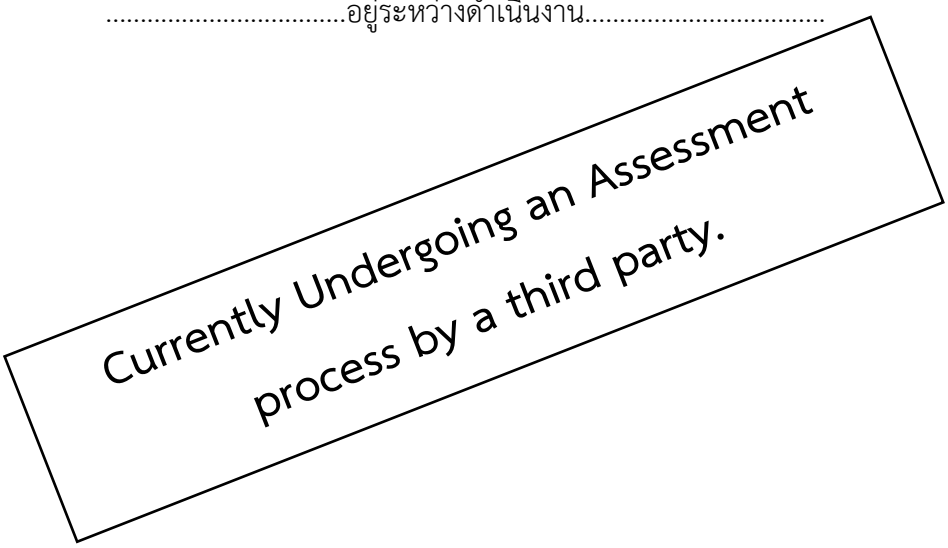
Statement of use	Provincial Electricity Authority (PEA) has reported in accordance with the GRI Standards for the period from 1 January 2024 to 31 December 2024.
GRI 1 used	GRI 1: Foundation 2021

GRI Standard/ Other Source	Disclosure	Location	Omission		SDGs
			Reason	Explanation	

Currently Undergoing an Assessment process by a third party.

13. External Assurance [2-5]

.....อยู่ระหว่างดำเนินงาน.....



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