

ENERGY TRANSITION



**OUR VISION
SINCE DAY ONE**

**When The World's Mission
and Our Vision
Converge**

A Call to Transform towards a Sustainable World

Our world faces a universal challenge of climate change,
which requires a united effort to achieve.

**The Earth will not change for us...
It is us who must adapt for our future.**



We commit to achieve net-zero
greenhouse gas emissions by

2050



Renewable Energy the Way to a Sustainable Tomorrow

Greenhouse gas emissions from electricity production play significant role in the climate change. Renewable energy stands as the beacon of hope...

...representing the perfect equilibrium between societal progress and environmental stewardship for the world.



We drive the transformation
with our renewable portfolio of

93%

in 2023.

Hydropower Harnessing Water for Renewable Energy

Water serves as a clean, sustainable, economical and stable renewable source for eco-friendly electricity production.

Water is the cornerstone for the electricity production of tomorrow.



We help the world
avoid over

4.4 million tCO₂e
of GHG emissions annually through
our renewable power.

* 2023 Data

Embracing Alternatives for a Sustainable Energy Transition

Beyond hydro, a spectrum of renewable energy sources awaits our harnessing for sustainable electricity production from solar and wind to the emerging potential of hydrogen.

These... are the future possibilities that we strive to embrace.



We generate

8.5

million MWh
of clean electricity annually
for Thailand.

* 2023 Data

A Decade as the Renewable Energy Pioneer

Through our steadfast dedication to unlock the immense potential of hydropower, today... hydropower has become indispensable as the leading source of electricity for the transition towards low-carbon society.

We affirm our commitment to sustainable electricity production and Net Zero aspiration.



Our endeavor for renewable energy began at our corporate inception with initial renewable proportion of

84%

and we aim to further our efforts with more renewables into the future.



The Unceasing Journey Towards Renewable Futures

We are one of the region's largest producers of electricity from renewables with one of the lowest carbon footprints.

We believe our renewable endeavor is principal to the global energy transition ambition.



We delivered

17%

of Thailand's total
renewable electricity.

* 2023 Data



Vision

To be one of the region's largest producers of electricity from renewables with one of the lowest carbon footprints.

Our Mission

- 1 -

To generate an optimal, stable and fair return for shareholders.

- 2 -

To be responsible to the environment, community and all stakeholders.

Table of Contents

<ul style="list-style-type: none"> • Message from the Managing Director 11 • About This Report 13 • 2023 Keys ESG Highlight Clean Electricity: Environmental 16 Kind Neighbor: Social 17 Partnership for Life: Governance and Economic 18 • Achievement Awards 19 					
About CKPower	24				
<ul style="list-style-type: none"> • Policy and Business Overview 25 • Sustainability Framework 27 • 2023 Materiality 32 • Stakeholders Engagement 40 • Supporting the Sustainable Development Goals (SDGs) and Joining the United Nations Global Compact 41 • Pathway to Net Zero GHG Emissions 42 					
		Clean Electricity	44	Performance Data	151
		<ul style="list-style-type: none"> • Energy Management and Climate Change 45 • Environmental Management 54 • Biodiversity 65 		<ul style="list-style-type: none"> • Environmental Performance 152 • Occupational Health and Safety Performance 160 • Human Resources Performance 162 • System Reliability and Availability Performance 170 	
		Kind Neighbor	74	GRI Content Index	172
		<ul style="list-style-type: none"> • Social and Community Care 75 • Respect for Human Rights 88 • Human Capital Management 94 • Occupational Health and Safety 103 		<ul style="list-style-type: none"> • General Disclosures 173 • Material topics 178 	
		Partnership for Life	111	Assurance Statement	184
		<ul style="list-style-type: none"> • Corporate Governance 112 • Risk and Crisis Management and Cybersecurity and Data Privacy 121 • Business Model Resilience 131 • System Reliability and Availability 137 • Innovation Management 146 		<ul style="list-style-type: none"> • Assurance Statement 184 	

Message from the Managing Director



THANAWAT TRIVISVAVET
Managing Director

Dear Esteemed Shareholders and Valued Stakeholders,

Reflecting on 2023, it's evident that it was a year of considerable challenges for the energy sector. We faced global economic uncertainties, geopolitical conflicts affecting energy prices, and severe climate changes leading to natural disasters. These issues have underscored the importance of environmental stewardship and the transition towards renewable energy, crucial for reducing reliance on the volatile fossil fuel market and for ensuring sustainable climate change mitigation.

With our 12 years of renewable energy experience, CKPower has been instrumental in advancing Thailand's Energy Transition. Our vision to become **"one of the region's largest producers of electricity from renewables with one of the lowest carbon footprints"** aligns with Thailand's national policy of **transitioning** from fossil fuels to renewable energy.

In alignment with this vision and the United Nations Sustainable Development Goals (SDGs), we have maintained our commitment to the "C-K-P" sustainability strategy, encompassing Environmental (C - Clean Electricity), Social (K - Kind Neighbor), and Governance & Economic (P - Partnership for Life) aspects. Our dedicated **"Sustainable Development Steering Committee"** plays a pivotal role in setting strategic directions and goals in sustainability, rigorously overseeing and supporting our plans in both the short and long term.

Our commitment to the 'C-K-P' strategy has yielded substantial achievements across all dimensions, positively impacting our business and stakeholders along the entire value chain.



CKPower Renewable
Energy Capacity

93%

In the **Environmental dimension, under C - Clean Electricity**, we developed a strategy for energy and climate change management that aligns with international standards (Task Force on Climate-Related Financial Disclosures: TCFD). In 2023, we enhanced our renewable energy capacity to 93%, generating 8.5 million MWh of renewable electricity which accounted for 17% of Thailand's renewable energy consumption, and thereby avoiding 4.4 million tons of carbon dioxide equivalent emissions annually. Our successful **"Green Bond"** issuance for XPCL, a CKPower associated company, underscores that renewable energy can simultaneously drive business growth and environmental conservation.

In Employee Engagement, we cultivated a culture of environmental consciousness and conservation, motivating our employees to create innovations in energy efficiency and energy consumption reduction. This has been recognized by the **Asian Power Awards for four consecutive years**.

On the **Social dimension, under K - Kind Neighbor**, we focused on community engagement, leveraging our expertise in renewable energy engineering. Our CSR Strategy Framework aims to (1) enhance access to renewable energy for better quality of life, (2) sustain natural resources and the environment, and (3) boost job stability and develop community careers. Our flagship **"Hinghoi"** Project in Thailand and Laos, under the "competency-co-creation-cooperation-connection" strategy, has significantly improved community life, earning us **the AREA Awards 2023 for Social Empowerment** from Enterprise Asia, **the Asset ESG Corporate**

Awards 2023 for Best Initiative – Social Responsibility, and the **CSR-DIW Continuous Award**.

In **Governance and Economic aspects**, under P - Partnership for Life, we aimed to enhance our capabilities and expand the renewable energy market with resilience. In 2023, we embarked on several key projects demonstrating this commitment; notably, the **utilization of solar energy for Thailand's first electric mass transit rail system**, in collaboration with the Bangkok Expressway and Metro Public Company Limited. Additionally, our growth in renewable energy activities, such as the selling of **Renewable Energy Certificates (RECs)** and forging partnerships for new technological innovations, further underscores our dedication to building a resilient and sustainable energy future.

Our unwavering commitment to sustainable development in all facets and our efforts towards creating a positive global impact have established us as a steadfast participant in **the United Nations Global Compact since 2020**. We consistently uphold its ten universal principles. This deep-rooted dedication to sustainability has not only earned us the prestigious **SET Awards 2023 for Sustainability Excellence** in the Commended Sustainability Awards category from the Stock Exchange of Thailand but also positioned us among the top 34 companies to receive the **'SET ESG Ratings for 2023 at the AAA level'** – the highest attainable rating. Additionally, for the second consecutive year, our efforts have been recognized with a listing in the **ESG100 by Thaipat Institute**.

As the Managing Director and the representative of Sustainable Development Steering Committee, I express deep gratitude for the unwavering trust and support from all sectors, crucial in steering our path towards robust and sustainable growth. I also extend heartfelt thanks to our company's personnel who have been essential in navigating through every challenge. Looking ahead, we remain committed to fostering renewable energy development, ensuring energy and economic stability, and actively supporting communities and the environment. We are dedicated to contributing to the sustainable transition to renewable energy globally.



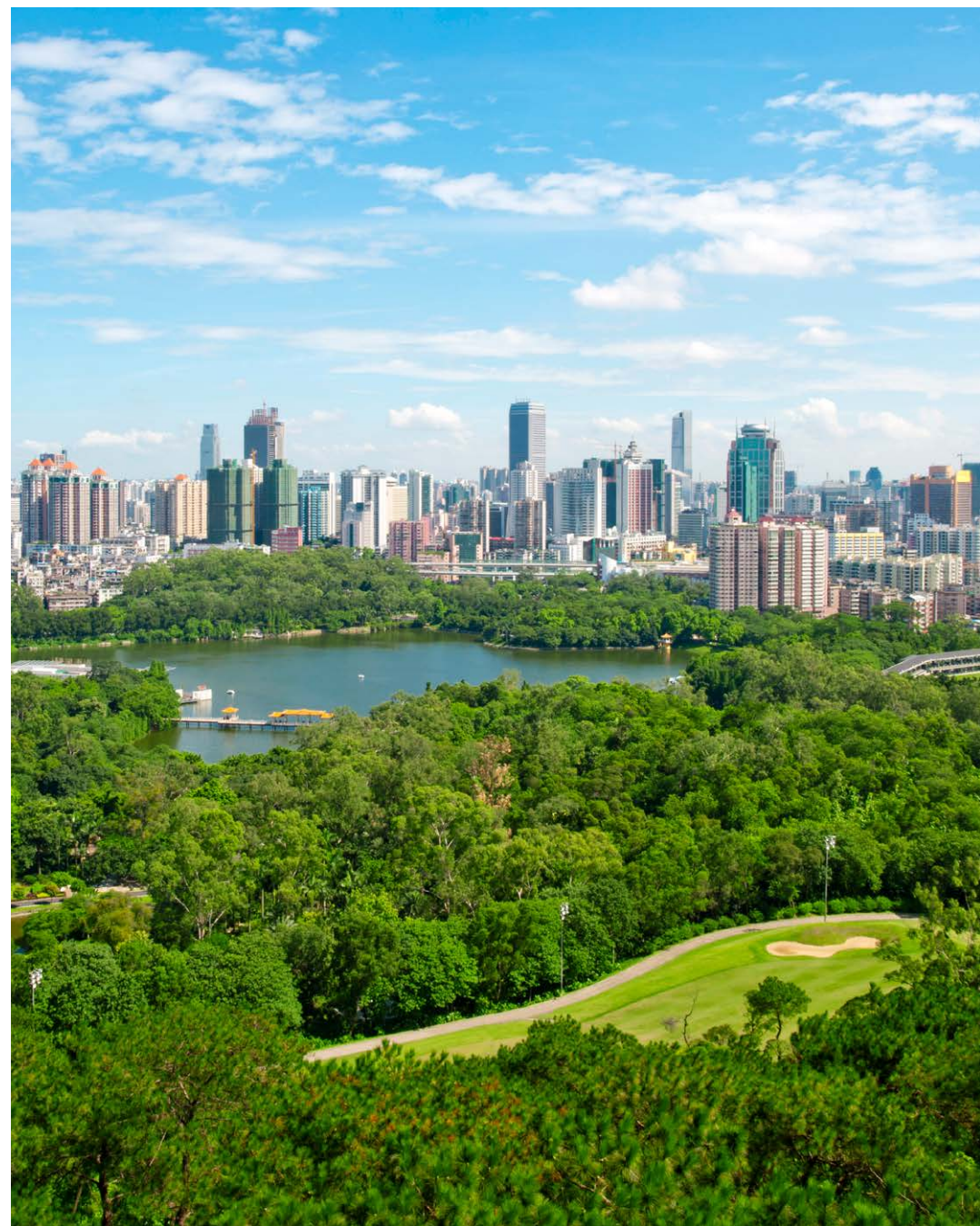
THANAWAT TRIVISVAVET
Managing Director

About This Report

CKPower Public Company Limited (hereinafter referred to as the “Company” or “CKPower” has disclosed its sustainability performance through annual sustainability reports since 2020. The objective of the 2023 sustainability report, which is CKPower’s 4th such report, is to present and communicate to all stakeholders vital issues as well as the Company’s sustainability strategies, practices, targets, and performance across the economic and governance, social, and environmental dimensions under its corporate governance system, reflecting its consideration to sustainable development in issues vital to business operations and to all stakeholders. The data presented in this report covers the period from January 1 to December 31, 2023.

The report conforms to the Global Reporting Initiatives Sustainability Reporting Standards (GRI Standards), and the content of this report is based on the assessment of the Company’s 12 key issues of sustainability materiality. This report also presents progress and performance in accordance with the Sustainable Development Goals (SDGs), the progress of achieving compliance with the United Nations Global Compact (UN Global Compact), and climate-related financial disclosures in accordance with Recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD).

For the year 2023, CKPower enhanced the quality of its sustainability report by ensuring full disclosure of its sustainability data and expanding the scope of reporting to cover all sustainability activities across the organization. The report was reviewed and approved by the Board of Directors, the Executive Committee, and the Sustainable Development Steering Committee, which was chaired by the Managing Director and consisted of executives from all power plants across the relevant scope of work. The report was also audited for data accuracy and integrity and verified for reliability by an external independent certification agency.





Report Verification

The indicators disclosed in this sustainability report have been reviewed for reliability and compliance with GRI Standards and have been verified with limited assurance by EY Office Limited, an external auditing firm, as detailed below:

GRI Standard Number	Disclosure Title
GRI 303-3	Water Withdrawal
GRI 303-4	Water Discharge
GRI 303-5	Water Consumption
GRI 302-1	Energy Consumption Within the Organization
GRI 305-1	Direct (Scope 1) Greenhouse Gas Emissions
GRI 305-2	Energy Indirect (Scope 2) Greenhouse Gas Emissions
GRI 305-4	GHG Emissions Intensity
GRI 305-7	Nitrogen Oxides (NOx), Sulfur Oxides (SOx), and Other Significant Air Emissions
GRI 306-3	Waste Generated
GRI 306-4	Waste Diverted from Disposal
GRI 306-5	Waste Directed to Disposal
GRI 403-9	Work-Related Injuries

The auditing was conducted by an independent licensed auditor from EY Office Limited. The Auditor's report and the financial statements are disclosed in the 2023 Annual Report (56-1 One Report).

Scope of Reporting

The content of the 2023 Sustainability Report covers the companies under CK Power Public Company Limited and companies in which CK Power Public Company Limited holds more than 50 percent of the shares or has operational control and shares the same scope as the financial reporting. The performance reported herein covered the period from January 1 to December 31, 2023. There are no significant changes in the reporting scope compared to the previous year.

Company	Country of Operation	Shareholding percentage	Operation Control	Scope of Reporting		
				Governance and Economic ¹	Environment	Social
Nam Ngum 2 Power Company Limited ²	Lao PDR	46.0%	Yes	○	○	○
Bangpa-in Cogeneration Limited	Thailand	65.0%	Yes	○	○	○
Bangkhenchai Company Limited	Thailand	100.0%	Yes	○	○	○
Xayaburi Power Company Limited	Lao PDR	42.5%	Yes	○	○	○
Luang Prabang Power Company Limited	Lao PDR	50.0%	Yes	□	□	□
Nakhon Ratchasima Solar Company Limited ¹	Thailand	30.0%	No	×	×	×
Chiangrai Solar Company Limited ¹	Thailand	30.0%	No	×	×	×
CKP Solar Limited	Thailand	100.0%	Yes	□	□	□
Vis Solis Limited	Thailand	100.0%	Yes	□	□	□
Helios Power Limited	Thailand	100.0%	Yes	□	□	□
Apollo Power Limited	Thailand	100.0%	Yes	□	□	□
Sole Power Limited	Thailand	100.0%	Yes	□	□	□

○ = Full implementation of policies, guidelines and/or complete performance data collection

□ = Partial implementation of policies, guidelines and/or partial performance data collection

×

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Website: www.ckpower.co.th

Remark:

1. Governance and economic performance and the reporting scope can be found in the 2023 Annual Report (56-1 One Report).
2. Nam Ngum 2 Power Company Limited (NN2) is 46 percent owned by the Company via SouthEast Asia Energy Limited ("SEAN").

Key ESG Highlights 2023

Environment (Clean Electricity)

Energy Management and Climate Change



93%

Renewable energy capacity



93%

Renewable electricity consumption
within the organization



0.26%

GHG Reduction from
the 2023 target

Biodiversity



DEVELOPED

Phase 1 Biodiversity Management Plan
for 2022-2026



65%

Screening and scoping
for biodiversity



>125

Fish species have been able
to migrate upstream safely

Key ESG Highlights 2023

Social (Kind Neighbor)

Social and Community Care



ZERO unresolved complaints



40,330

watts

of Renewable energy for enhancing the quality of life in communities (Cumulative)



4,030

children

children and youth reach knowledge in renewable energy (Cumulative)



17

learning centers

on renewable energy (Cumulative)

Respect for Human Rights



ZERO human rights violation across the value chain



100%

human rights due diligence, rectification, and remediation measures established



100%

awareness-raising on human rights among all employee level

Key ESG Highlights 2023

Governance and Economic (Partnership for Life)

Business Model Resilience



Expand renewable energy
certificates (RECs) sales by

6,500

RECs



6

MW
from solar project expansion



3,395

MW

total installed electricity generation
capacity from clean energy sources.

System Reliability and Availability



8.7

million MWh
of renewable energy generated



94%

average plant availability factor

Sustainability Awards



Sustainability Excellence and Commended Sustainability Award at SET Awards 2023

CKPower was honored with a SET Award in the Sustainability Excellence category and a Commended Sustainability Award at the SET Awards 2023, organized by the Stock Exchange of Thailand (SET) and Money & Banking Magazine, in recognition of its outstanding commitment to sustainable business practices, stakeholders, positive social and environmental impacts, the growth of its operating results, and its goal of becoming a renewables-based electricity producer with the smallest carbon footprint in the region through solar and hydroelectric power. The accolades also attest to CKPower's success in increasing its renewables-based capacity to 93% in pursuit of its 2050 Net Zero GHG emissions target.



“AAA” SET ESG Rating 2023

CKPower was given as the highest rating of “AAA” at the SET ESG Ratings 2023 by the Stock Exchange of Thailand (SET) and was one of the 34 listed companies to receive this distinction out of the 193 companies participating in the SET ESG Ratings 2023. CKPower was included on the list for a fourth consecutive year.



ESG 100 List in 2023

CKPower was placed on the ESG 100 List for the year 2023 in the Energy and Utilities category by the Thaipat Institute, a developer of a database of the sustainability of Thai businesses, marking the Company's second consecutive year on the list. The list was based on an assessment of environmental, social, governmental, and economic performance. The criteria included profitability over the past two fiscal years, the amount of free float exceeding 15% in accordance with the regulations prescribed by the Stock Exchange of Thailand (SET), and disclosure of sustainability reports.



Corporate Governance Assessment by the Thai Institute of Directors (IOD)

CKPower received an excellent rating in the Corporate Governance Report of Thai Listed Companies from the Thai Institute of Directors (IOD) for a sixth consecutive year in 2023.

The Asset ESG Corporate Awards 2023: ESG Corporate Awards

The company received The Assets ESG Corporate Awards 2023, achieving the Gold Level in the ESG Corporate Awards category from The Asset, a leading financial magazine in Asia. This recognition is attributed to the company's outstanding commitment to conducting business responsibly towards stakeholders, investors, and the environment, as well as its sustainable contributions to society under principles of good corporate governance.



Sustainability Disclosure Recognition from ThaiPat 2023

CKPower has been awarded the Sustainability Disclosure Recognition for two consecutive years. This recognition is for CKPower's commitment to transparently disclosing operational information that covers economic, social, and environmental aspects, in addition to financial data. Such disclosure demonstrates the company's sustainable business practices, benefiting stakeholders and aligning with the SDGs.



European Global Business Awards 2023

CKPower was presented with two awards at the European Global Business Awards 2023, hosted by the European, a world-class British business magazine, to honor role models of sustainable business practices. The two awards were:

1. Best Leadership in the Sustainable Energy Industry: Mr. Thanawat Trivisvavet – Thailand
2. Best Leadership in the Sustainable Energy Industry

Energy Management and Climate Change Awards



Asian Power Awards 2023

CKPower was honored by Asian Power, a prominent magazine in Asia's electricity industry, for a third consecutive year at the Asian Power Awards 2023 with the following awards: The Power Utility Award for its Piston Power Saver: Enhancing Gas Compression Efficiency Project. Asian Power Awards were deliberated by a panel of experts in the global electricity industry and given to electricity operators and power plant projects across Asia demonstrating exceptional and internationally recognized achievements.



Carbon Champion Certificate – Standard Tier

CKPower was given a Carbon Champion Certificate – Standard Tier from Enterprise Asia's Carbon Champion Programme, an independent, third-party agency that conducts assessments on decarbonization efforts of organizations globally.



"Carbon-Neutral Event" Certificate

CKPower has been honored with the "Carbon-Neutral Event" Certificate by Thailand Greenhouse Gas Management Organization (Public Organization:TGO). This recognition comes from our efforts in carbon credit offsetting activities, demonstrating our commitment to achieving Net-Zero greenhouse gas emissions in line with our company's goals. It also underscores our role in supporting Thailand's transition to a low-carbon society.

Social and Community Awards



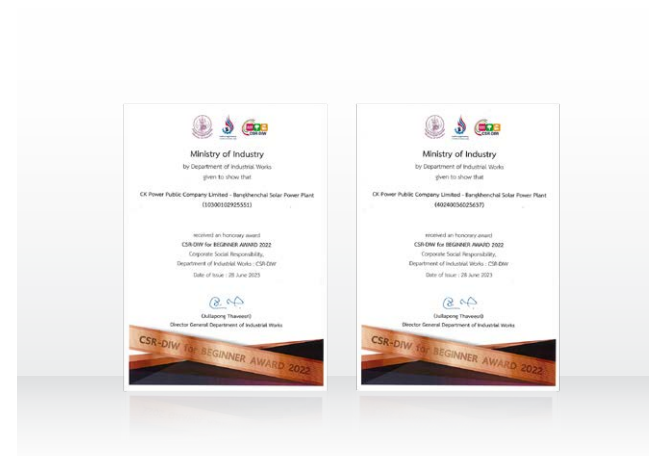
Asia Responsible Enterprise Awards 2023 (AREA)

CKPower won an award in the Social Empowerment category for a second consecutive year at the Asia Responsible Enterprise Awards 2023, hosted by Enterprise Asia, a leading non-governmental organization that promotes responsible entrepreneurship in Asia, in recognition of its Hing Hoi Project, a corporate social responsibility program carried out for over eighth consecutive year with the goal of contributing value through its Competency-Co-Creation-Cooperation-Connection strategies to communities around its power plants and in remote areas both in Thailand and Lao PDR in accordance with the community's way of life.



CSR-DIW Continuous Award 2023

Bangpa-in Cogeneration Power Plant received a CSR-DIW Continuous Award for a second consecutive year in 2023 from the Department of Industrial Works, the Ministry of Industry, as part of the CSR-DIW's effort to promote corporate responsibility towards society and communities, in recognition of its sustainable business practice in full compliance with CSR-DIW standards as well as its commitment to stakeholders across the value chain, the creation of stable long-term returns, social and environmental stewardship, and the promotion of employee participation in taking care of and ensuring harmonious co-existence with communities.



CSR-DIW for Beginner Award 2023

Bangkhenchai Solar Power Plant, installed on the property of Siam Wire Co., Ltd., and Bangkhenchai Solar Power Plant were honored with CSR-DIW for Beginner Awards. The awards were presented to industrial plants that applied CSR-DIW's practices in governance, environment, and community development.

The Asset ESG Corporate Awards 2023 : Best Initiative - Social Responsibility

CKPower won the Best Initiative – Social Responsibility Award at the Asset ESG Corporate Awards 2023, hosted by the Asset, Asia's leading finance magazine. The award assessed listed companies in Asia-Pacific with outstanding CSR performance, and the award was given in recognition CSR Strategy Framework through the Hing Hoi Project to enhance the quality of life.

Membership in Partnership Networks



Task Force on Climate-related Financial Disclosures (TCFD) Supporter

CKPower has joined the Task Force on Climate-related Financial Disclosures Supporter (TCFD) as a supporter.

WE SUPPORT



United Nations Global Compact (UN Global Compact)

CKPower has joined UN Global Compact as a member for a fourth consecutive year and operates its business in alignment with its 10 Principles, upholding its fundamental responsibilities with human rights, labor, environment, and anti-corruption.



Thailand Carbon Neutral Network (TCNN)

CKPower has joined the Thailand Carbon Neutral Network (TCNN) and become a certified Climate Action Leading Organization.



Thai Renewable Energy (RE100) Association

CKPower has become a member of the RE100 Association.



Sustainability Disclosure Community (SDC)

CKPower has become a member of the Sustainability Disclosure Community, established by the Thaipat Institute.



CSR-DIW Network

CKPower has become a member of the CSR-DIW Network, which promotes the sustainable co-existence between manufacturing plants and communities.

About CKPower

25 →

Policy and Business Overview

27 →

Sustainability Framework

32 →

2023 Materiality

40 →

Approach to Stakeholder Engagement

41 →

Supporting the Sustainable Development Goals (SDGs)
and Joining the United Nations Global Compact

42 →

Pathway to Net Zero GHG Emissions



About CKPower

Policy and Business Overview

CK Power Public Company Limited (the “Company” or “CKP”) was founded by CH. Karnchang Public Company Limited Group (“CH. Karnchang Group”) and registered its incorporation on June 8, 2011, with its registered capital of THB 1,000,000. CKPower produces and sells electricity from natural gases and renewable energy both domestically and internationally and serves as the core company of CH. Karnchang Group, focusing on investment in electricity businesses from different energy sources. The head office is located in Bangkok, Thailand.

The Company registered its conversion into a public company on February 6, 2013, and its ordinary shares were listed as listed securities and began trading on the Stock Exchange of Thailand (“SET”) on July 18, 2013, with its registered fully paid-up capital of Baht 5,500 million. On April 10, 2015, the Company registered its capital increase to Baht 9,240 million. At present, the Company’s registered and paid-up capital amounts to Baht 8,129 million.

Investment Structure by Power Plant Type

At present, CKPower invests in companies that produce and distribute electricity through three types of power plants:

1. Hydroelectric Power Plants
2. Solar Power Plants
3. Cogeneration Power Plants



Hydroelectric Power Plants



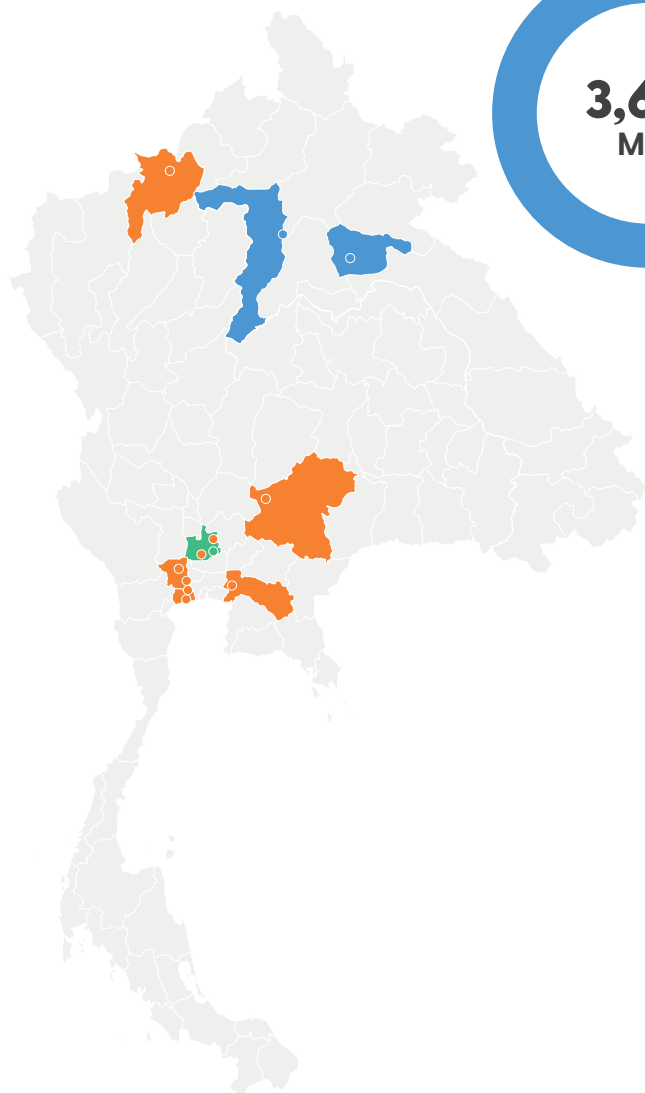
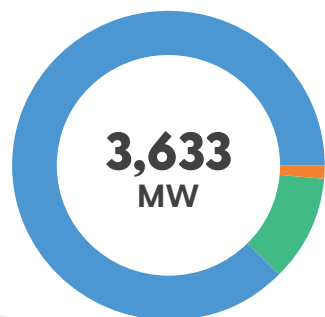
Solar Power Plants



Cogeneration Power Plants



Capital Structure



Hydroelectric Power Plants

Lao PDR

2 Power Plants
1 Project

Capacity Installation

92%

Total Capacity Installation

3,360 MW

Nam Ngum 2 Hydroelectric Power Plant

615 MW

Xayaburi Hydroelectric Power Plant

1,285 MW

Luang Prabang Hydropower Project

1,460 MW



Solar Power Plants

Thailand

9 Power Plants
1 Project

Capacity Installation

1%

Total Capacity Installation

35 MW

Bangkhenchai Solar Power Plant

8 MW

Phachi Solar Power Plant

0.89 MW

Banglen Solar Power Plant

0.97 MW

Phutthamonthon Sai 5 Solar Power Plant

0.97 MW

Mahachai Solar Power Plant

0.72 MW

Krathum Ban Solar Power Plant

0.51 MW

Khlong Preng Solar Power Plant

2.67 MW

Nakhon Ratchasima Solar Power Plant

6 MW

Chiangrai Solar Power Plant

8 MW

Pakthongchai Solar Project

6 MW



Cogeneration Power Plants

Thailand

2 Power Plants

Capacity Installation

7%

Total Capacity Installation

238 MW

Bangpa-in Cogeneration Power Plant 1 ("BIC1")

118 MW

Bangpa-in Cogeneration Power Plant 2 ("BIC2")

120 MW

Vision

To be one of the region's largest producers of electricity from renewables with one of the lowest carbon footprints

Missions

- To generate optimal, stable, and fair returns for shareholders.
- To be responsible to the environment, communities, and all stakeholders.

Sustainability Framework

In 2023, CKPower continued to adhere to its "C-K-P" sustainability framework, which covers important issues in the environmental (C - Clean Electricity), social (K - Kind Neighbor), and governance and economic dimensions (P - Partnership for Life). CKPower utilized its material issues, sought input from executives and operations-level employee representatives, and conducted interviews with stakeholders from all sectors to inform the formulation of its sustainability strategies and ensure alignment with the organization's vision **"To be one of the region's largest producers of electricity from renewables with one of the lowest carbon footprints"**

As part of the Company's sustainability framework, targets and performance indicators for successful operations have been prescribed, and five-year action plans (2022-2026) for key issues in all five dimensions have been formulated to drive CKPower towards becoming a leading producer and distributor of electricity from clean energy with the capacity to handle challenges and achieve endless business growth in the future. The five dimensions consist of:



Energy Management and
Climate Change



Biodiversity



Social and
Community Care



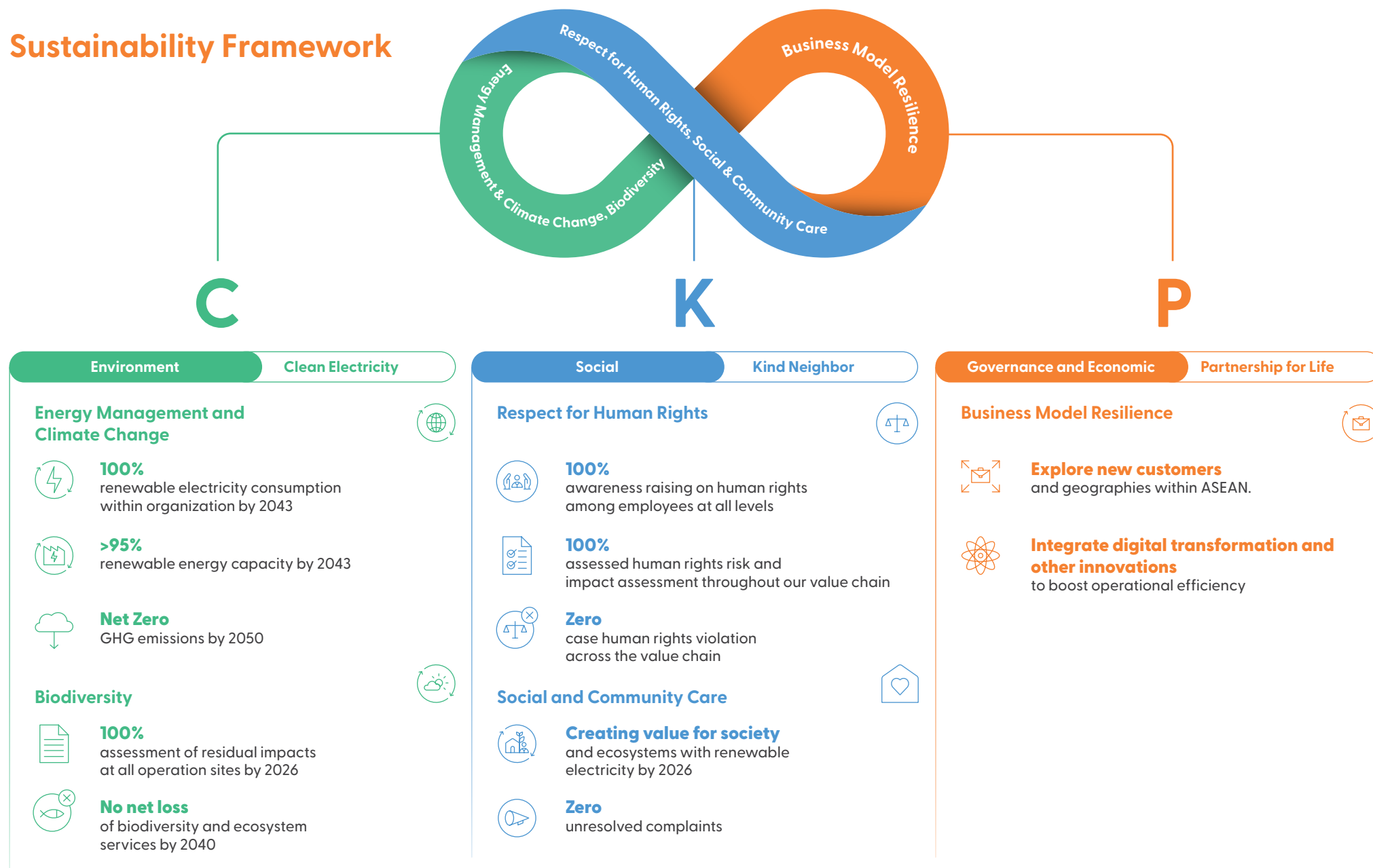
Respect for
Human Rights



Business Model
Resilience



Sustainability Framework

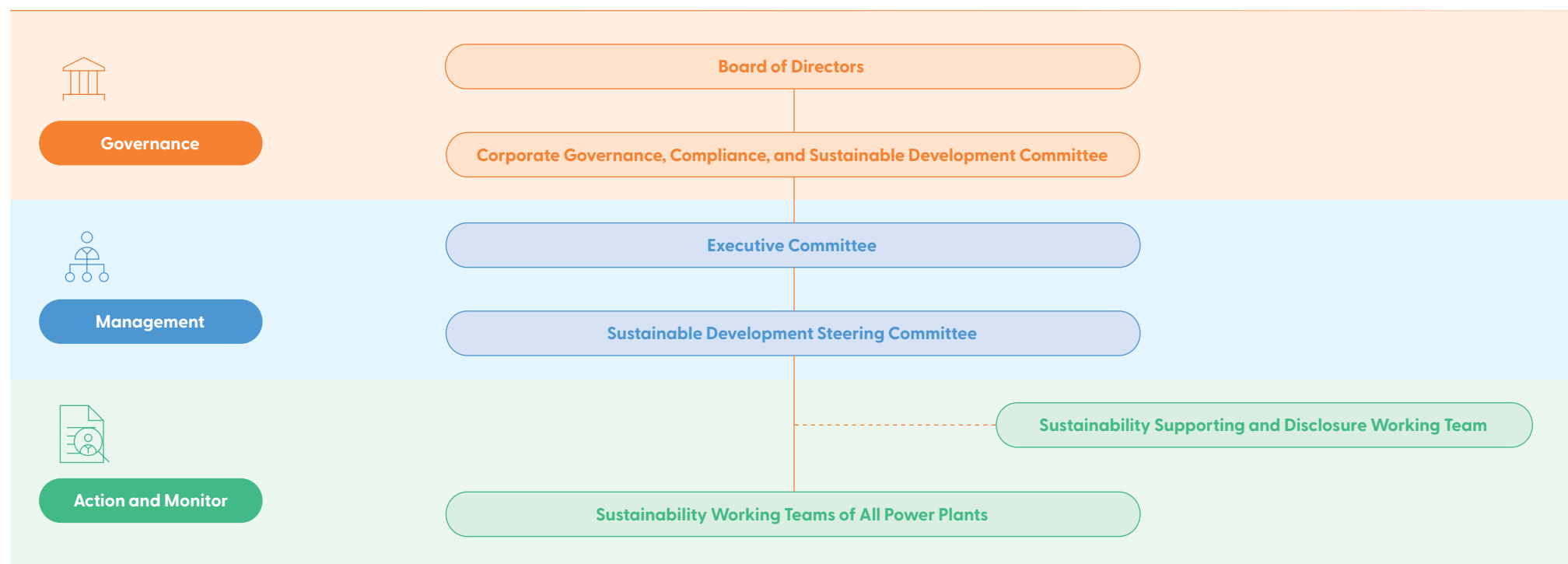


Sustainability Management Guidelines

Sustainability Management Structure

CKPower has appointed a Sustainable Development Steering Committee, chaired by the Company's Managing Director, with executives from all power plants covering all relevant areas of work joining as committee members. The committee is charged with the following duties:

- Establish strategic directions and targets in alignment with CKPower Group's sustainability policy and framework.
- Provide recommendations and guidance on sustainability management to the sustainability working teams.
- Appoint the sustainability working teams of CKPower and its subsidiaries.
- Monitor, review, and evaluate the performance of the sustainability working teams of CKPower and its subsidiaries.
- Report on the progress of sustainability management to the Corporate Governance, Risk Management and Sustainable Development Committee and the Board of Directors and the Executive Committee at least twice a year.

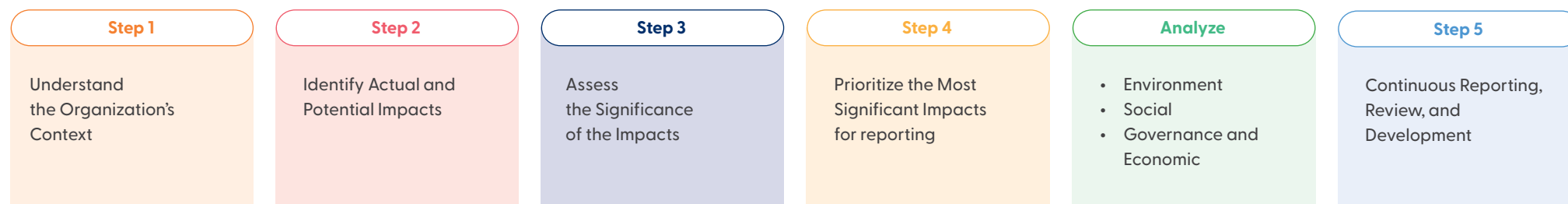


Materiality

Materiality Identification Process

In 2023, CKPower reviewed its material topics, taking into account various factors, such as changes in laws, regulations, and domestic and international materiality assessment standards, as well as global trends. The Company's materiality assessment conforms to the Global Reporting Initiative (GRI) Standards 2021 and is conducted on an annual basis. In addition, actual and potential impacts, both positive and negative, of its operations on stakeholders are analyzed across environmental, social, and governance and economic dimensions, taking into account both inside-out and outside-in impacts – a process known

as double materiality according to the GRI Standards 2021. Furthermore, in impact analysis, more emphasis has been placed on sustainability impact and financial impact, their significance on value creation for all stakeholders, as well as human rights issues. The material topics for the year 2023 have been approved by the Board of Directors/the Corporate Governance, Risk Management, and Sustainable Development Committee/senior executives. The process of identifying materiality topics involves five steps as follows:



↓ Determine material topics for reporting

CKPower's Material Topics

Environmental Dimension

- Energy Management and Climate Change
- Environmental Management
- Biodiversity

Social Dimension

- Social and Community care
- Respect for Human rights
- Human Capital Management
- Occupational Health and Safety

Governance and Economic Dimension

- Corporate Governance
- Risk and Crisis Management and Cybersecurity and Data Privacy
- Business Model Resilience
- System Reliability and Availability
- Innovation Management

Step 1: Understand the Organization's Context

CKPower considers various factors relevant to its business operations, namely internal factors, such as its strategies, vision, objectives, and the locations of its facilities, and input from the Board of Directors and executives through online surveys; external factors, such as global trends and industry changes; risks and opportunities that may impact the Company in the future; as well as international human rights principles and past events. The Company's core and supporting activities across the value chain are also taken into consideration to identify stakeholders who may be positively or negatively affected, either directly or indirectly, by its operations. The details of the value chain are presented in Section 3 of 56-1 One Report. Material topics impacting the Company's sustainability in the environmental, social, and governance and economic dimensions are then identified, with the material topics from 2022 taken into account in conjunction with the internal and external factors mentioned above and in comparison to the material issues of other companies in the same industry as well as domestic and global material issues with reference to the ESG Index of Morgan Stanley Capital International (MSCI), the Dow Jones Sustainability Indices (DJSI), the Sustainability Accounting Standards Board (SASB), the United Nations Global Compact (UNGC), and the Sustainable Development Goals (SDGs).

Step 2: Identify Actual and Potential Impacts

CKPower identifies actual and potential impacts, both positive and negative, across the environmental, social, and governance and economic dimensions and assesses whether the impacts are short-term or long-term in nature. Human rights impacts are also considered across the value chain. The positive and negative impacts can be categorized into two groups:

1. Financial impacts: Impacts that material topics not considered in the Company's financial statements have on the Company's operation.
2. Sustainability impacts: Impacts that are caused by the Company's operation and affect the environment, society, or people.

Step 3: Assess the Significance of the Impacts

Stakeholder interviews are conducted to confirm the environmental, social, and governance and economic impacts of the Company's operation on stakeholders, including relevant human rights issues. Assessment criteria for positive and negative sustainability impacts are then established based on the scale, scope, remediability, and likelihood, while assessment criteria for positive and negative financial impacts are established based on the magnitude and likelihood, with the Company's risk assessment principles integrated into the financial impact assessment process. CKPower then conducts assessments of both sustainability impacts and financial impacts.

Step 4: Prioritize the Most Significant Impacts for Reporting

CKPower prioritizes and selects the five most significant impacts, which score high to very high in terms of their impact on stakeholders and the Company. Additionally, such topics are categorized into material topics and fundamental business topics. The topics are then approved by the Board of Directors/the Corporate Governance, Risk Management, and Sustainable Development Committee/senior executives.

Step 5: Continuous Reporting, Review, and Development

The Company has established plans and operational guidelines to mitigate the negative impacts of its material issues and business fundamental issues. The outcomes of the preliminary materiality identification are presented to the Board of Directors, the Corporate Governance, Risk Management, and Sustainable Development Committee, the Sustainable Development Steering Committee, and senior executives for consideration and approval for disclosing information. The Company regularly reviews the process and discloses relevant data in its sustainability reports to provide an opportunity for the Company to consider appropriate impacts and management strategies in response to the changing environmental, social, and economic circumstances each year.

Materiality 2023

Outcomes of Materiality Identification

Based on stakeholder impact analysis and materiality prioritization, CKPower has identified topics relevant to its business, categorized into 12 material topics and 2 business fundamentals topics

Material Topics:

CKPower prioritizes material topics based on the impacts from internal and external factors on stakeholders, society, and the environment and on its own business operation. As material topics have high to very high impacts, CKPower places great emphasis on their management.

Business Fundamental Topics:

These are fundamental topics that must be managed to ensure compliance with national and international laws, standards, and general practices. Without any of such topics, CKPower may not be able to manage its operation efficiently and effectively in alignment with its established indicators, short, medium, and long-term targets, and strategies. As such, in order to advance the business towards sustainability and growth in the renewable energy business, CKPower's commitment to the continuous management of all business fundamental topics is the key to success.



C



Environment

Clean Electricity



Being committed to leveraging technology and environmentally friendly innovations in business operations to create a balance between the environmental conservation, energy management, greenhouse gas reduction, ecosystem restoration, and biodiversity, while maintaining the stability in clean electricity generation.

- Energy Management and Climate Change
- Biodiversity
- Environmental Management

K



Social

Kind Neighbor



Being committed to improving the quality of life and fostering shared values among communities, society, and stakeholders, both directly and indirectly, as well as carrying out operations with regard for the principles of human rights in accordance with international standards across the supply chain.

- Social and Community care
- Respect for Human rights
- Human Capital Management
- Occupational Health and Safety

P



Governance and Economic

Partnership for Life



Strengthening the competency to address challenges and achieve sustainable business growth through investment in new business opportunities in ASEAN and the region, as well as integrating innovation and digital technology into business operations, to create energy security for the region and provide good and fair returns for customers and shareholders.

- Corporate Governance
- Risk and Crisis Management and Cybersecurity and Data Privacy
- Business Model Resilience
- System Reliability and Availability
- Innovation Management







Changes in material topics compared to 2022 (13 material topics in 2022) are described below.

- Risk and Crisis Management, Cybersecurity, and Data Privacy: Due to the rapid changes in technology or global situations, CKPower is aware of the expectations of stakeholders and has assessed the impacts on the overall business, including environmental and social issues. Recognizing the importance of effective risk and crisis management, cybersecurity and data privacy, CKPower has categorized it as a separate material topic so as to be able to track and measure performance.
- Customer Relations Management: Recognizing the importance of greater management efficiency, CKPower has integrated the topic of customer relations management with the material topic of system reliability and efficiency, so as to unify the direction of operational planning and meet customer expectations.
- Supply Chain Management: As CKPower operates in adherence to international management standards, regularly monitors and measures performance, and strictly complies with relevant laws, supply chain management presents a low level of risk. As such, supply chain management is considered part of the Company's usual operation and should not be considered a material topic.








Outcomes of Materiality Identification








Relevant Stakeholders	Impacts on Stakeholders	Types of impact		Financial impacts (On a scale of 5)	Actions	Relevant SDGs
		Actual	Potential			
Environmental						
Energy Management and Climate Change						
<ul style="list-style-type: none">EmployeesCustomersSuppliers and contractorsInvestors and shareholdersCommunities and societyGovernment agencies (in Thailand and Lao PDR)	<div><div><div>+</div></div><div>Renewables-based electricity production helps minimize CKPower’s GHG emissions and potential environmental impacts of global warming.</div></div>	<div><div></div></div>	<div><div><div></div><div></div><div></div><div></div><div></div></div></div>	<ul style="list-style-type: none">Establish energy conservation and climate change policies.Share and apply renewables-based electricity production methods to communities and society, and exchange beneficial information with internal and external stakeholders.Expand renewables-based production capacity and adopt innovation to optimize production efficiency.	<div><div><div>7</div><div>affordable and clean energy</div></div><div><div>9</div><div>industry, innovation and infrastructure</div></div><div><div>13</div><div>climate action</div></div></div>	
	<div><div><div>+</div></div><div>Climate change may affect CKPower’s business operation, such as through changes in rainfall or sunlight, which in turn impact power production.</div></div>		<div><div><div></div></div></div>			<ul style="list-style-type: none">Assessment of climate risk to establish mitigation measures.Developing strategies and implementing ideal operational guidelines.Applying innovative assessment techniques and establishing water management for production processes.
Biodiversity						
<ul style="list-style-type: none">Communities and societyGovernment agencies (in Thailand and Lao PDR)	<div><div><div>+</div></div><div>The use of technology in biodiversity management can minimize risks and negative impacts on biodiversity arising from CKPower’s business operation.</div></div>	<div><div></div></div>	<div><div><div></div><div></div><div></div><div></div><div></div></div></div>	<ul style="list-style-type: none">Utilize innovation to track fish migration to inform biodiversity management plans and minimize risks and negative impacts on biodiversity arising from CKPower’s business operation.	<div><div><div>15</div><div>life on land</div></div></div>	
	<div><div><div>–</div></div><div>Without biodiversity management, hydroelectric power plant operations may have environmental impacts on the surrounding ecosystems.</div></div>	<div><div></div></div>				<ul style="list-style-type: none">Establish biodiversity management policies.Establish concrete operational strategies and guidelines.Plan biodiversity assessment and take action to promote biodiversity services through various projects.Formulate biodiversity action plans and monitoring plans

Relevant Stakeholders	Impacts on Stakeholders	Types of impact		Financial impacts (On a scale of 5)	Actions	Relevant SDGs
		Actual	Potential			
Environmental Management						
<ul style="list-style-type: none">EmployeesInvestors and shareholdersCommunities and societyGovernment agencies (in Thailand and Lao PDR)	<div><div>+</div><p>Good environmental management ensures operational efficiency and minimizes negative impacts on stakeholders.</p></div>	<div><div></div></div>	<div><div><div><div></div><div></div><div></div><div></div><div></div></div></div></div>	<ul style="list-style-type: none">Establish environmental policies.Put in place processes for monitoring and inspecting environmental quality and environmental management efficiency.	<div><div><div>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</div><div>13 CLIMATE ACTION</div></div></div>	
	<div><div>-</div><p>Without environmental management, the Company's power plant operations may affect neighboring communities in terms of resource consumption and the local way of life.</p></div>	<div><div></div></div>		<ul style="list-style-type: none">Put in place environmental management systems that are compliant with laws and international standards.Keep water, general waste, and hazardous waste management and air quality control in compliance with the law and promote innovation development to enhance production efficiency.Establish environmental criteria for supplier screening.		
Social						
Occupational Health and Safety						
<ul style="list-style-type: none">EmployeesCommunities and societySuppliers and contractors	<div><div>+</div><p>The promotion of occupational health and safety policy and practices can ensure workplace safety and reduce accidents among suppliers and contractors as well as society and neighboring communities.</p></div>	<div><div></div></div>	<div><div><div><div></div><div></div><div></div><div></div><div></div></div></div></div>	<ul style="list-style-type: none">Establish occupational health and safety policies and systems to serve as guidelines for workplace safety across all activities, operation sites, and all employees and contractors for CKPower and its subsidiaries.Identify and assess occupational health and safety risks.Oversee occupational health and safety.Implement occupational health and safety systems.Communicate to executives and employees at all levels to ensure understanding of occupational health and safety.	<div><div><div>3 GOOD HEALTH AND WELL-BEING</div><div>8 DECENT WORK AND ECONOMIC GROWTH</div><div>16 PEACE, JUSTICE AND STRONG INSTITUTIONS</div></div></div>	
	<div><div>-</div><p>Negligence of occupational health and safety can negatively impact safety to life and property, result in legal violations, and affect the confidence in and reputation of the Company.</p></div>		<div><div></div></div>			

Relevant Stakeholders	Impacts on Stakeholders	Types of impact		Financial impacts (On a scale of 5)	Actions	Relevant SDGs
		Actual	Potential			
Community Engagement						
<ul style="list-style-type: none">Communities and societyGovernment agencies (in Thailand and Lao PDR)Customers	<div><div>+</div><p>Community engagement fosters an understanding of the operations of the Company's power plants among local residents, promotes community development and job creation, reduces disputes with neighboring communities, and positive impacts the corporate image.</p></div>	<div><div></div></div>	<div><div><div></div><div></div><div></div><div></div><div></div></div></div>		<ul style="list-style-type: none">Conduct activities to listen to feedback and engage with the community around the power plant regularly every year.	<div><div></div></div>
	<div><div>-</div><p>The operation of the power plants may impact the way of life and well-being of local people around the plants or cause environmental changes.</p></div>	<div><div></div></div>			<ul style="list-style-type: none">Conduct impact assessment and community engagement activities according to the law before and during the construction and during the operation of the power plant.Establish community engagement and development policies.Establish concrete operational strategies and guidelines.Conduct community and social engagement activities and projects in line with the Company's business operations.Provide a whistleblowing channel and put in place mitigation and mediation measures.	
Respect for Human Rights						
<ul style="list-style-type: none">EmployeesCommunities and societySuppliers and contractors	<div><div>+</div><p>Human rights promotion encourages equitable stakeholder treatment and fosters awareness among the stakeholders in the supply chain.</p></div>	<div><div></div></div>	<div><div><div></div><div></div><div></div><div></div><div></div></div></div>		<ul style="list-style-type: none">Establish policies and guidelines for monitoring and preventing human rights risks across the supply chain in compliance with international standards, which will contribute to business stability and sustainability.	<div><div></div></div>
	<div><div>-</div><p>Human rights violations can lead to financial impacts in the form of damages and fines and result in the loss of stakeholder confidence and corporate reputation.</p></div>		<div><div></div></div>		<ul style="list-style-type: none">Establish concrete policies and guidelines.Conduct human rights due diligence.Organize projects or activities fostering human rights awareness.Put in place guidelines for preventing human rights violations for all stakeholder groups.Establish whistleblowing channels for human rights complaints.	

Relevant Stakeholders	Impacts on Stakeholders	Types of impact		Financial impacts (On a scale of 5)	Actions	Relevant SDGs
		Actual	Potential			
Human Capital Management						
<ul style="list-style-type: none">EmployeesInvestors and shareholders	<div><div><div>+</div></div><div>Promoting the continuous development of personnel knowledge and skills helps align operational performance with stakeholder expectations. Effective personnel management also enhances the overall well-being of employees through benefits and helps foster employee engagement with the organization.</div></div>	<div><div></div></div>	<div><div><div></div><div></div><div></div><div></div><div></div></div></div>	<ul style="list-style-type: none">Establish action plans and organize personnel training.Allocate budgets for personnel competency development training.Establish individual development plans.Formulate development plans to address competency gaps.	<div><div><div>3GOOD HEALTH AND WELL-BEING</div><div>4QUALITY EDUCATION</div><div>5GENDER EQUALITY</div><div>8DECENT WORK AND ECONOMIC GROWTH</div><div>10REDUCED INEQUALITIES</div></div></div>	
Governance and Economic						
Corporate Governance						
<ul style="list-style-type: none">CustomersEmployeesInvestors and shareholdersGovernment agencies (in Thailand and Lao PDR)Suppliers and contractors	<div><div><div>+</div></div><div>Corporate governance enables CKPower to conduct its business transparently, ethically, and with integrity, have efficient and effective management systems, foster trust, and meet the expectations of all stakeholders throughout the supply chain. It also mitigates risks arising from non-compliance with relevant regulations, standards, and laws.</div></div> <div><div><div>-</div></div><div>Without corporate governance, stakeholders might lose confidence in the organization, and violations of the business code of conduct may occur.</div></div>	<div><div></div></div>	<div><div><div></div><div></div><div></div><div></div><div></div></div></div>	<ul style="list-style-type: none">Establish corporate governance policies and guidelines, such as a corporate governance policy, a risk management policy, a business code of conduct, and anti-corruption guidelines.Conduct corporate risk assessment to evaluate and monitor risk management measures and keep risk within the risk appetite.Organize code of conduct training for employees.Issue communications and educate personnel on corporate governance through Compliance Journal on a quarterly basis.Create a whistleblowing channel.	<div><div><div>12RESPONSIBLE CONSUMPTION AND PRODUCTION</div><div>16PEACE, JUSTICE AND STRONG INSTITUTIONS</div></div></div>	

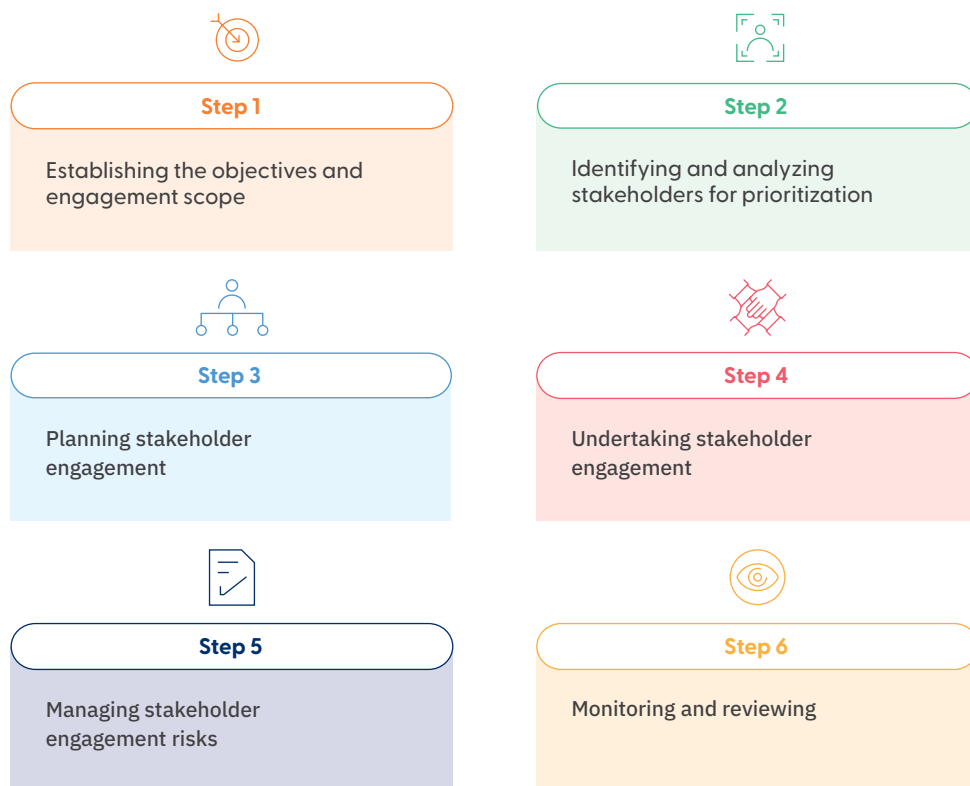
Relevant Stakeholders	Impacts on Stakeholders	Types of impact		Financial impacts (On a scale of 5)	Actions	Relevant SDGs
		Actual	Potential			
Innovation Management						
<ul style="list-style-type: none">CustomersEmployeesSuppliers and contractors	<div><div><div>+</div></div><div><ul style="list-style-type: none">Innovation management can enhance operational efficiency and promote business growth to meet customer demand.Stakeholders are equipped with knowledge for innovation development.</div></div>	<div><div></div></div>		<div><div><div></div><div></div><div></div><div></div><div></div></div></div>	<ul style="list-style-type: none">CKPower has established guidelines for developing innovation knowledge, beginning with personnel development and network building to further build upon its innovations.Promote innovation diffusion to external stakeholders.Apply innovation to social, community, and environmental development.	<div><div><div><div>4</div><div>QUALITY EDUCATION</div></div><div><div>9</div><div>INDUSTRY, INNOVATION AND INFRASTRUCTURE</div></div><div><div>13</div><div>CLIMATE ACTION</div></div><div><div>17</div><div>PARTNERSHIPS FOR THE GOALS</div></div></div></div>
System Reliability and Availability						
<ul style="list-style-type: none">CustomersInvestors and shareholdersSuppliers and contractors	<div><div><div>+</div></div><div><p>CKPower enjoys system reliability without interruptions, enabling it to meet demand and foster confidence among stakeholders.</p></div></div>	<div><div></div></div>		<div><div><div></div><div></div><div></div><div></div><div></div></div></div>	<ul style="list-style-type: none">Establish efficient annual power production and delivery plans.Assess and monitor the effectiveness of power plant operations.Optimize the electricity delivery systems using advanced technology and innovation.Arrange for system inspections by experts according to action plans and international standards.Formulate regular power plant maintenance plans.Promote the development of operational knowledge among operators.	<div><div><div><div>7</div><div>AFFORDABLE AND CLEAN ENERGY</div></div><div><div>9</div><div>INDUSTRY, INNOVATION AND INFRASTRUCTURE</div></div><div><div>12</div><div>RESPONSIBLE CONSUMPTION AND PRODUCTION</div></div></div></div>
	<div><div><div>-</div></div><div><p>Production disruptions can have direct and indirect financial impacts.</p></div></div>		<div><div></div></div>	<div><div><div></div></div></div>		

Relevant Stakeholders	Impacts on Stakeholders	Types of impact		Financial impacts (On a scale of 5)	Actions	Relevant SDGs
		Actual	Potential			
Risk and Crisis Management, Cybersecurity, and Data Privacy						
<ul style="list-style-type: none">CustomersEmployeesInvestors and shareholdersGovernment agencies (in Thailand and Lao PDR)Communities and societySuppliers and contractors	<div><div>+</div><p>Prudent risk and crisis management helps equip the Company against potential risks, reduce negative impacts, and fosters stakeholder confidence.</p></div>	<div><div></div></div>	<div><div><div></div><div></div><div></div><div></div><div></div></div></div>	<ul style="list-style-type: none">Establish a risk management process and identify emerging risks.Foster a risk culture.Conduct corporate risk assessment to evaluate and monitor risk management measures and keep risk within the risk appetite.	<div><div></div><div></div></div>	
	<div><div>-</div><p>Without proper actions, the overall management may be affected, resulting in business disruptions and affecting the satisfaction of stakeholders.</p></div>	<div><div></div></div>	<div><div><div></div><div></div><div></div><div></div><div></div></div></div>			<ul style="list-style-type: none">CKPower regularly assesses its information security system and power plant operating systems.CKPower has established the roles and responsibilities related to information security to ensure the proper safeguarding of vital information.Communicate to executives and employees at all levels to ensure understanding of cybersecurity and data privacy.
Business Model Resilience						
<ul style="list-style-type: none">CustomersEmployeesInvestors and shareholders	<div><div>+</div><p>Business resilience and adaptability to changes in business directions can help CKPower achieve long-term business stability.</p></div>	<div><div></div></div>	<div><div><div></div><div></div><div></div><div></div><div></div></div></div>	<ul style="list-style-type: none">Establish concrete operational strategies and guidelines.Increase internal and external collaboration.Increase business expansion geographically.Seek further opportunities to conduct renewable energy certificates (RECs) business to meet the emissions targets of the organization and stakeholders.	<div><div></div><div></div><div></div><div></div><div></div></div>	

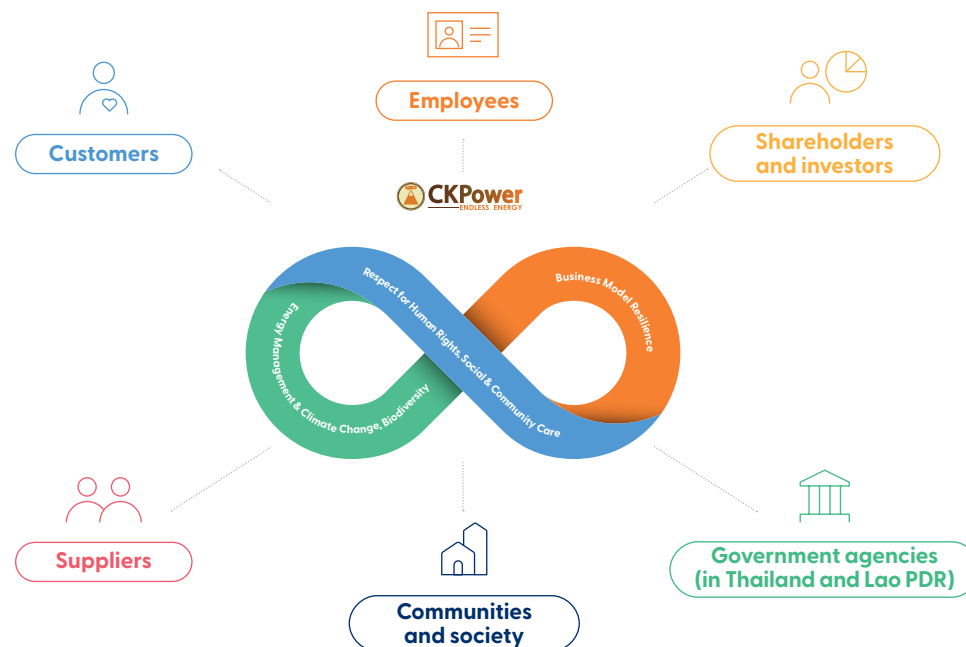
Approach to Stakeholder Engagement

CKPower acknowledges the integral role stakeholder opinions play in optimizing its business operations. To this end, it has established a stakeholder engagement policy in order to prioritize and understand stakeholder perspectives and expectations in the formulation of strategies and management approaches. In addition, CKPower reviews stakeholder engagement activities and channels on a yearly basis to assure all stakeholders that they have equal opportunities to participate and offer comments in a transparent and suitable manner.

CKPower's stakeholder engagement process consists of the following steps:



In relation to the process above, CKPower has identified 6 major stakeholder groups, namely:



CKPower's stakeholder engagement process is compliant with the AA1000 Stakeholder Engagement Standard (AA1000SES), in which stakeholders positively or negatively affected in social, environmental, or governance and economic dimensions are identified along with their connection to human rights issues and stakeholders related to core and supporting activities in the value chain of the business. Stakeholders are efficiently identified through the consideration of the engagement scope according to their influence on the Company and the interdependence level between the stakeholders and the Company.

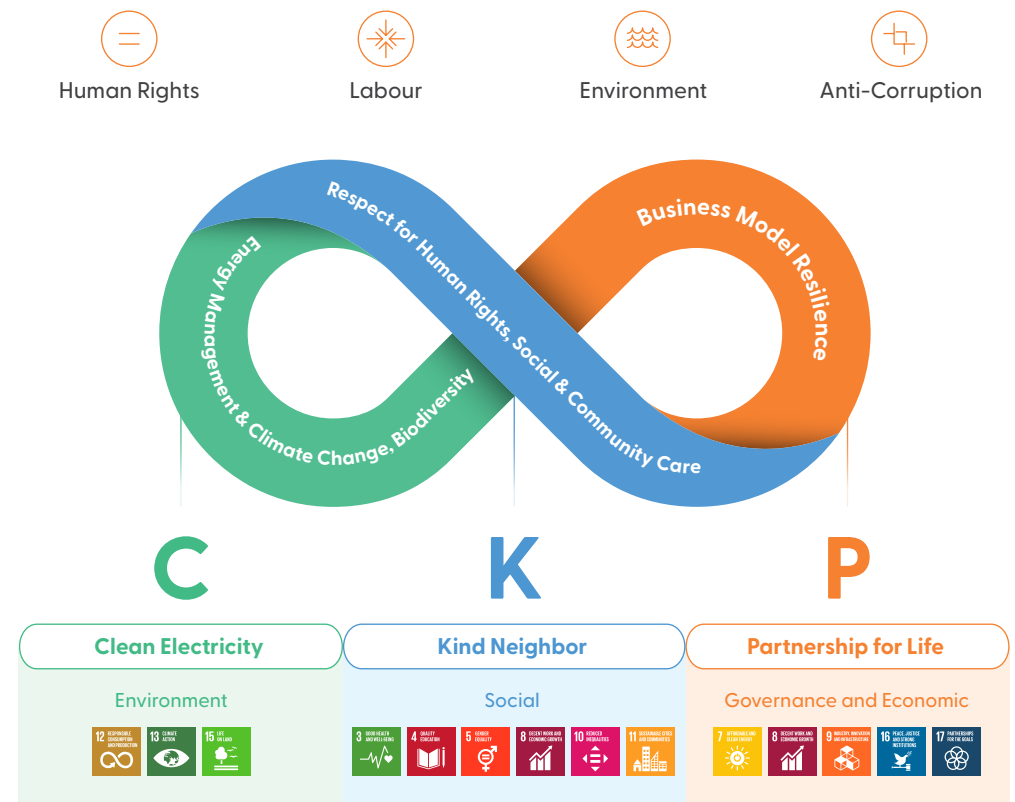
Supporting the Sustainable Development Goals (SDGs)

As one of the region's largest producers of electricity from renewables with one of the lowest carbon footprints, CKPower strives to co-create value with its stakeholders by demonstrating its responsibility to the world and society. The Company also seeks to drive its sustainability actions by applying national and international sustainability principles and ESG-led business practices to the formulation of its sustainable development strategies and utilizing the United Nations' Sustainable Development Goals (SDGs) in establishing sustainability targets in different dimensions, which are connected to 13 out of the 17 SDGs. This is to ensure that the Company's targets and actions meet SDGs in a suitable way and aligns with its vision, missions, nature of business, strategic plans, as well as material topics and stakeholder expectations.

Dimensions	SDGs
Environment	  
Social	     
Governance and Economic	    

Joining the United Nations Global Compact (UNGC)

CKPower recognizes the significance of fulfilling its role as a good corporate citizen in the global community and thus strives to advance, support, and foster a good quality of life in society. To this end, CKPower has joined the United Nations Global Compact (UN Global Compact) as a member to demonstrate its intent and commitment to sustainable business practices in accordance with its 10 international principles as well as its fundamental responsibility with regard to human rights, labour, environmental, and anti-corruption efforts, in order to raise awareness of adherence to such principles in business practice in Thailand's business sector.



Pathway to Net Zero GHG emissions

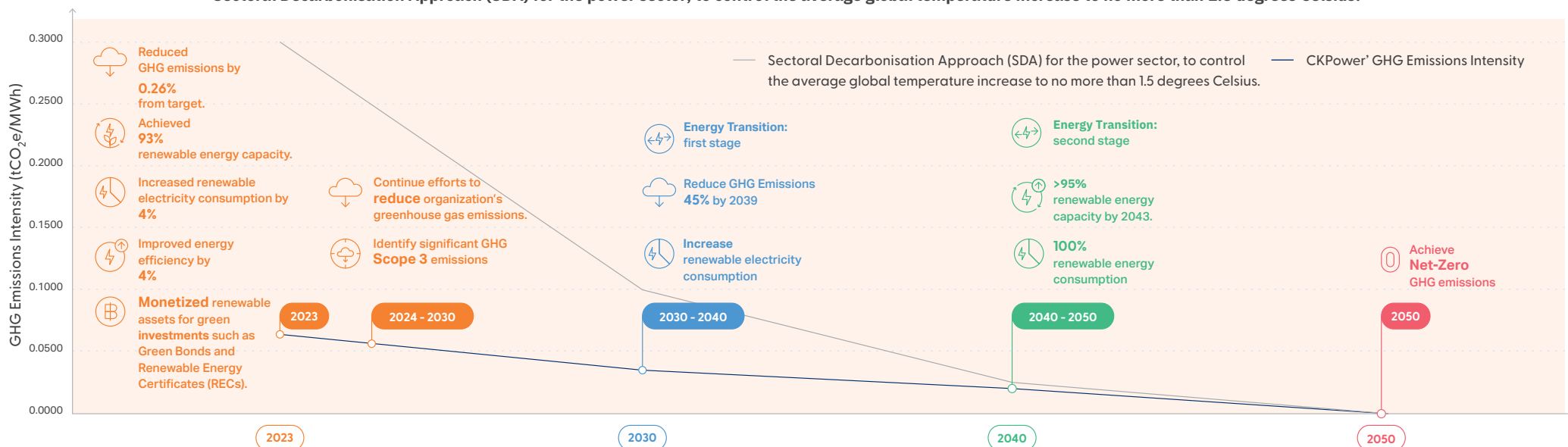
CKPower is driven by the concept of **"energy transition"** and focuses on producing and transitioning to renewable energy sources such as hydropower and solar energy. This represents a sustainable investment opportunity in the renewable energy sector, which will continuously increase in value in the future. An important aspect of preparation is the transition from traditional energy or fossil fuels to clean energy. Over the past decade, CKPower has been dedicated to generating clean electricity to enhance Thailand's energy security and elevate business operations with innovations that prioritize social and environmental benefits, aiming to advance sustainable development and a low-carbon society. Through constant development, CKPower has demonstrated to the world that **"hydroelectric power is a sustainable clean energy"** and contributes to a low-carbon society, aligning with the Company's vision to become one of the region's largest producers of electricity from renewables with one of the lowest carbon footprints.

CKPower Group's energy transition pathway for sustainability is driven by a three-keys strategy, "CKP", which encompasses key sustainability dimensions: environment (C – Clean Electricity),

social (K – Kind Neighbor), and governance and economic (P – Partnership for Life). This strategy aims to position CKPower as one of the region's largest producers of electricity from renewables with one of the lowest carbon footprints, while also promoting the balance of the ecosystem, the environment, and biodiversity and promoting well-being in the community and society. To this end, CKPower strives to build awareness and cooperation with both internal and external agencies and foster the corporate DNA among its employees, who serve as the vital driver of the transition. These initiatives under the "C - Clean Electricity" dimension are united under the sustainable energy transition strategy, under which CKPower seeks to play a vital role in actively putting climate management plans into practice. As part of the joint operation **"Together for Implementation,"** CKPower will step up its decarbonization efforts in pursuit of Net-Zero GHG emissions, in line with Thailand's and the global community's intentions as outlined in the Paris Agreement, which seeks to limit the global average temperature increase to no more than 1.5 degrees Celsius within two decades. CKPower has made significant contribution to the mitigation of impacts of the ever-intensifying climate change.

CKPower - Pathway to Net Zero

Sectoral Decarbonisation Approach (SDA) for the power sector, to control the average global temperature increase to no more than 1.5 degrees Celsius.



Performing According to Science-Based Targets for the Electricity Production Industry

In line with the Science Based Target initiative, CKPower has established greenhouse gas reduction targets for the electricity production industry to ensure alignment with global objectives. Adhering to the **Sectoral Decarbonisation Approach (SDA)**, our aim is to limit global temperature rise to **below 1.5 degrees Celsius**, in accordance with the Paris Agreement. Utilizing 2023 data as a baseline, we have formulated short-term, mid-term, and long-term targets to achieve **net-zero greenhouse gas emissions by 2050**. To this end, our strategic approach, coined "**1 Reduce 4 Enhance**," encompasses **reducing energy consumption, enhancing efficiency, increasing production capacity**, adapting to changes, and **creating added value**.

In the short term, CKPower has developed energy and greenhouse gas emission databases, setting targets to **reduce organizational emissions** by 0.26%. Additionally, we aim to **increase energy efficiency** in electricity production by 4% and **boost renewable energy capacity** to 93%. Furthermore, we are actively **creating added value** by facilitating green investment opportunities, such as selling Renewable Energy Certificates (RECs) and issuing Green Bonds.

In the mid-term, CKPower is implementing continuous energy efficiency and conservation projects to reduce emissions, guided by the SDA. We are also expanding investments in renewable energy production capacity.

Looking ahead to **the long term**, CKPower has set a goal to reduce organizational greenhouse gas emissions by 45%, ultimately achieving net-zero emissions by 2050. This involves further enhancing energy efficiency and conservation measures, alongside significant investments in expanding renewable energy capacity, exceeding 95%.

Through these targeted initiatives and strategic investments, CKPower is committed to playing its part in mitigating climate change and achieving a sustainable, net-zero future.

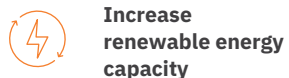
Commitment

CKPower demonstrates unwavering commitment to achieving Net-Zero GHG emissions by , in strict adherence to **Science-Based Targets (SBT)** for the energy industry, Sustainable Development Goal **(SDG) 13: Climate Action**, and **Task Force on Climate-Related Financial Disclosures (TCFD)** guidelines. Specializing in hydroelectric and solar power generation, CKPower significantly bolsters Thailand's energy stability and security while prioritizing sustainable practices. Transitioning from fossil fuels to clean energy, particularly through sustainable hydroelectric projects, is crucial for environmental and societal harmony, ensuring hydropower remains a reliable source of green energy. CKPower actively collaborates for an energy transition, leveraging cutting-edge innovations to advance business development towards achieving Net-Zero GHG emissions by 2050.

Net-Zero Emissions Strategies



A robust climate change action plan across the organization, guided by a 5-year strategy (2022-2026). This includes a comprehensive energy management and climate change strategy, outlining the transition to Net-Zero GHG emissions through the "**1 Reduce 4 Improve**" approach. Strategies encompass emission reduction, energy efficiency enhancement, renewable capacity augmentation, renewable energy consumption promotion, and renewable asset monetization. Integrated into the organization's risk management plan, these strategies come with clear targets. Furthermore, CKPower fosters engineering knowledge and efficient resource management across all personnel levels, facilitating learning and improving work practices to drive energy and climate change innovation for optimized operational systems. The company also prepares for **internal carbon pricing (ICP)** mechanisms, opening avenues for green finance to reduce greenhouse gas emissions and solidify its position as a regional leader in renewable electricity production with minimal carbon footprint.



95%

Clean Electricity

45 →

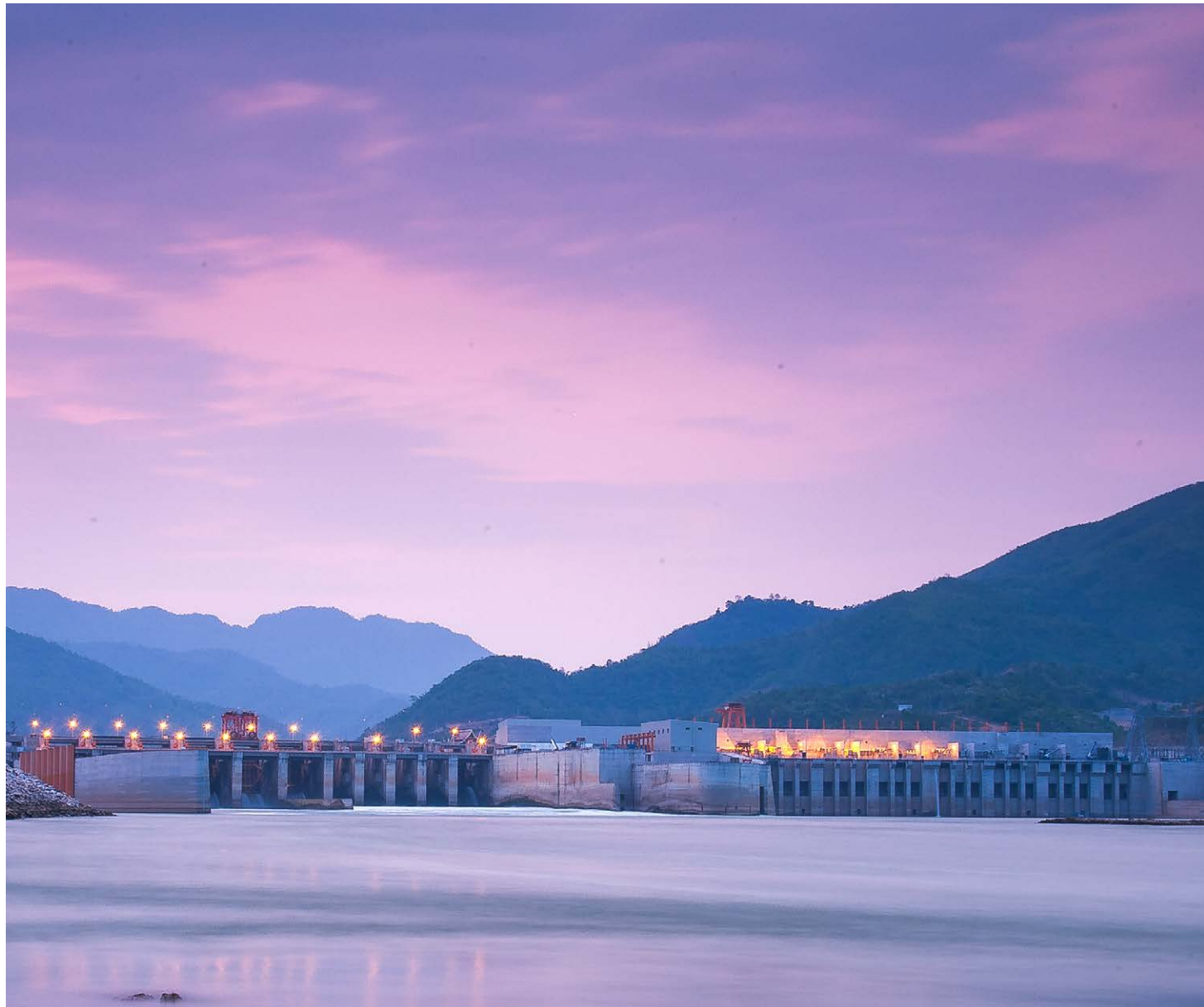
Energy Management and Climate Change

54 →

Environmental Management

65 →

Biodiversity



Energy Management and Climate Change



SDGs



Long-term Targets



Energy Consumption



100%

Renewable electricity consumption within the organization by 2043



>95%

Renewable energy capacity by 2043



92%

Renewable electricity consumption within the organization



93%

Renewable energy capacity



93%

Renewable electricity consumption within the organization



93%

Renewable energy capacity



Energy consumption

≤2,113,371.85
MWh



Energy consumption

2,108,270.85
MWh



Reduction of energy consumption

5,101
MWh



Energy intensity

≤0.20
MWh/MWh



Energy intensity

0.20
MWh/MWh

Long-term Targets



GHG Emissions



Net-Zero

GHG emissions by 2050

2023 Targets



GHG Scope 1 & 2 emissions
≤723,673.98
tCO₂e



GHG Scope 1 emissions
≤721,469.18
tCO₂e



GHG Scope 2 emissions
≤2,204.80
tCO₂e



GHG emissions intensity
≤0.0695
tCO₂e/MWh

2023 Achievements



GHG Scope 1 & 2 emissions
721,781.47
tCO₂e



GHG Scope 1 emissions
719,930.32
tCO₂e



GHG Scope 2 emissions
1,851.15
tCO₂e



GHG emissions intensity
0.0693
tCO₂e/MWh

Message from a Stakeholder



“According to the information disclosed to customers, CKPower has intentions to expand its business towards the establishment of new renewables energy power plants, with the objective of supplying clean electricity to EGAT. We believe that the fact that CKPower is increasing the capacity of its clean electricity power plants is a positive development as the clean energy produced will serve as a substitute for fossil fuels and support Thailand’s energy transition policy and greenhouse gas reduction efforts.”

Mr. Chairerk Thammarak,
Chief, IPP Power Purchase Agreement Management
Department, Electricity Generating Authority of Thailand (EGAT)
Stakeholder Group, (Customer)

Impact on Business

The global impacts of climate change, which significantly affect nature and all living beings, have become a driving force for intensifying worldwide efforts to reduce greenhouse gas emissions. Thailand has participated in the international effort by signing the Paris Agreement under the United Nations Framework Convention on Climate Change. This agreement aims to control the increase in the world’s average temperature to below 1.5 degrees Celsius and includes nationally determined contributions (NDCs) to reduce greenhouse gases and address climate change. To support these goals, CKPower has shown its determination by setting a strategy to achieve Net-Zero Greenhouse Gas Emissions by the year 2050. We are transitioning towards clean energy, using renewable energy sources to prepare ourselves to become a leading global renewable energy electricity producer. This transition also aligns with our strength in delivering stable and reliable energy, effectively meeting the expectations of our stakeholders.

Challenges and Opportunities

A sustainable energy transition represents a significant challenge for the energy production industry. CKPower is acutely aware of the energy sector’s crucial role in mitigating the effects that contribute to climate change. As a result, we are advancing our Net-Zero GHG emissions policy and are actively increasing our renewable energy portfolio. Moreover, the Company remains committed to sourcing and producing electricity from renewable, preparing for the anticipated rise in the demand for clean energy. To support these initiatives, CKPower is also exploring financial opportunities like issuing Green Bonds to fund renewable energy projects and investigating other financial instruments for environmental benefit, such as Renewable Energy Certificates

(RECs) and Carbon Credits derived from renewable energy, offering additional avenues to expand our renewable energy-based electricity business.

The journey towards achieving our Net-Zero GHG emissions target is a challenging aspect of our business, given the significant contribution of the energy sector to greenhouse gas emissions. In response, CKPower has set a goal to enhance our renewable energy production capacity. We are conducting risk assessments to manage the challenges posed by climate change and to ensure efficient energy management. This approach not only seeks to benefit from the energy transition but also aims to sustainably meet and balance the expectations of our stakeholders.

Commitment

CKPower is dedicated to reaching a Net-Zero emissions target by the year 2050, and aims to increase its renewable energy production, like hydropower and solar power, to exceed 95% by 2043. The company is also focused on supporting and driving the creation and development of innovations to reduce energy consumption and electricity production efficiency, and raise awareness about energy conservation throughout the organizational value chain. Furthermore, CKPower has integrated the United Nations’ Sustainable Development Goals (SDGs) into its business operations for a sustainable energy transition, particularly focusing on Goal 7: Affordable and Clean Energy, and Goal 13: Climate Action. In response to the outcomes of the 28th United Nations Climate Change Conference (COP 28), CKPower is committed to maintaining global temperature rise below 1.5 degrees Celsius and is intensifying its continuous efforts to reduce GHG emissions.

Message from CKPower



“We are witnessing impacts of climate change, such as prolonged hot spells, unseasonal rains, as well as droughts and floods. With the pledge of the international community to keep global warming under 1.5 degrees celsius and national green energy policies, coupled with the belief that fossil fuel sources will soon be depleted and their costs will rise, CKPower strives to develop and harness alternative energy sources and energy storage technology and remains committed to hydroelectric and solar power production to meet the demand for clean electricity in Thailand and the region, while also reducing the impact of greenhouse gas emissions.”

Mr. Sakolkiat Puangpatcharakul

Senior Expert – Civil Engineering Division
Head of Ambition - Energy Management
and Climate Change

Operational Guidelines

Energy Management and Climate Change Governance

CKPower has formed an Energy Management and Climate Change Committee, overseen by the Corporate Governance, Risk Management, and Sustainable Development Committee and driven by the **Sustainable Development Steering Committee**. This body is charged with setting strategic directions and goals in accordance with sustainability and climate change policies and operational frameworks, ensuring compliance with international standards and trends. This committee also oversees the implementation and monitoring of energy and climate change management strategies, in collaboration with the working groups from all power plants. In addition, CKPower has defined roles, responsibilities, performance indicators, and remuneration for executives in charge of each power plant's operations, who are tasked with overseeing sustainability and climate change initiatives, ensuring they align with the company's goals. These executives collaborate with the **Sustainability Supporting and Disclosure Working Team** to provide quarterly performance reports to the Board of Directors. To further bolster its operations in sustainability and climate change, CKPower has established energy conservation and climate change policies, setting organizational targets for reducing energy usage and greenhouse gas emissions across both office and production processes. The aim is to enhance awareness about energy conservation and climate change within all company units, thereby motivating employees to develop innovative solutions for reducing energy consumption, improving electricity production efficiency, and lowering GHG emissions, all in pursuit of achieving the Net-Zero emissions goal.























Climate Risk Management

CKPower has adopted principles and practices in line with the Task Force on Climate-related Financial Disclosures (TCFD) framework to develop its strategies for energy management and addressing climate change. This involves conducting risk assessments and establishing climate management practices in accordance with internationally recognized guidelines. The company has implemented a continuous process to assess risks and changes related to climate, using international standards to define targets and approaches for its Energy Management and Climate Change Roadmap. This roadmap aims to prepare and respond effectively to the evolving climate change scenarios.

Energy Management and Climate Change Strategies

Based on the principles derived from the operational framework for risk assessment and climate change management and the guidelines of the Task Force on Climate-Related Financial Disclosures (TCFD), CKPower has developed energy management and climate change strategies, with an assessment process in accordance with international standards, in order to continuously formulate an Energy Management and Climate Change Roadmap.

1 REDUCE 4 IMPROVE

Strategies	Short-Term Plans	Medium-Term Plans	Long-Term Plans
5 Strategies  REDUCE Reduce GHG Emissions	2022 - 2023  Developing a database on the organization's energy consumption and GHG emissions.  Conducting annual climate-related risk and opportunity assessments.  Developing climate change strategies.	2024 - 2026  Conducting annual climate-related risk and opportunity assessments.	2027 - 2050  Reducing GHG emissions 45% by 2039.  Striving towards Net-Zero GHG emissions by 2050.
 IMPROVE Improve Energy Efficiency	 Implementing measures and increasing investments in decarbonization & contributing to GHG reduction projects.	 Continuously optimizing energy efficiency.  Conducting energy conservation and energy cost saving projects.	
 IMPROVE Increase Renewable Energy Capacity	 93% Renewable Energy capacity	 Expanding renewable energy capacity	 95% Renewable Energy capacity
 IMPROVE Shift to Renewable Energy Consumption	 100% renewable electricity consumption include utilizing Renewable Energy Certificates (RECs).	 Offsetting residul GHG emissions and increasing GHG removals.	
 IMPROVE Monetize Renewable Assets	 Issuing green bonds. Sale of Renewable Energy Certificates (RECs)	 Preparing for the implementation of Internal Carbon Pricing.	 Diversifying into new businesses that leverage advanced renewable energy technologies

Green Financing Activities in 2023

Green Bonds

In 2023, Xayaburi Power Co., Ltd. (XPCL) issued green bonds valued at THB 3,500 million. These bonds have a maturity of three years and were issued under a framework verified by Det Norske Veritas (DNV), a globally recognized accreditor. This framework aligns with the 2021 Green Bond Principles and the 2018 ASEAN Green Bond Standards.

The issuance of these green bonds earned XPCL two prestigious awards: **the Best Green Bond Hydropower Plant Framework Award** at the International Finance Awards, organized by International Finance Magazine, a leading business and finance publication, and the **'Most Sustainable Hydro Power Company'** at the Global Economics Awards in the Utility & Energy category, hosted by The Global Economics, a prominent UK finance magazine.

Internal Carbon Pricing: ICP

CKPower is studying the adoption of Internal Carbon Pricing (ICP) to ensure proper implementation within the organization, prepare for government regulations, and analyze additional costs and returns from GHG emission reduction in order to formulate its GHG management plans and strategies.

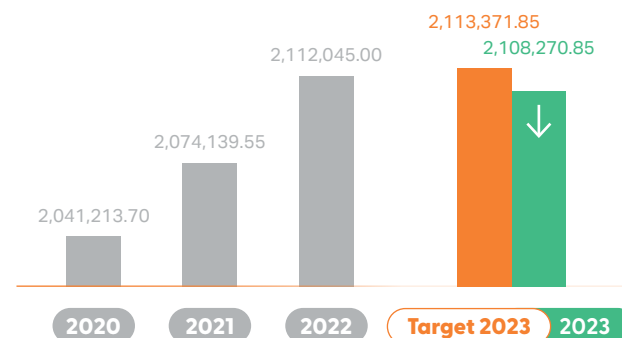
Climate Change and Energy Management Performance

Energy Consumption

(MWh)



Energy consumption decreased **5,101 MWh** from the target.

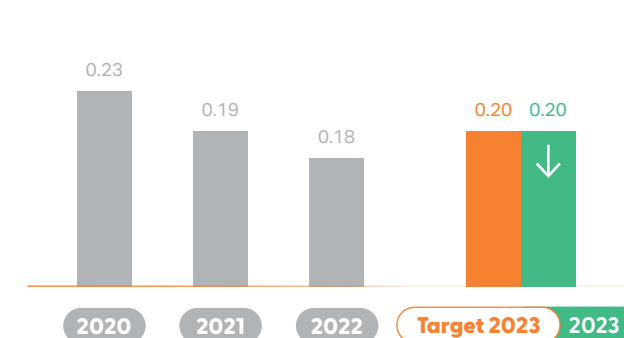


Energy Intensity

(MWh/MWh)



Energy intensity decreased **0.24%** from the target.

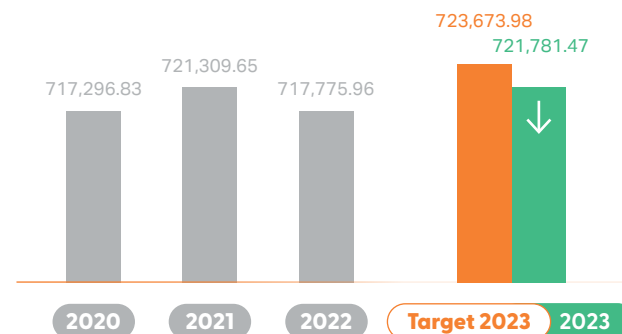


GHG Scope 1 & 2 Emissions

(tCO₂e)



GHG Scope 1 & 2 emissions decreased **1,892.51 tCO₂e** from the target.

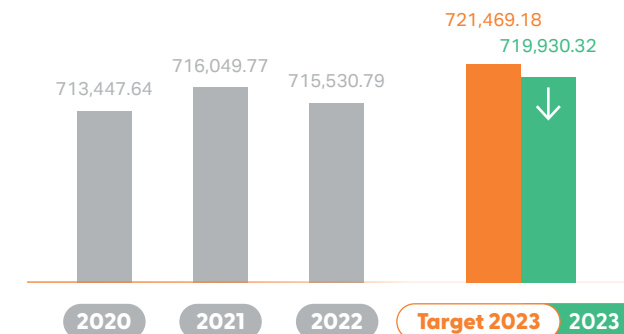


GHG Scope 1 Emissions

(tCO₂e)



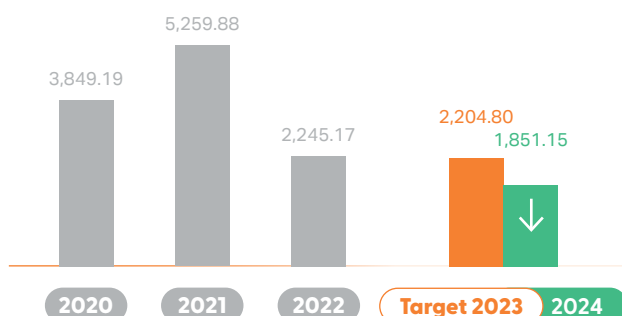
GHG Scope 1 emissions decreased **1,538.86 tCO₂e** from the target.



GHG Scope 2 Emissions

(tCO₂e)

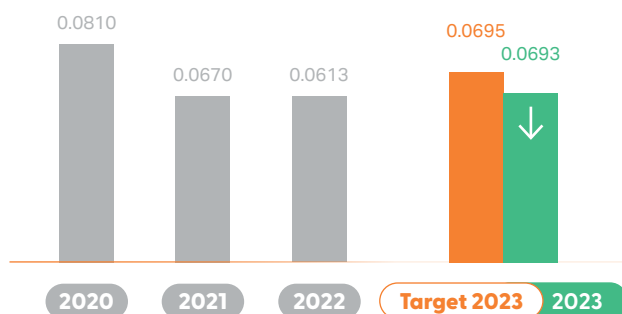
↓ GHG Scope 2 emissions decreased **353.65 tCO₂e** from the target.



GHG Emissions Intensity

(tCO₂e/MWh)

↓ GHG emissions intensity decreased **0.26%** from the target.



Project Highlights in 2023

Office Electricity Consumption Reduction Project

CKPower has recognized the importance of energy conservation and efficient energy use. To engage all employees in this initiative, an energy-saving project in offices was launched. This project aimed not only to reduce expenses but also to help mitigate global warming and foster a deeper awareness of resource efficiency and value. The project was communicated to employees via the company's intranet, encouraging them to adopt the '4U's approach: ปิด - Switch off, ปรับ - Adjust, เปลี่ยน - Change, and ปลugged - Unplug. Stickers were also placed in areas of electricity use to reinforce this message. As a result, there was a 15 MWh reduction in electricity consumption compared to the previous year, amounting to a 6.79% decrease. This led to cost savings of 119,520 baht. On average, this represents a reduction of 0.15 MWh and a cost saving of 1,200 baht per person compared to the previous year.

Internal Combustion Engine to PHEV Transition Project

CKPower is committed to continuously reducing energy consumption towards a low-carbon society and aims to achieve Net Zero Greenhouse Gas Emissions by 2050. The management has set a goal to reduce fossil fuel consumption by transitioning all vehicles used in power plants and company cars to electric vehicles. This initiative is in line with the company's goal to reduce air pollution emissions by 2030. The transition project began in 2022, and out of the total 34 internal combustion engine vehicles, 7 have already been replaced with Plug-In Hybrid Vehicles.

Energy Saving



Reduction in electricity consumption compared to the previous year (%)

6.79



Cost Saving (baht)

119,520

Internal Combustion Engine to PHEV Transition Project



Replaced with Plug-In Hybrid Vehicles (Cars)

7

Lower Gas Pressure - Better Heat Rate Project

The Bangpa-in Cogeneration Power Plant has developed a more efficient electricity production system by optimizing fuel (gas) pressure to better match the requirements of its machinery. This adjustment has led to a decrease in the energy used by air compressors in the electricity production process.

Steam Turbine Load Adjustment Project

At Bangpa-in Cogeneration Power Plant, there has been an enhancement in the upper limit of the steam turbine's capacity to effectively harness and convert excess steam from the Heat Recovery Steam Generators (HRSG) into electricity. This adjustment is particularly beneficial during times when the demand for steam from customers is lower than usual.

Deactivation of a Cooling Fan during Off-peak Periods (00:00-06:00 hrs.)

During off-peak hours at night, Bangpa-in Cogeneration Power Plant's production load fell below the heat dissipation capacity of the cooling towers. This, coupled with lower temperatures at night, prompted the operation team to deactivate the cooling tower fans while the cooling towers were still operational in order to reduce the electricity consumption by the fans. The temperature of the cooling water was monitored to prevent it from exceeding the control limits.

Cooling Tower Optimization Project

Bangpa-in Cogeneration Power Plant further improved its cooling system by analyzing the heat dissipation capacity at different times of the day and optimizing the functions of the equipment accordingly, thus reducing the energy consumption by the equipment in the cooling system.

Online Water Wash Project

Bangpa-in Cogeneration is powered by gas turbines, where air is compressed before entering the combustion chamber. To maintain air compression efficiency, an online water wash has been implemented to clean the air compression system. While this does not require a shutdown, the production capacity needs to be lowered for the washing, and as such, the cleaning intervals have been optimized to reduce the loss from capacity lowering during each wash.

Off-peak Gas Compressor Power Reduction Project

The engineering department of Bangpa-in Cogeneration Power Plant discovered that the excessive pressure of the gas compressor activated the excess flow valve system, resulting in energy loss. To this end, they studied and improved the excess flow valve system and reduced the pressure of the gas leaving the pistons to ensure that the valve system would not be triggered.

Electric Vehicle Project

To transition from diesel-powered to electric vehicles, the Xayaburi Hydroelectric Power Plant replaced a company car for employee transportation and two three-wheel pickup trucks for housekeeping with electric counterparts.



Performance of Energy Conservation Projects in 2023



Reduction in energy consumption
MWh

5,101



Reduction in GHG emissions
tCO₂e/year

2,051



Reduction in energy costs
million baht

18.97

Performance

Project	Type of energy reduction	Reduction in energy consumption (MWh)	Reduction in GHG emissions (tCO ₂ e/year)	Reduction in energy costs (baht/year)
Office Electricity Saving Project	Electricity	15	7.47	119,520
Internal Combustion Engine to PHEV Transition Project	Fuel	58	15.45	190,643
Lower Gas Pressure - Better Heat Rate Project	Fuel	688	317.91	2,561,520
Steam Turbine Load Adjustment Project	Fuel	1,422	657.21	5,295,432
Deactivation of a Cooling Fan during Off-peak Periods (00:00-06:00 hrs.)	Fuel	94	43.52	350,648
Cooling Tower Optimization Project	Fuel	86	39.75	320,317
Online Water Wash Project	Fuel	1,839	847.37	6,827,649
Off-peak Gas Compressor Power Reduction Project	Fuel	261	120.53	971,128
Electric Vehicle Project	Fuel	638	1.75	2,333,664

Environmental Management

2023 Targets



Law



NO

case
of violation of
environmental
laws or regulations



0

Baht
in fine for violation
of environmental
laws or regulations



0

Baht
in expected fine
for violation of
environmental laws
or regulations by
the end of the year

Water Resource



Total water
withdrawal

≤8,535.62
million liters



The total reduction of
water withdrawal

28
million liters



The total water
withdrawal per
production unit

≤819.76
liters/MWh



The total reduction
of water withdrawal
per production unit

2.69
liters/MWh



100%
of wastewater to
be treated before
discharge



NO

case
of violation of
environmental
laws or regulations



0

Baht
in fine for violation
of environmental
laws or regulations



0

Baht
in expected fine
for violation of
environmental laws
or regulations by
the end of the year



Total water
withdrawal

8,512.74
million liters



The total reduction of
water withdrawal

22.88
million liters



The total water
withdrawal per
production unit

817.56
liters/MWh



The total reduction
of water withdrawal
per production unit

2.20
liters/MWh



100%
of wastewater to
be treated before
discharge

2023 Targets

Waste Management



Total weight of hazardous waste generated

≤25
metric tons



Total weight of non-hazardous waste

≤120
metric tons



Total weight of waste generated

≤145
metric tons



Reduce

0.02
metric tons of total hazardous waste to landfill of from the year 2022



Total weight of hazardous waste per production unit

≤0.0024
kg/MWh



Total weight of non-hazardous waste per production unit

≤0.01152
kg/MWh



Total weight of waste generated per production unit

≤0.0139
kg/MWh



2023 Achievements



Total weight of hazardous waste generated

24.09
metric tons



Total weight of non-hazardous waste

119.49
metric tons



Total weight of waste generated

143.58
metric tons



Reduce

0.10
metric tons of total hazardous waste to landfill of from the year 2022



Total weight of hazardous waste per production unit

0.0023
kg/MWh



Total weight of non-hazardous waste per production unit

0.01148
kg/MWh



Total weight of waste generated per production unit

0.0138
kg/MWh



The total weight of waste that underwent reuse and/or recycling amounted to

12.77
metric tons

2023 Targets

Air Pollution



Total NOx emitted

≤708.79
metric tons



Total SOx emitted

≤38.28
metric tons



Total Particulate Matter (PM) emitted

≤16.86
metric tons



Total NOx emitted per production unit

≤0.4249
kg/MWh



Total SOx emitted per production unit

≤0.02294
kg/MWh



Total amount of Particulate Matter (PM) emitted per production unit

≤0.0101
kg/MWh



2023 Achievements



Total NOx emitted

703.55
metric tons



Total SOx emitted

37.99
metric tons



Total Particulate Matter (PM) emitted

16.73
metric tons



Total NOx emitted per production unit

0.4217
kg/MWh



Total SOx emitted per production unit

0.02277
kg/MWh



Total amount of Particulate Matter (PM) emitted per production unit

0.0100
kg/MWh

Message from stakeholders



“The majority of CKPower power plants primarily rely on renewable energy, meaning they promote the energy transition, are environmentally friendly, and help reduce fossil fuel consumption. With respect to the environment, we believe in CKPower’s environmental management is fairly effective as the ISO 14001 environmental management system standards have been implemented to the power plants, Which arises from waste disposal policies and good environmental operational measures.

Mr. Thanakrit Phothong

Director of Bangpa-In Industrial Estate Office
Stakeholder – Government Agency

Impact on Business

As a producer of electricity from renewable sources, CKPower acknowledges the importance of conserving natural resources and protecting the environment. To this end, CKPower has implemented policies to ensure the efficient and sustainable use of resources in production, thereby minimizing environmental impacts. This includes efforts to reduce resource consumption and implement efficient environmental management practices. Additionally, CKPower prioritizes the adoption of modern, eco-friendly technologies and conducts educational initiatives to raise awareness among stakeholders, fostering a culture of environmental conservation and sustainable practices.

Challenges and Opportunities

CKPower is aware that environmental quality is vital and natural resources are finite. As such, CKPower places great emphasis on designing eco-friendly business strategies and management approach, focusing on renewables electricity production to avoid and minimize environmental impacts and utilize finite resources to the greatest advantage, which is a key challenge of the power industry. To this end, CKPower strives to foster eco-consciousness, enrich employee knowledge, and give employees opportunities to exercise their creativity and develop environmental conservation projects and innovations. In addition, the Company operates in compliance with the laws and requirements set forth by regulatory agencies, with plans to further strengthen compliance for sustainable business growth.

Commitment

CKPower is committed to sustainability energy transition and has plans to increase renewable energy capacity to avoid and minimize impacts on natural resources and the environment. In addition, the Company has implemented an environmental policy as well as social and environmental guidelines to maximize resource efficiency. Furthermore, CKPower implements efficient environmental management in strict compliance with international standards and relevant laws, while also fostering employee development and promoting the adoption of advanced innovations and technologies to support its environmental activities.

Operational Guidelines

To ensure a sustainable energy transition, CKPower has consistently aimed to increase its renewable energy capacity by investing in hydropower and solar power plants. This demonstrates the Company’s awareness of environment significance and its commitment to stewardship in its electricity product. While operating cogeneration power plants that produce electricity

and steam through natural gas combustion, CKPower diligently monitors environmental quality and strives to improve production efficiency to minimize pollution. Additionally, the company applies technology to systematically monitor and enhance environmental quality to meet legal and international standards. CKPower also disseminates knowledge to both employees and external stakeholders for sustainable environmental management, collaborating with communities and society.

CKPower has obtained ISO 14001:2015 accreditation for its environmental management systems and has conducted organization-wide environmental impact assessments. These assessments include stakeholder engagement process on relevant environmental issues, impact mitigation and prevention measures and impact remediation efforts. Each power plant has has received operating approval from relevant regulatory bodies in compliance with the law. CKPower reports its performance as specified in environmental impact prevention and mitigation measures and undergoes environmental impact inspection. In 2023, CKPower underwent environmental data verification including water withdrawal, water consumption, water discharge, waste generation, and air pollutant emissions, conducted by EY Office Limited, an external verifier.

Water Management

Water plays a crucial role in CKPower’s hydroelectric power operations, constituting 90% of its total power output. Therefore, the company prioritizes efficient water management to maximize usage efficiency and collaborates across its supply chain to monitor water sources, aiming to prevent shortages. CKPower advocates for water efficiency in its offices and production processes, employing innovative technologies for water management and ensuring responsible water consumption throughout its production processes. Compliance with required standards for discharged water is rigorously maintained across all buildings and operational sites.

Message from CKPower



“Beyond initiatives aimed at the efficient utilization of natural resources, CKPower has implemented several additional environmental management projects. These include plans to reduce waste generation, implement paper recycling programs, and transition the company’s vehicle fleet from fossil fuel-powered vehicles to clean energy vehicles. Moreover, CKPower actively advocates for the adoption of green products within its organization and among its suppliers. By informing our partners of CKPower’s unwavering dedication to environmental stewardship, we aim to underscore the benefits and importance of preserving the environment while pursuing sustainable business practices.

Ms. Benjawan Sabua

General Manager – Administration Management
Sustainability Supporting and Disclosure Working Team –
Environmental Management

CKPower conducts qualitative and quantitative water risk assessments across its power plants using the AQUEDUCT Water Risk Atlas developed by the World Resources Institute (WRI). These assessments are conducted annually to identify areas experiencing water stress. Additionally, the company has implemented measures to enhance sustainable water management, leveraging suitable innovations and technologies to guarantee adequate water supplies for its operations.

Furthermore, CKPower studies the impact of water consumption on local communities and actively engages local residents and government agencies in water conservation efforts from upstream to downstream. Collaborative efforts with communities and society are aimed at establishing preventive and mitigation measures in a sustainable manner.

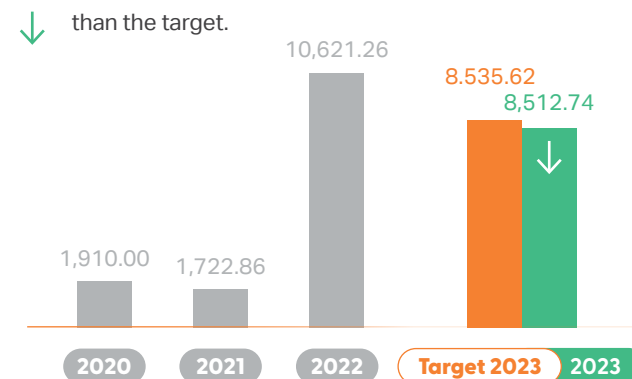
- **Cogeneration Power Plants:** Located in the Bangpa-in industrial estates, the cogeneration power plant has a water supply agreement with TTW Public Company Limited (TTW), which manages water within the estate. Water is drawn from the Chao Phraya River into the estate’s water production process. After usage, industrial wastewater is directed to the centralized wastewater treatment system of the Bangpa-In Industrial Estate, where TTW is responsible for treatment. Treated wastewater is stored in holding ponds for one day before discharge into the estate’s drainage canal for potential reuse. The Cogeneration Power Plant ensures that the quality of discharged water to meet legal requirements and the water quality standards of the industrial estate.
- **Hydroelectric Power Plants:** These plants utilize both surface and underground water sources for employee consumption. Water is reused within the facilities before discharge, and the quality of effluent is rigorously controlled to ensure compliance with legal requirements.
- **Solar Power Plants:** These power plants rely on a water supply system drawing from surface sources and reuse water within the facilities. Similar to hydroelectric plants, effluent quality is closely monitored to meet legal standards.

Water Management Performance

Total water withdrawal

(million liters)

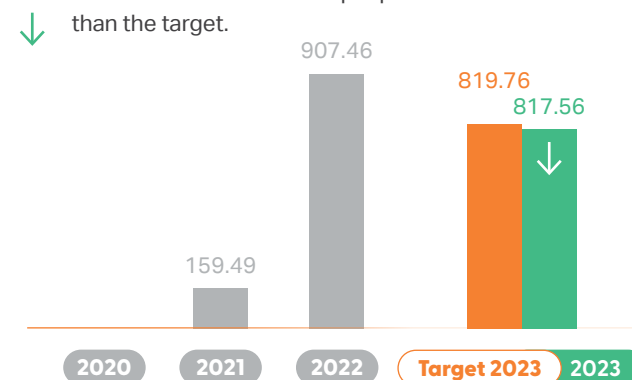
The total water withdrawal is **22.88 million liters** lower than the target.



Total water withdrawal per production unit

(liter/MWh)

The total water withdrawal per production is **0.27%** lower than the target.



Remark: CKPower expanded the scope of waste indicator data collection to cover Xayaburi Hydroelectric Power Plant, Nam Ngum 2 Hydroelectric Power Plant, and its headquarters for the first time in 2022.

Waste Management

CKPower has implemented protocols for managing the waste generated in its business activities to optimize waste management, placing emphasis on reducing waste generation at the source and maximizing waste reutilization. In addition, circular economy principles have been adopted to ensure efficient and sustainable waste management, and training on proper waste management is provided to employees.

01



Avoid
Avoid materials that produce waste that resists disposal.

02



Reduce
Reduce the purchase of materials that generate waste.

03



Recycle
Recycle leftover materials.

04



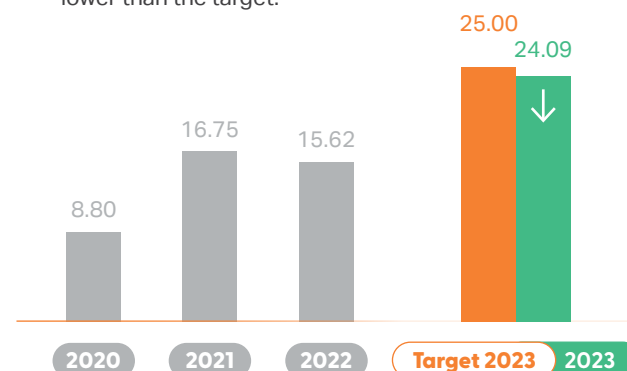
Reuse
Recover used materials for reuse.

Waste Management Performance

Total hazardous waste generated

(metric ton)

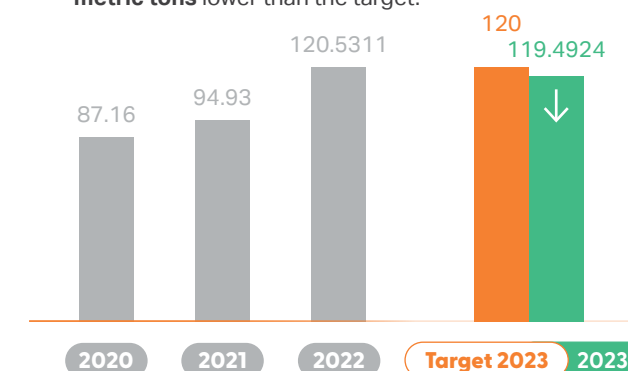
↓ The total hazardous waste generated is **0.91 metric tons** lower than the target.



Total non-hazardous waste generated

(metric ton)

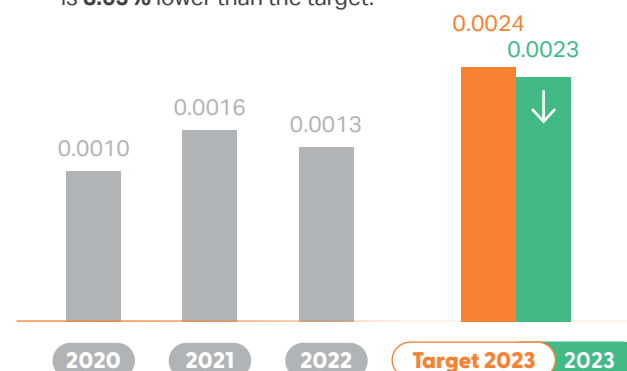
↓ The total non-hazardous waste generated is **0.5076 metric tons** lower than the target.



Total hazardous waste generated per production unit

(kg/MWh)

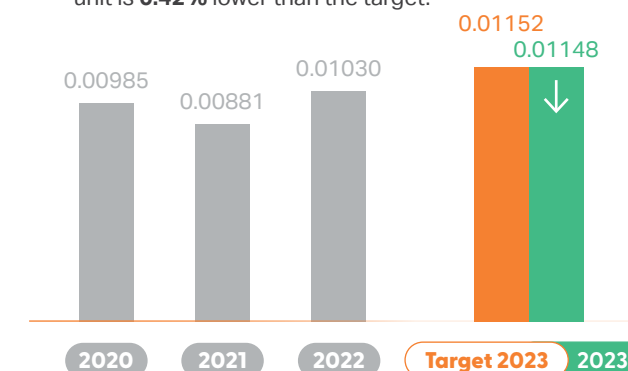
↓ The total hazardous waste generated per production unit is **3.65%** lower than the target.



Total non-hazardous waste generated per production unit

(kg/MWh)

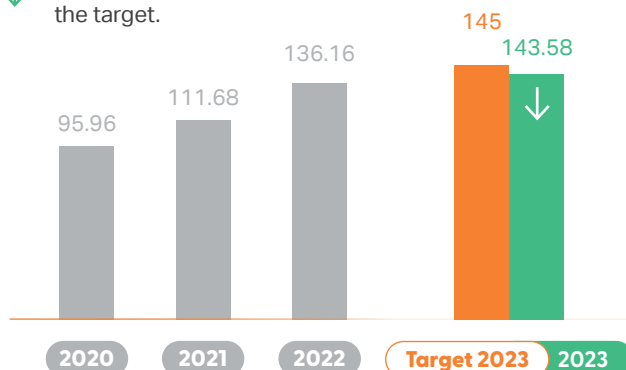
↓ The total non-hazardous waste generated per production unit is **0.42%** lower than the target.



Total waste generated

(metric ton)

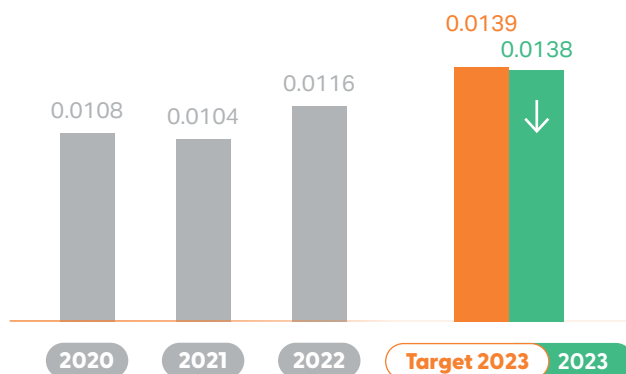
↓ The total waste generated is **1.42** metric tons lower than the target.



Total waste generated per production unit

(kg/MWh)

↓ The total waste generated per production unit is **0.98%** lower than the target.



Remark: CKPower expanded the scope of waste indicator data collection to cover its headquarters for the first time in 2022. Nam Ngum 2 Hydroelectric Power Plant underwent two major overhauls in November–December 2023.

Air Pollution Management

Over 90% of the power that CKPower produces is generated from different sources of renewable energy, such as hydropower and solar power, which do not involve the burning of fossil fuels or emit air pollutants. However, natural gas is used as a fuel at Bangpa-in Cogeneration Power Plant, which is a combined-cycle power plant and utilizes natural gases as fuels, which contain very little nitrogen. CKPower is aware that its combustion during electricity production may produce thermal nitrogen oxide (NOx) and has thus applied a Dry Low NOx Burner (DLE) to combine the fuel with air before combustion, which helps lower the temperature in the combustion chamber and cut down the amount of NOx by 40-50% as well as reduce fuel loss in the production process, thus maximizing resource efficiency.

CKPower monitors and measures the air quality at its power plants through Continuous Emission Monitor systems (CEMs), which are installed at the flare stacks and show results in real time. The Company also discloses the results of its air quality inspection as stipulated in its environmental impact monitoring and inspection measures in Environmental Impact Assessment (EIA) reports twice a year. In 2023, the air quality at the power plants was above the legally required standard across all categories.



90%

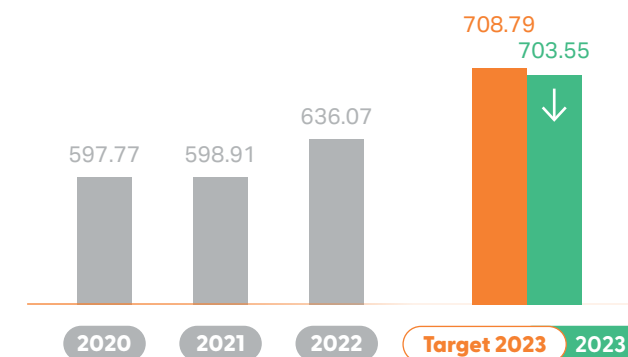
The Power that CKPower produces is generated from different sources of renewable energy, such as hydropower and solar power.

Air Quality Performance

The amount of NOx emitted

(metric ton)

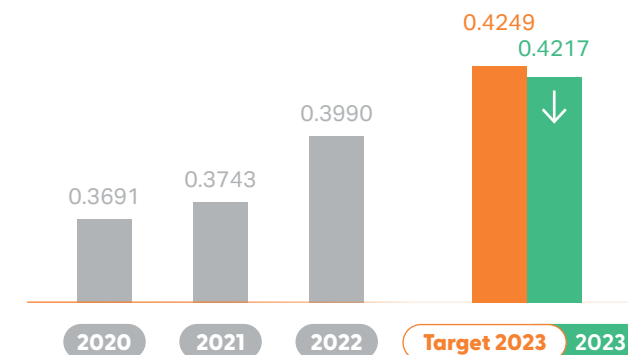
↓ The amount of NOx emitted is **5.24** metric tons lower than the target.



The amount of NOx emitted per production unit

(kg/MWh)

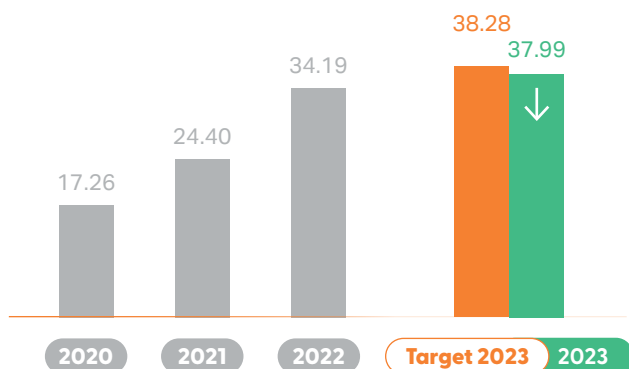
↓ The amount of NOx emitted per production unit is **0.74%** lower than the target.



The amount of SOx emitted

(metric ton)

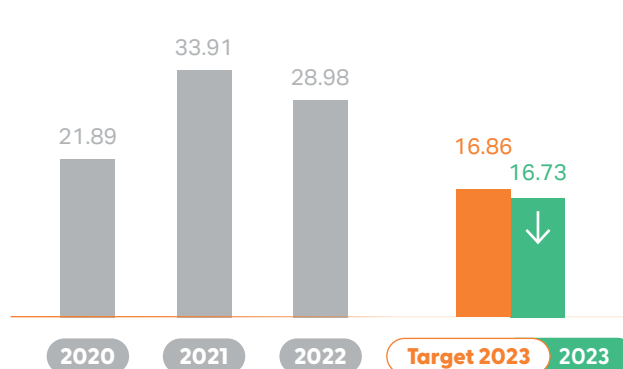
↓ The amount of SOx emitted is **0.28** metric tons lower than the target.



The amount of Particulate Matter (PM) emitted

(metric ton)

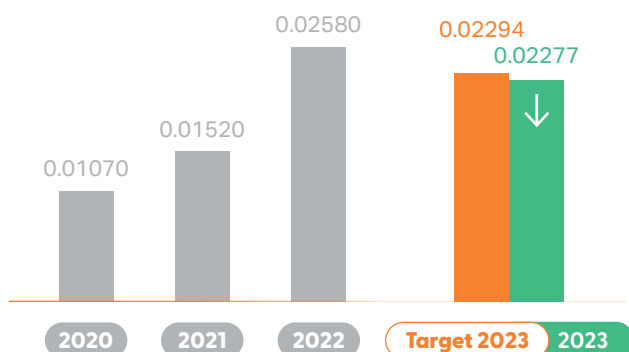
↓ The amount of PM emitted is **0.12** metric tons lower than the target.



The amount of SOx emitted per production unit

(kg/MWh)

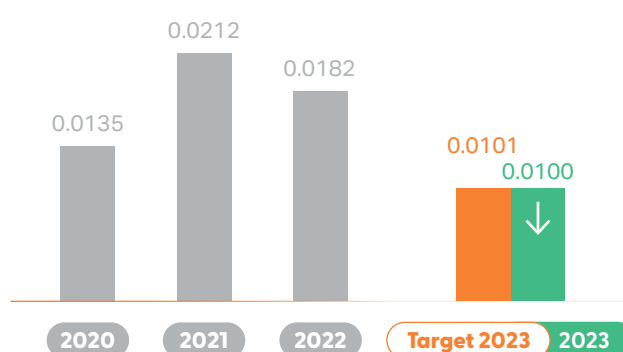
↓ The amount of SOx emitted per production unit is **0.74%** lower than the target.



The amount of Particulate Matter (PM) emitted per production unit

(kg/MWh)

↓ The amount of PM emitted per production unit is **0.74%** lower than the target.



Remark: The Company's only facility with air pollution emissions is the Bangpa-in Cogeneration Power Plant.

Project Highlight in 2023

Paper X Project (ongoing project)



To reduce waste and maximize paper recycling and reuse, CKPower has launched the Paper-X Project, in which employees are encouraged to participate in proper waste separation. Waste paper is divided into three types: 1) white paper, 2) cardboard/brown paper, and 3) others, so that it can be recycled into new paper and distributed to schools around CKPower's power plants for further use. The results have shown that the project has enabled the employees to sort wastepaper correctly, reduced the consumption of resources in paper production, and supported the education of the students in the vicinity of CKPower's power plants.

In 2023, CKPower was able to enter a total of 2,670 kilograms of sorted used paper into a proper recycling process, which was produced into 43 reams of paper to be distributed as school supplies to a school near its power plants, namely Bang Pa-In Rachanukhro School 1, and give them educational opportunities.



CKPower effectively managed to send a significant amount of sorted waste paper for proper recycling.

2,670 kg.

ReFun Machine (ongoing project)

แนะนำจุดทิ้งขยะแยกประเภทภายในสำนักงาน CKPower เริ่มต้นง่าย ๆ คุณก็ช่วยโลกได้... เริ่ม 2 ส.ค. นี้ เป็นต้นไป



CKPower has launched the ReFun Machine Project to deliver used plastic bottles to Wat Chak Daeng in Samut Prakan, where they are sorted and recycled into synthetic fibers and processed into fabrics used in funeral rites, monk robes, blankets, and other products. The project also promotes professional development among the local residents. Part of the proceeds from product sales is paid as wages for local residents who participate in waste sorting or use their skills and expertise to produce recycled products. The project demonstrates CKPower's social responsibility and promotes long-term reduction of environmental impacts through the reduction of discarded plastic bottles. The project also seeks to instill awareness of the benefits of proper and efficient plastic use, which will

further optimize waste management, as well as develop employees' understanding of how to add value to plastic waste and maximize its utilization through reuse, thus enhancing the corporate image as a waste-conscious organization and instilling the awareness of proper waste separation among its employees.

Collect plastic bottles

169.40 kg.

In 2023, the ReFun Machine Project successfully collected a total of 6,267 bottles, weighing 169.40 kilograms, which were delivered to Wat Chak Daeng to further generation income and create jobs for the local community.

Think Before You Print Project (ongoing project)



New Normal for CKPower's Sustainability

ขอความร่วมมือชาว CKPower Group งดการพิมพ์เอกสารสี
โดยทีม IT จะช่วยตั้งค่าเริ่มต้นในการพิมพ์ให้เป็นขาว-ดำ
เรามาร่วมกันคนละนิด เพื่อออฟฟิศสีเขียว...

SSC - Admin

CKPower has implemented the "Think Before You Print Project" to encourage employees across the organization to reduce the printing of color documents and promote awareness of sustainable practices.

In 2023, CKPower was able to reduce color document printing by 884 pages compared to the previous year, resulting in 1,767 baht savings in company expenses.



CKPower managed to decrease its color document printing by approximately

884
pages

Waste Sorting Bin Program (ongoing project)



RECYCLABLE PLASTIC

พลาสติก รีไซเคิล



COLOR PAPER CARDBOARD

กระดาษสี กระดาษลัง



GENERAL WASTE

ขยะทั่วไปไม่มัลลิน



WASTE WET

ขยะเปียก

CKPower has initiated the Waste Sorting Bin Program to ensure that waste in its offices is properly sorted and recycled or disposed of appropriately so that it can be reused. The following six categories of waste bins have been placed at various points within the offices: 1) general waste 2) paper 3) recyclable plastic 4) hazardous waste 5) infectious waste 6) organic waste.

The weight of each type of waste is recorded as comparison data for determining the reduction of waste in the future, and employees are encouraged to learn how to separate waste at the source. To this end, a training program entitled "Putting Waste in the Right Bin to Better Protect the World" has been hosted, and training documents have been disseminated through the mobile application CKPower Academy in order to instill knowledge and understanding of waste types and proper sorting of waste in employees and executives. In 2023, employees were able to separate waste correctly, enabling proper disposal and generating further value from the waste.

6 categories of waste



01

General waste



02

Paper



03

Recyclable Plastic



04

Hazardous Waste



05

Infectious Waste



06

Organic Waste

Optimization of Chloride Control for Cooling BIC1



The Optimization of Chloride Control for Cooling BIC1 project focuses on reclaiming wastewater for reuse prior to discharge.

In 2023, this initiative successfully reduced effluent discharge and minimized make-up water consumption for the cooling systems by an impressive 28,006 cubic meters, equivalent to 28 million liters.



28,006

cubic meters reduced
effluent discharge and
minimized make-up
water consumption.

Biowaste Soil Conditioner Project



The Xayaburi Hydroelectric Power Plant has implemented the Biowaste Soil Conditioner Project, an innovative initiative aimed at effectively managing biodegradable organic waste generated from kitchens and canteens. By sorting food scraps and fruit peels, this project facilitates their biodegradation into high-quality soil conditioners. The primary objectives include waste reduction, value creation, and minimizing greenhouse gas emissions associated with traditional waste incineration methods.

In 2023, the project successfully produced soil conditioners from a total of 15.47 tons of non-hazardous waste. By repurposing food scraps, the project reduced expenses for both the power plant kitchen and employees' households while providing valuable soil conditioners for agricultural use.

Biowaste Soil Conditioner Project Performance



5 households

in Noen Sawang Village to expand their pilot vegetable patches, promoting self-sufficiency and sustainable agriculture.



89 children and local residents

in Noen Sawang Village gained knowledge and understanding about soil conditioners, natural resource conservation, and environmental stewardship.



40%

reduction in carbon dioxide emissions from waste burning was achieved.



Value added

repurposing food scraps, the project reduced expenses for both the power plant kitchen and employees' households while providing valuable soil conditioners for agricultural use



Reduced expenses

for soil conditioners

Biodiversity

Long-Term Targets



Formulate
DEVELOP
a Biodiversity
Management Plan



100%
Assessment of residual impacts at all
operation sites by 2026



Achieve
**NO NET LOSS
(NNL)**
of Biodiversity and Ecosystem
Services by 2040

2023 Targets



Formulated
100%
of the Phase 1 Biodiversity
Management Plan for 2022-2026.



Conduct
100%
Screening and scoping for
Biodiversity



>110
Fish species to migrate upstream
safely, maintaining or exceeding 2022
level

2023 Achievements



Formulated
100%
of the Phase 1 Biodiversity
Management Plan for 2022-2026.



65%
Screening and scoping for
Biodiversity



>125
Fish species have been able to
migrate upstream safely

Message from Stakeholder



“Electricity production at the Xayaburi Hydroelectric Power Plant’s hydroelectric dam has not affected or disrupted land animals. Residents report the same presence of land animal species as before. Meanwhile, the population of aquatic animals has grown due to the widening of the river, which has made it easier to catch and farm fish, enabling locals to make a comfortable living. The number of fish species has remained the same, with no noticeable decrease in any particular type of fish.”

Ban Thung Charoen Village Headman
Xayaburi Power Plant Community Stakeholder

Impact on Business

CKPower acknowledges its potential implications for biodiversity, which could influence ecosystem integrity and precipitate the loss of biodiversity-critical habitats, including species extinction. In order to maintain ecological balance and deliver benefits across business, environmental, and community spheres sustainably, CKPower has striven to research and gain an understanding on biodiversity management in order to devise policies and measures to prevent and mitigate its impacts on biodiversity with care. Furthermore, the Company has advocated for the utilization of technology and innovation to aid conservation and restoration efforts. CKPower has also established a network of cooperation with surrounding communities and stakeholders in a coordinated effort to conserve natural environmental balance and mitigate its impact on biodiversity and the ecosystem in a sustainable way.

Challenges and Opportunities

Currently, biodiversity holds paramount importance for business operations, driven by regulatory compliance mandates related to the utilization of biological resources and biodiversity conservation. This importance is further amplified by advancements in management technology and the significant interest of investors and society in the process of monitoring and reporting biodiversity data. Given that electricity production operations can impact the biodiversity of surrounding areas, CKPower has developed a framework for biodiversity operations

and project development. This framework aims to minimize impact, conserve and restore biodiversity and ecosystems, and foster a sustainable balance throughout the supply chain. Aligning with Sustainable Development Goal 15 (SDG 15), which focuses on protecting, restoring, and promoting the sustainable use of terrestrial ecosystems, CKPower plans to disclose financial transactions related to its use of natural resources. Additionally, the company plans to develop a framework in 2024 on impacts and guidelines for biodiversity management according to the Taskforce on Nature-related Financial Disclosure (TNFD) framework, thereby aligning its biodiversity operations with international standards.

Commitment

CKPower is committed to achieving No Net Loss (NNL) of biodiversity and ecosystem services by 2040. To prevent and reduce potential impacts as well as effectively protect and manage biodiversity, the Company has developed a biodiversity action plan and integrated biodiversity issues into its sustainability strategy. This includes formulating an environmental monitoring program, establishing a biodiversity strategy and roadmap, and assessing the residual impact on biodiversity of its own business operations as well as those of its suppliers. This is part of the effort to develop and enhance management guidelines for biodiversity impacts, ensuring they are appropriate and sustainable.

Message from CKPower



“CKPower focuses its renewable energy business operations on promoting energy transition to consumers under the framework of sustainable development. We are mindful of the environment, including biodiversity, in our hydroelectric power production process. We operate in accordance with the fundamental principles of preventing and reducing impacts on biodiversity and ecosystems, which includes using the PIT System to study the behavior and migration pathway of fish species in the Mekong River. Additionally, we continuously monitor and inspect the implementation of the biodiversity strategy to maintain biological diversity and the ecological system in the Mekong Basin.”

Thanasak Poomchaivej

Chief Engineer – Environment and Social
Head of Ambition in Biodiversity

Operational Guidelines

Biodiversity Management

CKPower acknowledges the critical importance of biodiversity and ecosystems, consequently ensuring strict adherence to the Biodiversity Management Policy in its business operations. The company champions sustainable conservation of natural resources and the environment by fostering innovation and adopting environmentally friendly technology throughout business operations. Moreover, CKPower is committed to cultivating understanding and awareness among all organizational levels and stakeholders throughout the supply chain, actively engaging in projects aimed at the restoration and conservation of biodiversity with community and social participation.

Through the years, CKPower has consistently engaged in electricity production business within the biodiversity framework, employing the **Mitigation Hierarchy** to complement biodiversity conservation efforts from design and construction through to operational management across all sites. This strategy is focused on avoiding activities potentially harmful to biodiversity, minimizing impacts where possible, and implementing restoration and offset measures to compensate for any biodiversity loss through ecosystem services, thereby ensuring the comprehensive preservation of biodiversity.

Biodiversity Operations

CKPower has developed Biodiversity Roadmap Phase 1, spanning five years (2023-2027), to advance its commitment to preserving biodiversity and ecosystem services. The aim is to attain no net loss of biological and ecological systems by 2040. Last year's operations yielded the outcomes detailed below.

Biodiversity Operations

01



Study

02



Monitoring

03



Access

04



Manage

05



Support

1. Study

CKPower aimed to study ecosystem and species biodiversity and assess protected or conservation areas as well as species protected by the International Union for Conservation of Nature (IUCN) by 2024. Currently, no power plant or office operated by the company is situated in forest reserves, world heritage areas, or areas protected by IUCN categories 1-4.

2. Monitoring

The Company monitored and inspected terrestrial and aquatic biodiversity as per the Environmental and Social Management and Monitoring Plan during the Operation Phase (ESMMP-OP) in accordance with environmental impact prevention and mitigation measures and conduct biodiversity risk assessments for the Nam Ngum 2 Power Plant as well as with relevant laws. These efforts encompass construction and operation activities of power plants and involve managing biodiversity within areas of operation. The objective is to maintain as much aquatic species biodiversity as possible, focusing on sediment and water quality, fish species, and fish eggs. Each power plant regularly measures environmental quality to ensure compliance with laws and standards.

- Xayaburi Hydroelectric Power Plant regularly monitors key environmental quality indicators in the Mekong River, such as sediment volume, water quality, fish species, and fish eggs in the area under monitor, which spans both the upstream and downstream sections flowing through the power plant. This includes active participation in preserving both upstream and downstream ecosystems to maintain their natural state as much as possible, ensuring continuous sustainability. Additionally, the plant contributes to the conservation of forest areas.

Deforestation

- No stage in the production process of any of the Company's power plants involves deforestation, and none of the Company's power plants are situated within protected areas, including reserved forest areas and world heritage areas.

Contamination

- Each power plant is equipped with a system to monitor, manage, and mitigate environmental contamination from operational waste. This system covers all types of waste, including wastewater and air pollutants. The continuous implementation of this control system, along with the fish

passing system, has succeeded in preserving the natural processes of terrestrial and aquatic ecological systems in relevant areas.

3. Assessment

CKPower has conducted an evaluation of the residual risks and impacts on biodiversity from the operations of all business units it manages, with the goal of formulating a plan to restore and offset as well as to prevent the overall loss of ecosystem services and biodiversity. The Company is committed to such endeavors despite the fact that some of its major operations are located in industrial estates, with minimal ecological impact.

4. Management

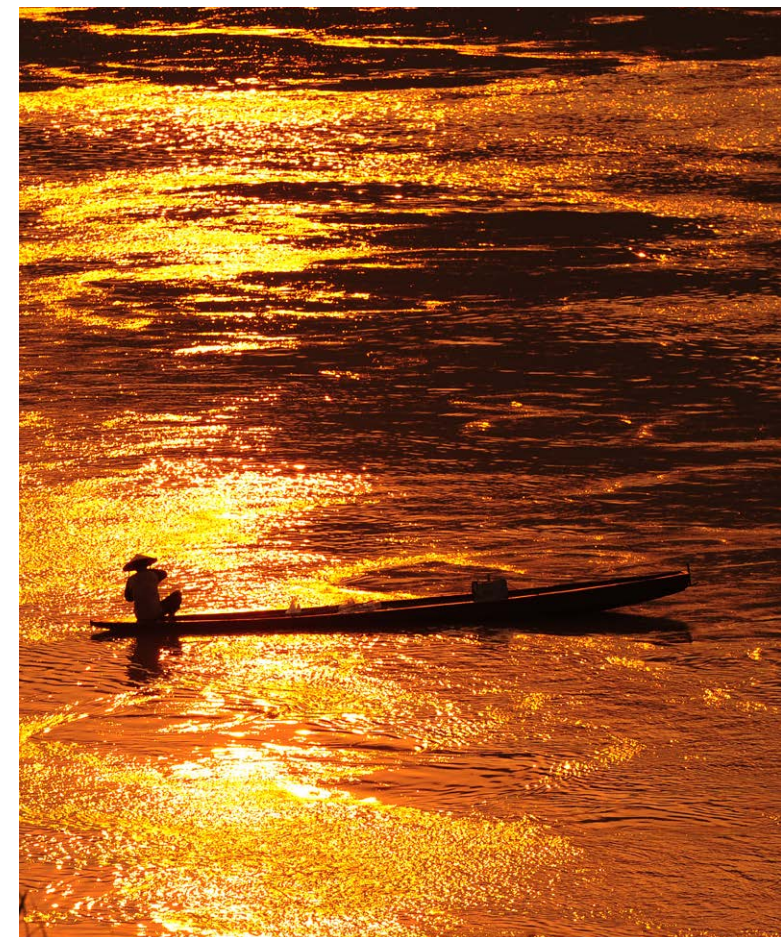
In formulating a biodiversity management plan, CKPower adhered to International Finance Corporation Guidance Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resource (IFC Guidance PS 6). As such, the plan specifies affected areas and assesses the threat of power plant activities to biodiversity, including changes in the natural characteristics of the habitat and threats from invasive species.

- The Company has created a biodiversity management plan encompassing critical biodiversity areas.



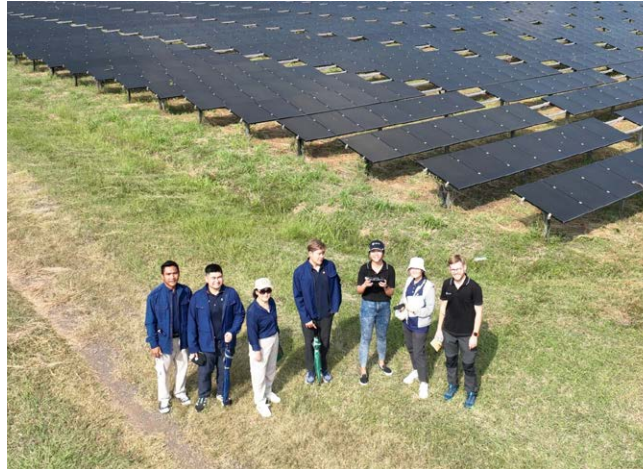
5. Support

CKPower enhances stakeholder engagement, promoting animal conservation projects and supporting community livelihoods around its power plants, reinforcing its commitment to biodiversity preservation and sustainable operational practices.



Screening and Scoping for Biodiversity

CKPower has partnered with AFRY Thailand Ltd., a consultancy firm, to conduct a thorough investigation and data collection on biodiversity implications stemming from the activities of its energy business units. This research adheres to the foundational principles of biodiversity study, encompassing the determination of study scope, examination of pertinent reference materials, and the execution of field surveys within the operational areas of the Energy Business Unit. In 2023, preliminary data was acquired for three power plants: Bangkhenchai Solar Power Plant, Khlong Preng Solar Power Plant, and Xayaburi Hydroelectric Power Plant.



1. Solar Power Plant

Bangkhenchai Solar Power Plant (Operated by Bangkhenchai Solar Co., Ltd.)

In 2023, biodiversity data surrounding the plant was collected through drone-captured aerial imagery and observation of the adjacent living organisms. Interviews with local residents supplemented these observations. The initial survey unveiled the presence of various species, such as birds, mammals, insects, and signs of animal habitation.

Khlong Preng Solar Power Plant (Operated by Bangkhenchai Solar Co., Ltd.)

Similarly, in 2023, this plant underwent a biodiversity data collection process, leveraging drones for aerial photography to observe the nearby ecological life and through discussions with locals. The focus was notably on the plant's drainage systems and adjacent agricultural lands, revealing habitats and feeding patterns of certain birds, reptiles, and aquatic species along the drainage channels.

2. Xayaburi Hydroelectric Power Plant (Located in Lao PDR)

In 2023, A comprehensive survey identified potential zones around the plant suitable for wildlife and aquatic species conservation. Utilizing drones for aerial photography, the study aimed to gather detailed insights for planning and establishing biodiversity conservation areas.



Site Survey

A comprehensive survey identified potential zones suitable for wildlife and aquatic species conservation.

Project Highlights in 2023

Biodiversity Management Promotion Projects

1. Hybrid Fish Passing and Fish Locks System in Xayaburi Hydroelectric Power Plant

CKPower utilizes a hybrid fish passing and fish lock system to preserve biodiversity at the 1,285 MW Xayaburi Hydroelectric Power Plant. This plant is situated on the Mekong River between Sainyabuli and Luang Prabang in the Lao People's Democratic Republic, with an operational area of 564,000 hectares. Since the construction design phase, the company has conducted studies to assess the suitability of the passing system for various fish species. Additionally, an evaluation of the risk of extinction for aquatic animal species according to the IUCN List was performed before implementing the hybrid fish passing system.

The fish passing system at the Xayaburi hydroelectric power plant is a hybrid system comprising a vertical-slot fishway connected to large fish locks. The fish passage has a width of 18 meters and a maximum depth of 16 meters. The design of the hybrid fish passing system is tailored to accommodate the size and behavior of fish species in the Mekong River. Fish naturally swim against the current to upstream areas when it's time to breed and lay eggs. This system aims to preserve the biological diversity of fish species and maintain the life cycle of aquatic animals in the Mekong River. By facilitating fish migration, the Xayaburi power plant is able to perform its operations while creating sustainable balance with nature in the Mekong River Basin.



Fish passing cover Operation area

564,000
hectare



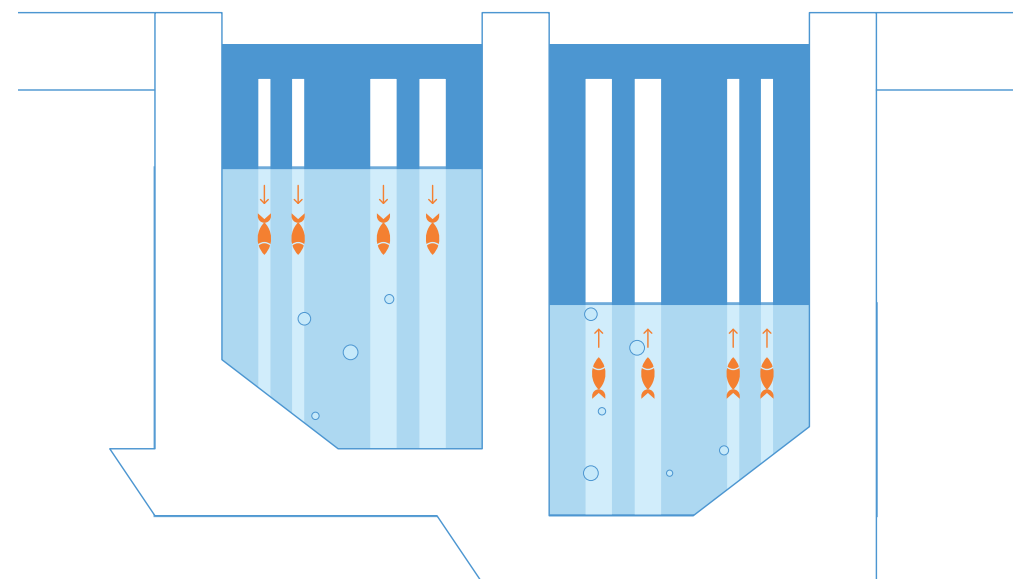
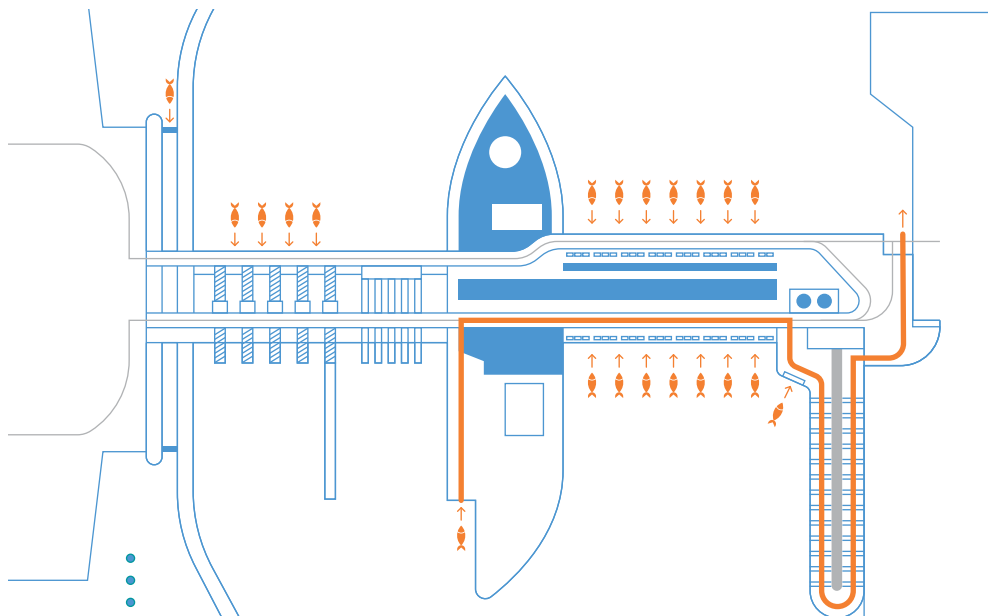
Fish passing width

18
meters



Fish passing depth

16
meters

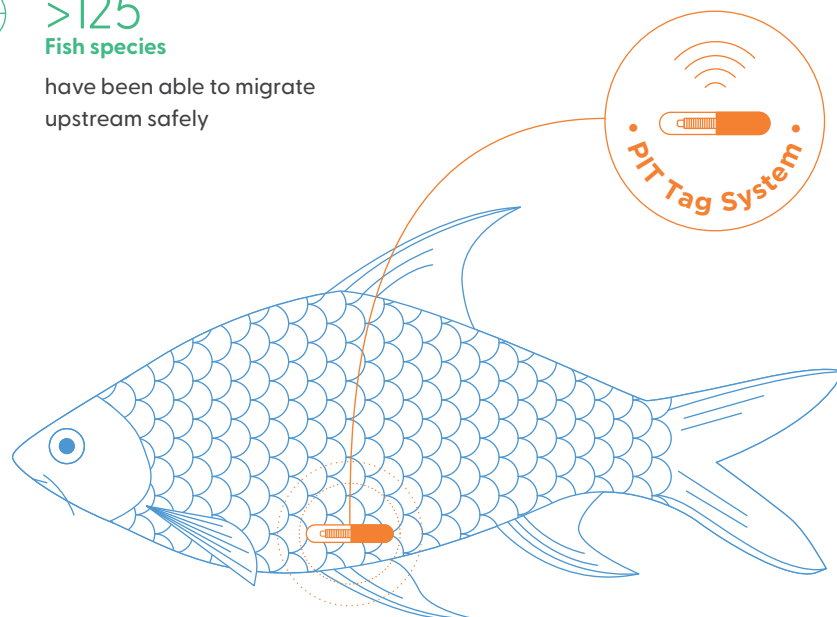


To monitor the effectiveness of the hybrid fish passing system, the company utilizes the innovative **Passive Integrated Transponder (PIT) Tag System**. This involves implanting microchips in fish to study their behavior. Additionally, **hydroacoustic Adaptive Resolution Imaging Sonar (ARIS) cameras** are employed to continuously monitor fish migration and movement around the power plant, 24 hours a day. These monitoring methods have been in place since the Xayaburi Hydroelectric Power Plant commenced operations in 2019. In 2023, it was observed that over 125 fish species were able to pass through the power plant's fish ladder. The management of the fish passing system ensures a balance between electricity generation targets and unimpeded fish migration.



>125
Fish species

have been able to migrate
upstream safely



Number of Fish Species (Cumulative) on the IUCN Red List and All National Conservation Lists Found in the Area in 2023

Critical Endangered (CR)	0
Endangered (EN)	1
Vulnerable (VU)	10
Near Threatened (NT)	5
Least Concern (LC)	96
Data Deficient (DD)	7

In its pursuit of excellence in biodiversity management, CKPower has forged strategic collaborations with notable institutions, including:

- Australian Center for International Agricultural Research (ACIAR)
- Charles Sturt University, Australia
- Living Aquatic Resources Research of Lao (LARReC)
- National University of Lao (NUOL)

CKPower actively disseminates knowledge to communities adjacent to its power plants, aiming to enhance awareness and foster collaborative efforts in conserving the life cycle and diversity of fish species within the Mekong River ecosystem.

2. Passive Integrated Transponder (PIT Tag) System

CKPower has supported pioneering research spearheaded by the biodiversity team and that of Xayaburi Hydroelectric Power Plant, in partnership with distinguished faculty from Charles Sturt University, Australia. Supported technically by the Australian Centre for International Agricultural Research (ACIAR; FIS-2017-017), the project was conducted in strict adherence to ethical guidelines approved by the Animal Care and Ethics Committee of Charles Sturt University (A19040).

This initiative sought to explore the applicability of PIT tagging on four naturally occurring fish species from the Mekong River: *Hypsibarbus lagleri*, *Hemibagrus filamentus*, *Barbonymus schwanenfeldii*, and *Scaphognathops bandanensis*. The research involved gently tagging these fish with PIT tags and monitoring their recuperation within the specialized recovery pond at the Xayaburi Hydroelectric Power Plant's Fish Research Center.

The primary objective was to ascertain the safety of PIT tagging for these fish species, ensuring it did not adversely affect their survival rates. Positive outcomes from this study would confirm the suitability of PIT tagging technology for assessing fish passage systems' efficacy and understanding the Mekong River fish's ecological patterns, all while upholding the highest standards of animal welfare.



Hypsibarbus lagleri



Hemibagrus filamentus



Barbonymus schwanenfeldii



Scaphognathops bandanensis

Passive Integrated Transponder (PIT Tag) System process



1. Research Objectives and Methodology

The study was designed to explore the effects of PIT (Passive Integrated Transponder) tagging on various fish species within the Mekong River, aiming to determine the compatibility of these species with PIT tagging and the broader implications of this method on the natural fish populations.

2. Fish Species Selection

To represent the diversity of the Mekong River's aquatic life, four species—*Hypsibarbus lagleri*, *Hemibagrus filamentus*, *Barbonymus schwanenfeldii*, and *Scaphognathops bandanensis*—were selected based on their migratory patterns, economic value, and vital role in the ecosystem. Notably, with the exception of *Barbonymus schwanenfeldii*, these species are migratory, spawning in the river's mainstream, potentially making them susceptible to the effects of hydropower developments in the Lower Mekong Basin (LMB). This aspect emphasizes the urgent need for conservation measures to mitigate potential impacts from infrastructure projects and human interventions on these key species.

3. Preparation and Procedure

The core of this research focused on the assessment of PIT tagging's impact on fish near the Xayaburi Hydroelectric Power Plant. A specially designed, humane fish trapping facility was utilized to minimize stress and harm to the fish during capture. This approach highlights our commitment to conducting research that not only informs but also respects the well-being of the Mekong River's fish populations, ensuring that the study's procedures align with best practices in animal welfare.

After capture, each fish was gently placed into an aerated recovery pond before undergoing a minimally invasive PIT tagging process, meticulously designed to safeguard their health. This controlled recovery environment was rigorously maintained with optimal water conditions to assess the tagging's impact on fish mortality, tag retention, and physical health (including weight and length) with the utmost care. Throughout the experiment, the water quality in the recovery pond—temperature, dissolved oxygen levels, turbidity, and pH—was continuously monitored, ensuring a habitat as close to their natural Mekong River environment as possible, with a steady flow of river water into their temporary home.

The test and control fish were cared for in a shared, meticulously maintained environment for a period of 43-59 days. During this time, their well-being was closely observed, with a particular focus on monitoring mortality rates and the persistence of PIT tags. In instances of mortality, each fish was respectfully handled, with measurements of its size and weight taken, alongside the documentation of its tag number. Subsequently, the tag was gently removed to facilitate a thorough evaluation of the fish's condition following the tagging process. This careful and considerate approach underpinned the study's objective to thoughtfully assess the tagging method's effectiveness and its overall impact on the health and well-being of Mekong River fish populations, considering critical welfare indicators such as survival rates, tag retention, and any changes in the fish's physical condition post-tagging.

Mortality and tag shedding analyses were performed using IBM SPSS Statistics 29.0.0.0, and fitness analysis was performed using SAS Institute. (2015) SAS/STAT® 14.1 User's Guide. Cary, NC: SAS Institute. Inc.

4. Findings and Contributions to Environmental Well-being

The research confirmed the appropriateness of PIT tagging for the evaluated species, importantly showing that PIT tagging had no significant adverse effects on fish mortality or health deterioration. Additionally, the rate of tag loss was notably low, averaging around 4.5% across the species examined.

This study underscores the minimal impact of PIT tagging on fish within the Mekong River, illustrating low mortality rates associated with tagging and high levels of tag retention, without substantial alterations in the fishes' weight and length. Such results affirm the PIT system's reliability and appropriateness as a humane and effective method for monitoring Mekong River fish populations.

Advancing Biodiversity and Sustainable Resource Management

The outcomes have profound implications for conserving water ecosystems and managing fish populations sustainably in the lower Mekong Basin. Demonstrating that the selected Mekong fish species are viable for PIT tagging supports the system's use in tracking migratory behaviors, enhancing sustainable fishery management practices. These achievements are in harmony with our commitment to environmental preservation and the prudent management of natural resources.

Eco-friendly Practices and Tangible Outcomes

Employing PIT tagging and selecting appropriate species for this process highlight our commitment to eco-friendly practices, especially relevant to the Xayaburi Hydroelectric Power Plant operations. This initiative strengthens our efforts to minimize environmental impacts and endorse sustainability. Engaging in creating effective fish passage systems and promoting the conservation and sustainable management of local fish populations aligns with the hydropower plant's environmental goals, contributing to responsible natural resource use.

Conclusion

The collaborative research by CKPower and the Xayaburi Hydroelectric Power Plant, together with Charles Sturt University, Australia, signifies a key advancement in sustainable fisheries management within the lower Mekong Basin. The insights gained into PIT tagging's application for tropical river fish populations underscore the potential for aquatic ecosystem conservation and the ethical utilization of natural resources.

CKPower is proud of its role in supporting initiatives that conserve and manage fish populations in tropical rivers sustainably. This research highlights our ongoing commitment to environmental stewardship and our efforts to foster biodiversity preservation and eco-friendly practices.

CKPower actively engaged with local communities around the power plant to enhance their understanding of the Mekong River fish migration monitoring initiative. In 2023, the company organized educational programs to enrich community knowledge and comprehension regarding this important environmental effort. Outreach was extended to 10 neighboring communities, briefing residents on the procedure should they encounter a fish equipped with a PIT tag. Community members were encouraged to return these tags to the power plant officials, facilitating ongoing data collection and aiding in the research's progress.

2023 Achievements



10
Communities

182
People

Gained an understanding of the company's approach to sustainable fisheries management, aimed at promoting environmental conservation and responsible resource management. This was achieved through the monitoring of fish migratory behaviors in the Mekong River and the use of PIT Tag technology, which is effective, harmless, and suitable for tracking the native fish populations of the Mekong River.

Kind Neighbor

75 →

Social and Community Care

88 →

Respect for Human Rights

94 →

Human Capital Management

103 →

Occupational Health and Safety



Social and Community Care



SDGs



Long-term Targets



ZERO

unresolved complaints



CREATE SHARED VALUE

for society and ecosystems through renewable energy.

Renewable electricity for better quality of life



150,000

Watts
Renewable energy for enhancing the quality of life in communities



20,000

Children
children and youth reach knowledge in renewable energy



30

Learning centers
on renewable energy

2023 Targets



ZERO

unresolved complaints



60,000

Watts
Renewable energy for enhancing the quality of life in communities



3,640

Children
children and youth reach knowledge in renewable energy



10

Learning centers
on renewable energy

2023 Achievements



ZERO

unresolved complaints



40,330

Watts
Renewable energy for enhancing the quality of life in communities (Cumulative)



4,030

Children
children and youth reach knowledge in renewable energy (Cumulative)



17

Learning centers
on renewable energy (Cumulative)

Long-term Targets



Preserving and restoring natural resources



80

Rais

Conservation and restoration of natural resources and the environment



10,000

People

Gain knowledge about the conservation of natural resources and the environment

Co-creating innovations to enhance opportunities for communities



3

Products

Innovation for communities



400,000

Baht

Increase income for communities

Community satisfaction rate



>90%

The satisfaction rate among communities regarding the CSR activities

2023 Targets



1

Rais

Conservation and restoration of natural resources and the environment



2,875

People

Gain knowledge about the conservation of natural resources and the environment



1

Product

Innovation for communities



100,000

Baht

Increase income for communities



>90%

The satisfaction rate among communities regarding the CSR activities

2023 Achievements



3.94

Rais

Conservation and restoration of natural resources and the environment



1,225

People

Gained knowledge about the conservation of natural resources and the environment



1

Product

Innovation for communities



470,000

Baht

Increase income for communities



>95%

The satisfaction rate among communities regarding the CSR activities

Message from CKPower



Clean energy is increasingly recognized as essential in today's world, particularly as we aim for the ambitious goal of achieving net-zero emissions. To this end, we are harnessing the talents and capabilities of our personnel across all power plants in our network to drive forward the energy transition. This effort is part of our broader strategy to create long-term societal value, encompassing both social and environmental resilience. We are dedicated to skill development and fostering innovation that builds upon local wisdom, thereby creating job opportunities and enhancing community incomes.

Our strategy begins with laying a foundation of “local wisdom” within the community and moving towards “active learning and implementation”. We are committed to the efficient management of resources, safeguarding natural resources and the environment. This includes the incorporation of renewable energy innovations into various processes to initiate “value-creating projects with communities and society,” aimed at improving life quality in harmony with sustainable community practices.

Ms. Trichana Songsermsakul

Manager - Project Management Department for Corporate Sustainability and CSR Projects
Disclosure of Social and Community Sustainability Working Team

Impact on Business

CKPower places a high priority on social and community care as a cornerstone of its sustainability agenda, recognizing communities and society as essential stakeholders who may be impacted by the company's operations, particularly those in the vicinity of the power plant. In response, we emphasize the importance of community participation, demonstrating our commitment to social and environmental responsibilities. We address issues that influence people's livelihoods and quality of life with the goal of bolstering economic resilience and mitigating social disparities. These efforts are crucial for maintaining a sustainable and stable power generation business, relying on the community's trust and social license to operate. CKPower firmly believes that sustainable business growth is intertwined with the progress and development of communities and society. To this end, we utilize our renewable energy engineering expertise, knowledge, and skills to support communities through various activities. This not only enhances employee engagement and brand recognition but also fosters enduring relationships with communities, significantly enriching our business value.

Challenges and Opportunities

Today's business landscape presents numerous challenges, including community and social challenges stemming from the necessity of acceptance and cooperation from social stakeholders in conducting business, technological access inequality, environmental , environmental disruptions affecting operations, economic obstacles, and evolving regulations with an increased focus on environmental and climate change concerns. As a leader in renewable energy production, CKPower prioritizes creating inclusive processes to engage communities and listen to their feedback. This enables us to understand and address any concerns or misconceptions, allowing for timely and effective resolution of potential issues. Additionally, we recognize the opportunity to drive positive change and improve living standards through our expertise and continuous knowledge development. By building a collaborative network with various sectors and carrying out activities that meet community expectations, CKPower aims to generate shared value. This fosters better quality

of life, self-reliance among communities, and sustainable growth alongside our business development.

Commitment

CKPower is firmly committed to conducting its business with a profound sense of responsibility towards communities and society, focusing on simultaneously developing its business and ensuring the sustainability of the communities which are among its key stakeholders and form the foundation of its operations. Moreover, the Company seeks to integrate business development with social progress, adhering to sustainable development principles that emphasize inclusive growth and reducing inequalities, ensuring no one is left behind. As part of this commitment, CKPower has established policies and strategies for community engagement and development, as well as social and community care, aligned with the United Nations Sustainable Development Goals (UN SDGs), to ensure the effectiveness and uniformity of its community development efforts. CKPower leverages its expertise and capabilities in renewable energy to support development initiatives and facilitate knowledge sharing between the Company, its employees, and communities. This collaborative approach aims to create mutual value and enhance the quality of life for local residents, contributing to a cohesive and sustainable community development.

Operational Guidelines

CKPower has developed a comprehensive community engagement and development policy, as well as social and environmental practices to guide its business activities toward the sustainable development of communities, society, and vulnerable groups. The Sustainability Working oversees implementing these policies and practices, setting both long-term and short-term objectives, key performance indicators, practices, and action plans aligned with CKPower's sustainability and strategic goals in support of the United Nations Sustainable Development Goals (UN SDGs). The group is also responsible for monitoring, evaluating, and reviewing performance annually to promote ongoing improvement and sustainable coexistence with communities, along with integrating the Company's business expertise into the process of caring for communities and society in a sustainable way.

Message from Stakeholder



“The quality of life has improved significantly for the locals as a result of the installation of solar electricity for lighting. CKPower also recommended activities to enhance livelihoods and well-being. These activities include lessons on rubber cultivation and animal husbandry (with a current emphasis on rubber planting. They’ve also improved lighting throughout the village. The power plant’s efforts in educating and supporting the villagers are greatly appreciated.”

Seesomluem

Village Headsman of Ban Na Tor Yai
Stakeholder, Communities Surrounding Xayaburi Hydroelectric Power Plant

Message from Stakeholder



“Thank you to CKP for visiting and assisting the Ban Phon Pha community, engaging in discussions, and listening to the opinions of community members. Overall, the Nam Ngum 2 Hydroelectric Power Plant has brought numerous benefits to the community, including support for 6-7 communities. The Company assisted in the construction of a kindergarten, provided support for groundwater drilling, and provided funding for repairs to temples and roads around the perimeter of the Nam Ngum 2 Hydroelectric Power Plant. Additionally, many areas now have access to electricity, contributing to brighter roads and improved infrastructure. The power plant’s commitment to the community is highly appreciated.”

Boonnueng

Deputy Village Headman of Ban Phon Pha
Stakeholder, Communities Surrounding Nam Ngum 2 Hydroelectric Power Plant

Community Engagement

CKPower places high importance on social and community care in its business operations to foster confidence and demonstrate its transparency in every community across all of its areas of operation before and during power plant construction and during commercial operation. The Company conducts site surveys to understand the traditional way of life and the quality of life in communities around the power plants across economic, environmental, social, and human rights dimensions as well as carries out surveys on residents’ opinions, concerns, needs, and satisfaction and works with local residents to identify impacts and initiate CSR activities/projects, such as improving the quality of life for communities surrounding power plants, providing access to renewable energy that meets community needs, offering educational support, fostering community career development to generate additional income, and supporting public amenities and infrastructure, among other initiatives. All of this is part of the effort to address the expectations and concerns of community members, which can then be translated into action in accordance with CKPower’s clean energy engineering capabilities in order to create social value. This is achieved through the 3Cs principle.

3Cs Principle



Competency

Enhancing clean energy engineering competency



Co-Creation

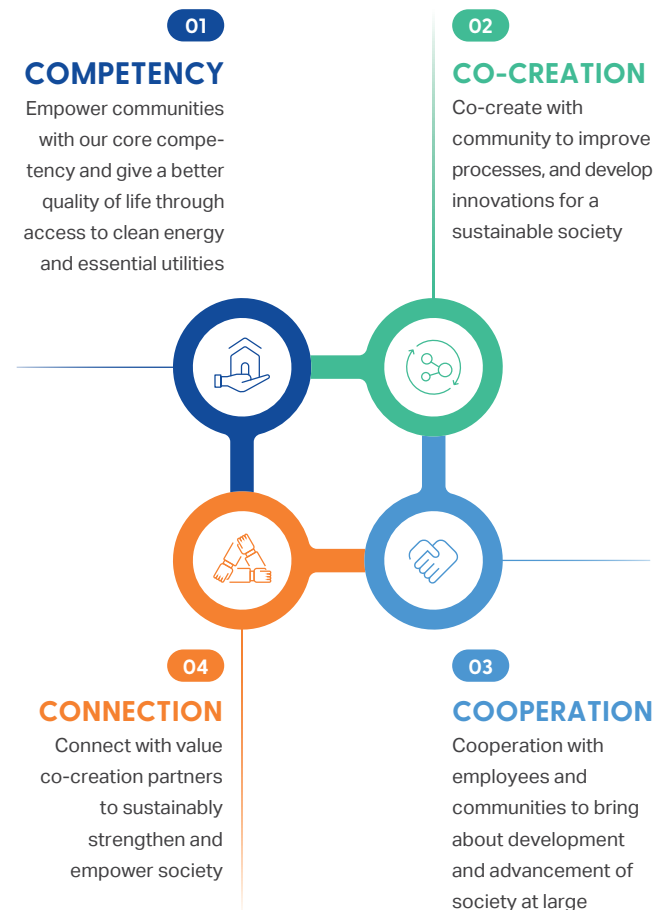
Delivering clean energy to co-create value for society



Cooperation

Fostering cooperation with employees, communities, and network partners

Under the **3Cs** principle, CKPower carries out community engagement projects compatible with the local way of life through the “**Competency – Co-Creation – Cooperation – Connection**” strategies. In essence, CKPower uses its capabilities to empower communities, society, and stakeholders (**Competency**), advances ideas, innovations, and processes towards sustainability (**Co-Creation**), fosters employee and stakeholder participation (**Cooperation**), and collaborates with its network partners for sustainable development (**Connection**).



Community Complaints Process

CKPower has instituted a process for receiving, reviewing, recording, and responding to community complaints in a timely manner, in accordance with ISO14001 standards. In conjunction, the Company conducts surveys and discussions with local communities annually so that it can incorporate community members' opinions into the development of projects that align with the communities' needs as well as the Company's operational framework. Any potential issues affecting the community are encouraged to be expressed so that solutions can be found. In 2023, community visits revealed no complaints regarding immigration/violation of the rights of indigenous peoples and minorities, social and human rights issues, or environmental concerns. Additionally, there were no outstanding cases of complaints that had not been addressed.

CSR Strategies

CKPower has formulated corporate social responsibility strategies that align with United Nations Sustainable Development Goals (UN SDGs) in order to achieve the objective of creating a positive impact and improving the quality of life of communities, society, and vulnerable groups thoroughly and efficiently. The strategies encompass the development of innovation that can enhance potential in various fields and provide value to communities and society. The Company has also outlined the direction of its social and community care efforts for a five-year period from 2022 to 2026 and established the following three core principles of social and community care:

Core Principles of Social and Community Care

01



Quality of Life:

Improving access to renewable energy for a better quality of life.

02



Natural Resources and Environment:

Conserving, protecting, and restoring natural resources and the environment sustainably

03



Job Security:

Further enhancing innovations and creating opportunities of occupation development for communities

CKPower's Framework for Social Value Creation

Mission

To generate the optimal, stable and fair return to stakeholders and to be responsible for environment, community and all stakeholders.

Renewable electricity for better quality of life



CSR focus

Improving access to renewable energy for a better quality of life.

Project driver

1. Hinghoi Project

- Clean electricity for communities
- Clean water for communities
- Clean electricity for Teacher for Change
- Introducing Clean Energy to Communities

Outcome in 2026

- Children and communities have access to **150,000 watts** of renewable energy, in accordance with their specific needs.
- Education and awareness raising programs on renewable energy are provided for **20,000 children and youth**.



Preserving and restoring natural resources



CSR focus

Conserving, protecting, and restoring natural resources and the environment sustainably.

Project driver

2. Grow Green

- Waste to Value
- Grow Together
- Green Power Plant

Outcome in 2026

- Natural resource and environmental protection education and awareness raising programs are provided for **10,000 employees**, Children and youth, communities and employees.
- Terrestrial forest conservation and protection areas are expanded by **80 rais**.



Renewable electricity for a better quality of life

Preserving and restoring natural resources



Implementing renewable energy solutions promotes innovation within society, generates value for both the community and the environment, and leads to a more sustainable and enhanced quality of life

Co-creating innovations to enhance opportunities for communities

Co-creating innovations to enhance opportunities for communities

CSR focus

Further enhancing innovations and creating opportunities of occupation development for communities



Project driver

3. OPOP (One Power Plant, One Product)

- Development of innovations to create job opportunities, improve products, and increase income for local communities.
- Strengthening the network among partners for innovations in occupation development

Outcome in 2026

- **3 community products** are developed.
- An additional income of **400,000 baht** is generated for communities.

Recognizing the importance of improving societal and community well-being as a cornerstone for economic advancement and sustainable growth, and encouraging employee involvement in social activities, CKPower in 2023, initiated 83 projects and activities aimed at enhancing the lives of both local communities surrounding power plants and those in broader society. These efforts focused on educational advancement, promoting renewable energy awareness, conserving natural resources and the environment, and fostering lifelong learning, especially among children and youth. Additionally, initiatives included promoting cultural traditions, sports, public health, and improving life quality for the elderly and disabled within these communities.

CSR Projects/Activities	Number of projects in 2023	Million Baht
1. Renewable energy for a better quality of life in communities	9	3.40
2. Conservation and restoration of natural resources and the environment	4	0.09
3. Innovations to enhance opportunities for communities	1	0.40
4. Support for improved quality of life in communities		
• Promoting the quality of life of the community/elderly/disabled	6	0.85
• Education	4	0.40
• Sports	13	1.70
• Public health	8	0.50
• Cultural traditions and religion	28	1.60
• Public infrastructures	2	0.12
5. Promoting and supporting networks for renewable energy	2	0.02
6. Natural disaster relief	2	0.80
7. Community relations and philanthropy	4	0.08
Total	83	9.96

2023 Performance



Surveys of opinions, concerns, and needs and impact assessments conducted in communities around power plants

100%



Employees' community service hours

3,673
hours



Public infrastructures

50
facilities



The satisfaction rate among communities regarding the CSR activities

>95%



Partnering networks

31
networks,
cumulatively



Renewable energy learning centers

17
centers,
cumulatively



Unresolved complaints

0
case



Communities engaged in CKPower's projects

18
communities



External training cost savings

5.9
million baht

Project Highlights in 2023

Hinghoi Project 2023, Year 8

CKPower is committed to conducting business with a focus on social responsibility and strengthening its business while fostering sustainable growth. To this end, the Company engages in ongoing social activities like the "Hinghoi Project." Originating from the vision of senior executives, this initiative emphasizes leveraging the knowledge and expertise of electrical engineering personnel to benefit society, with a focus on addressing a lack of access to electricity. Launched in 2015, the Hinghoi project was built from the ground up, with the Company conducting field surveys on the opinions, concerns, needs, and potential of communities. This approach fosters cooperation between the Company, local communities, and relevant network partners to ensure that the project aligns with the communities' needs. So far, the project has resulted in the installation of solar power systems and solar-powered water turbines for power generation; the construction of energy-saving school buildings, libraries, and canteens; and the provision of education and pamphlets on saving energy and the proper use of electrical appliances that use renewable energy in neighborhoods around its power plants and remote areas in Thailand and Lao PDR.

In 2022, CKPower established a framework for its efforts in creating value for society, engaging power plants within its network to contribute to planning and executing projects and setting joint goals towards a unified organizational direction which encompasses all dimensions of sustainable development: environmental, societal, and economic. The Hinghoi Project was identified as a key initiative to facilitate community access to clean electricity and water, enhancing availability of essential renewable energy for daily life. This initiative also supports educators as renewable energy advocates, fostering community awareness and understanding of renewable energy, ultimately leading to sustainable improvements in quality of life.

CKPower leverages the capacity, knowledge, and expertise of its personnel on clean energy-based electricity generation engineering to create value for communities and society. In 2023, the Hinghoi Project was executed under the theme of "Developing Remote Societies" in support of Sustainable Development Goals (SDGs) 3, 4, and 7. The Company implemented clean electricity initiatives in community areas surrounding the Xayaburi Hydroelectric Power Plant, such as Kang Village and Phon Si Village in Laos, along with a clean water project for communities near the Bang Pa-in Cogeneration Power Plant, including Khlong Phutsa Community in Phra Nakhon Si Ayutthaya Province. Additionally, clean electricity activities were conducted in remote communities at the Ban Mae Mu Nai Border Patrol Police Learning Center, sponsored by CK Power Public Company Limited, located in Mae Na Chon Subdistrict, Mae Chaem District, Chiang Mai Province. These initiatives aimed to prepare educators, children, and youth for a future powered by solar energy and involved the installation of solar street lights and water pumps. The overarching goal was to enhance access to renewable energy, improve community living standards, and promote awareness of renewable energy. The specific goals and outcomes of the project are detailed as follows:

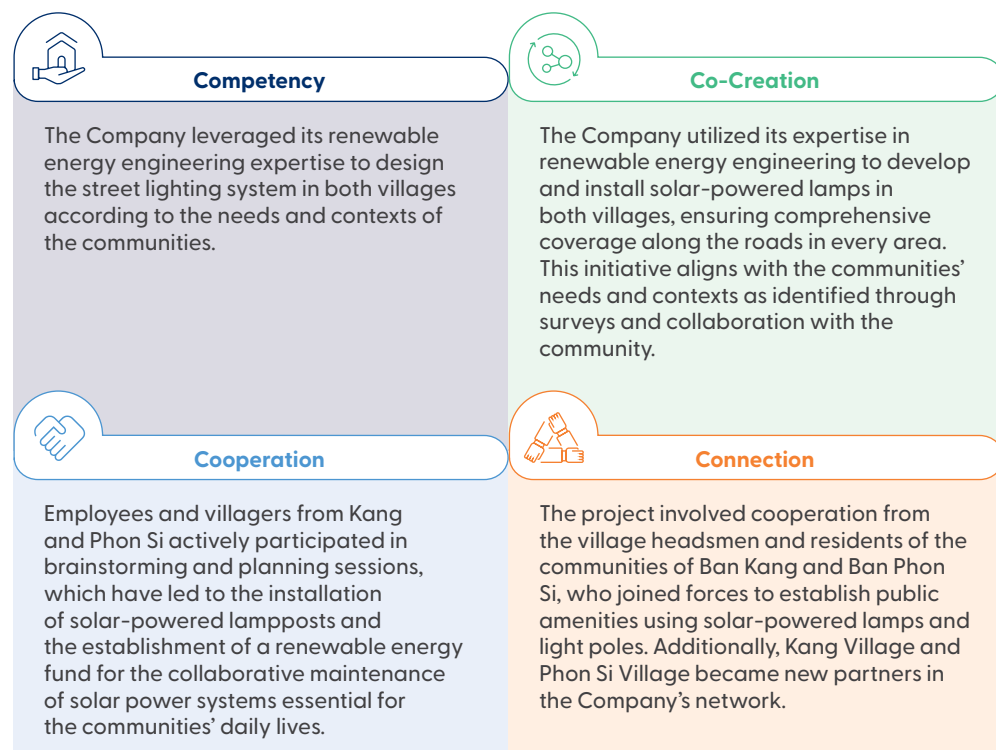
Xayaburi Hydroelectric Power Plant: Clean Electricity Project for Communities (Solar-Powered Street Lights), Kang Village and Phon Si Village, under the Hinghoi Project







The initiative began with surveys and dialogues with communities around the Xayaburi Hydroelectric Power Plant, a subsidiary of CK Power Public Company Limited, which identified a need for street lighting in Kang Village and Phon Si Village, as these areas lacked sufficient street lights, particularly along the main public routes connecting to the city of Xayaburi, especially at night.



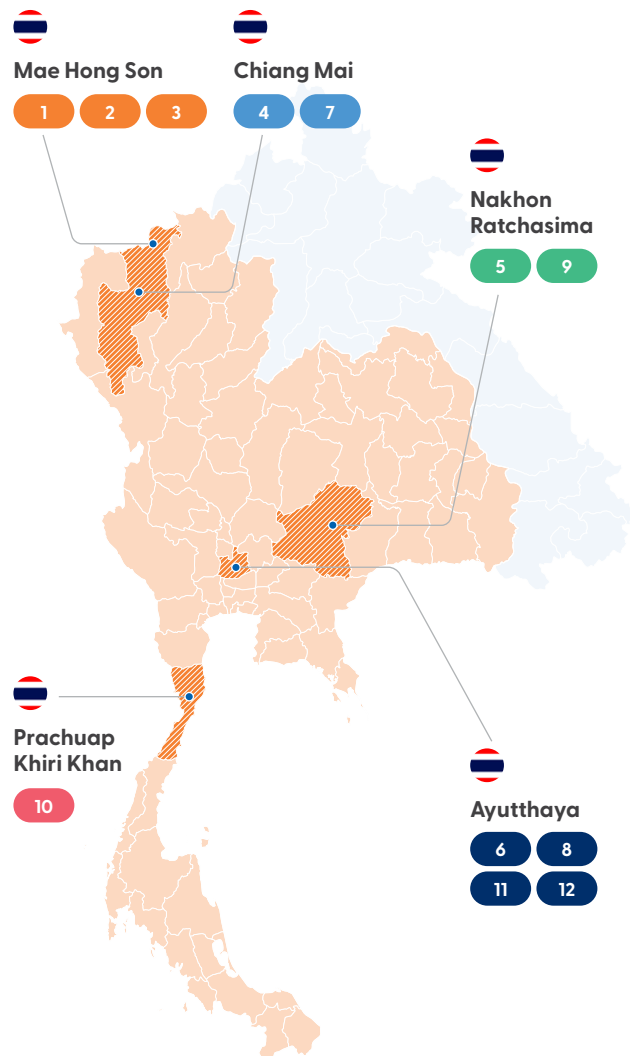
To address the identified issues, the Company implemented the Competency, Co-creation, Cooperation, and Connection strategy. Employees participated in installing 17 sets of equipment spanning 735.5 meters in Kang Village, and another 17 sets covering 709 meters in Phon Si Village. Additionally, the communities were educated about the importance of using renewable energy and basic equipment maintenance methods. Furthermore, sustainable stewardship was promoted by helping the communities establish a renewable energy fund.

The installation of solar-powered lights in both villages provides access to 5,100 watts of renewable energy for daily life. This is equivalent to reducing greenhouse gas emissions by 3,722 kgCO₂e/ year. The initiative enhances access to renewable energy required for the communities' daily activities and decreases road accidents by providing road lighting at night, benefiting a total of 166 households.



Project Targets and Performance					
Description	Project Target			Outcomes	
 Establishing a community renewable energy fund.	At least 1 fund			1 fund	
 Providing Ban Kang and Ban Phon Si with access to renewable energy for daily life.	Over 160 households	Over 5,000 watts		166 households	5,100 watts
 Providing education about renewable energy and basic maintenance to community members.	70 people			80 people	
 Supplying solar-powered lampposts for additional street lighting at night.	Ban Kang 17 sets	Ban Phon Si 17 sets	A total of 34 sets	Ban Kang 17 sets	Ban Phon Si 17 sets
 Providing personnel training and development in engineering, community outreach, and innovation creation for the benefit of society.	15 personnel			17 personnel	
 Reducing greenhouse gas emissions.	3,722 kgCO ₂ e/ year			3,722 kgCO ₂ e/ year	

Project Targets Performance (Thailand)



Remote community

1

Hinghoi 1: Construction of a solar powered school in Poo Kham Noi Village

Sop Moei District, Mae Hong Son Province, Thailand

Created a renewable energy learning center.

Number of Children and Youth Reached **50** children

Remote Community

2

Hinghoi 1: Construction of small water turbines to generate electricity in Mae Pa Klang Village

Sop Moei District, Mae Hong Son Province, Thailand

Created a renewable energy learning center.

Number of Children and Youth and Communities Reached **50** children

Remote Community

3

Hinghoi 2: Ban Mae Loe Border Patrol Police Education Center

Mae Sariang District, Mae Hong Son Province, Thailand

Created a renewable energy learning center.

Number of Children and Youth Reached **73** children

Remote Community

4

Hinghoi 3: Ban Mae Mu Nai Border Patrol Police Education Center under the sponsorship of CK Power Public Company Limited

Mae Chaem District, Chiang Mai Province, Thailand

Created a renewable energy learning center and access to renewable energy.

Number of Children and Youth Reached **48** children **3,000** watts

Bangkhenchai Solar Power Plant

5

Hinghoi 4: Ban Du School (Saharat Wittaya)

Nakhon Ratchasima Province, Thailand

Provided education on renewable energy.

Number of Children and Youth Reached **130** children

Bangpa-in Cogeneration Power Plant

6

Hinghoi 5: Wat Kudi Prasit School

Ayutthaya Province, Thailand

Provided education on renewable energy.

Number of Children and Youth and Communities Reached **126** children

Remote Community

7

Hinghoi 7: Lion Mahajak School 9 and Ban Pa Khaolam Community

Mae Taeng District Chiang Mai Province, Thailand

Provided education and create access to renewable energy.

Number of Children and Youth Reached **77** children **900** watts

Bangpa-in Cogeneration Power Plant

8

Support for teachers in Teach for Thailand Project, Udomseelwitthaya School
Ayutthaya Province, Thailand

Provided education on renewable energy.

Number of Children and Youth Reached **143** children

Bangkhenchai Solar Power Plant

9

Support for teachers in Teach for Thailand Project, Pakthongchai Choonhawan Wittayakarn School

Nakhon Ratchasima Province, Thailand

Provided education on renewable energy.

Number of Children and Youth Reached **334** children

Remote Community

10

Wat Na Haui

Prachuap Khiri Khan, Thailand

Create access to renewable energy.

16,630 watts

Bangpa-in Cogeneration Power Plant

11

Clean Canals in Khlong Jik Community

Ayutthaya Province, Thailand

Create access to renewable energy.

1,200 watts

Bangpa-in Cogeneration Power Plant

12

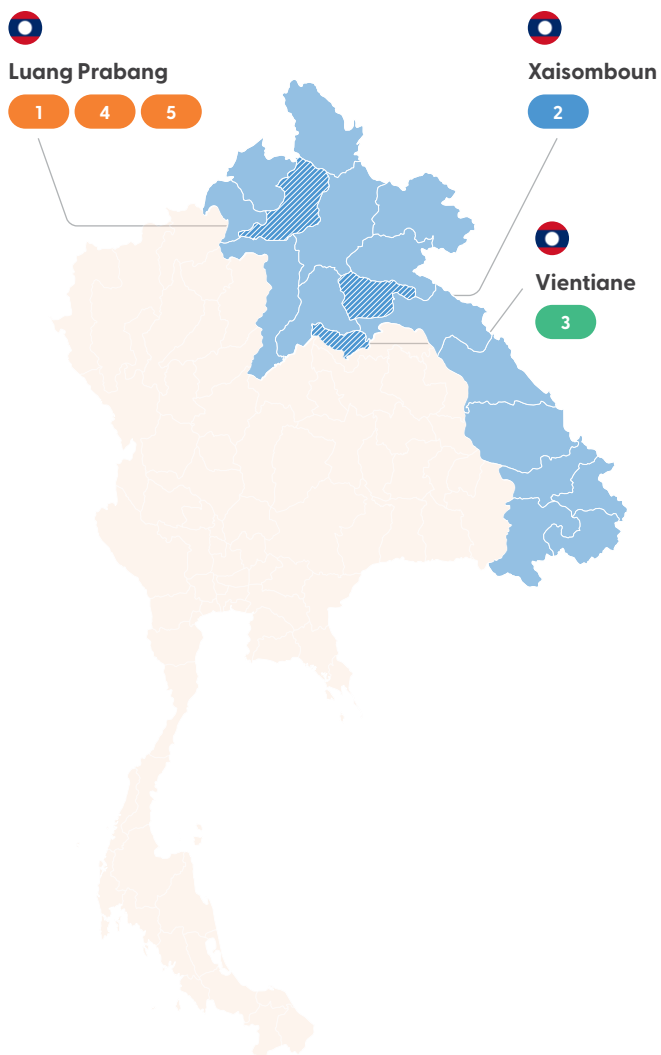
Clean Canals in Khlong Phutsa Community

Ayutthaya Province, Thailand

Create access to renewable energy.

1,200 watts

Project Targets Performance (Lao PDR)



Xayaburi Hydroelectric Power Plant

1

Hinghoi 4: Ban Kang School

Luang Prabang District, Lao PDR

Provided education on renewable energy.

Number of Children and Youth Reached
94 children

Nam Ngum 2 Hydroelectric Power Plant

2

Hinghoi 6: Hin Hua Seua Kindergarten

Xaisomboun Province, Lao PDR

Create access to renewable energy.

2,400 watts

Nam Ngum 2 Hydroelectric Power Plant

3

Na Bong Village

Vientiane District, Lao PDR

Create access to renewable energy.

9,900 watts

Xayaburi Hydroelectric Power Plant

4

Ban Kang Village

Luang Prabang District, Lao PDR

Created a renewable energy learning center and access to renewable energy.

Number of Children and Youth and Communities
47 children 2,550 watts

Xayaburi Hydroelectric Power Plant

5

Ban Phon Si Village

Luang Prabang District, Lao PDR

Created a renewable energy learning center and access to renewable energy.





Number of Children and Youth and Communities
47 children 2,550 watts



Waste to Value Project: Transforming Food Scraps into Soi Conditioner (Under the Grow Green Initiative)

The project transformed food scraps into a valuable soil conditioner, reinforcing its commitment to environmental sustainability and aiding community growth. Started at Xayaburi Power Plant and extended to Ban Noen Sawang, the initiative is a model for sustainable community engagement. Employees create eco-friendly soil conditioner from food waste, which has shown promising agricultural results and exceeded high-quality compost standards according to the Soil Research Center in Vientiane. The project, aimed at benefiting nearby communities and cutting soil conditioner costs, showcases CKPower's expertise in environmental engineering, dedication to community collaboration, and drive for sustainable agricultural enhancements through innovative practices.



 Competency	 Co-Creation
<p>CKPower utilized its capabilities to conduct conducted surveys and data analysis to understand food waste volumes and soil conditioner needs, aiming to benefit the community. They also evaluated the impact of reducing waste incineration, which also reduce carbon dioxide emissions by 40% from the process.</p>	<p>CKPower leveraged innovation and knowledge to develop oil conditioner from food waste with nutrients exceeding high-quality compost standards, later distributing it to the community. Their lesson plan and practical demonstrations highlighted environmental preservation and the benefits of recycling food waste, including reducing GHG and offering non-toxic agricultural products.</p>
 Cooperation	 Connection
<p>Employees and five households from Ban Noen Sawang tested the soil conditioner from food scraps and shared it with nearby communities. Additionally, 89 locals were trained in its use, leading to high-quality produce.</p>	<p>CKPower established a partnership and engagement with to distribute its developed soil conditioner from food scraps, cutting community costs and enabling extra income through production and utilization.</p>

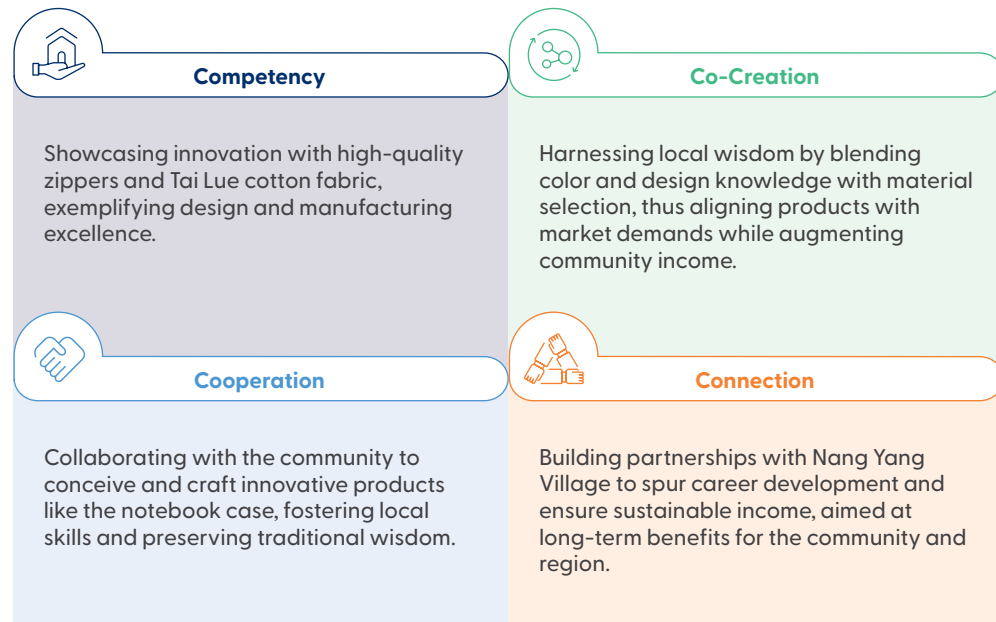
Project Target and Performance		
	Project Target	Outcomes
Fostering knowledge in children, youth, and villagers in Noen Sawang Village on the use of soil conditioner and conserving natural resources.	40 people	89 people
Providing personnel training and development in engineering, community outreach, and innovation creation for the benefit of society.	40 personnel	89 personnel
Reducing carbon dioxide emission from waste burning.	40% or 329 kgCO ₂ e/ year	40% or 329 kgCO ₂ e/ year
Increasing household income per harvest in Noen Sawang Village	1,000,000 kip, or 1,560 baht/ harvest/household	3,000,000 kip, or 4,683 baht/ harvest/household

Remark: Exchange rates as of February 1, 2024.

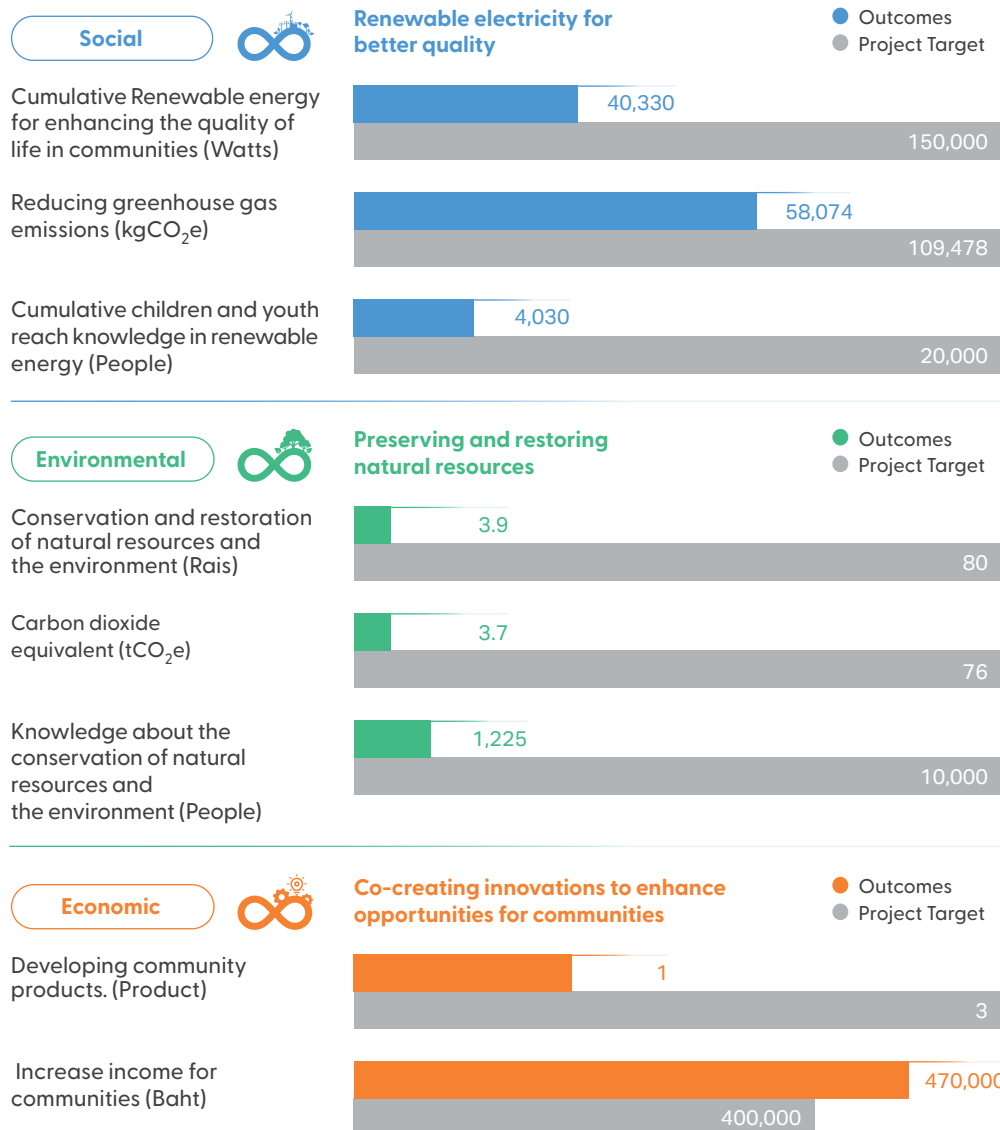
CKPower Sustainable Notebook Case Project under OPOP (One Power Plant One Product)

CKPower's Sustainable Notebook Case Project under OPOP (One Power Plant One Product) in 2023 at Nang Yang Village, Luang Prabang, Lao PDR, aimed at integrating business with community and social development. This initiative created jobs and career opportunities for locals near the power plant by turning Tai Lue cotton, a product of local wisdom, into eco-friendly notebook cases, alongside materials and design input from CKPower.

This endeavor not only highlights CKPower's environmental engineering expertise but also underscores its dedication to community co-creation, sustainable innovation, and the preservation of local wisdom for communal prosperity.



Targets and Performance Comparison according to the Framework for Social Value Creation



Respect for Human Rights



SDGs



Long-Term Targets



ZERO

case of human rights violation across the value chain



100%

of CKPower's businesses undergo human rights due diligence, and mitigation, rectification, and remediation measures are established.



100%

of personnel at all levels receive human rights training and communications

2023 Targets



ZERO

case of human rights violation across the value chain



100%

of CKPower's businesses undergo human rights due diligence, and mitigation, rectification, and remediation measures are established.



100%

of personnel at all levels receive human rights training and communications

2023 Achievements



ZERO

case of human rights violation across the value chain



100%

of CKPower's businesses underwent human rights due diligence, and mitigation, rectification, and remediation measures were established.



100%

of personnel at all levels received human rights training and communications

Message from CKPower



“In 2023, CKPower continued to achieve its goal of maintaining its zero human rights complaint record by adding new channels for employees to voice their concerns in addition to email channels, such as one-on-one inquiries and conversations, meetings with employees, and a suggestion box where employees could submit complaints. Suggestions and feedback from employees were used to inform various improvements. For example, CKPower redesigned its physical examination program to be suitable for different genders, ages, and job characteristics and created rooms for religious ceremonies and breastfeeding. In addition, CKPower ensured equal consideration for promotions regardless of gender, nationality, or religion and recognized all employees are entitled to fundamental human rights. Furthermore, the Company organizes human rights training for all employees and updates their knowledge annually to foster a corporate culture of social responsibility towards society, surrounding communities, and all stakeholders across the value chain.”

Mr. Jessadin Suwanbubpa

Assistant Managing Director – Human Resources
Head of Ambition – Human Rights

Impact on Business

Human rights issues can affect the Company’s reputation and operations as they are part of the foundation of sustainable business practices and a matter of high interest and expectation for all stakeholders. As such, CKPower prioritizes respect for human rights across the value chain and strives to protect human rights for all involved and ensure equal labor treatment. To this end, the Company has established relevant measures and guidelines in strict compliance with international standards to prevent violations against the rights of its stakeholders and any vulnerable groups, such as indigenous children, individuals with disabilities, members of the LGBTQI+ communities, women, and foreign labor. The initiative also instills confidence in stakeholders that the Company as well as its affiliates, suppliers, and business partners operate without labor right violations or discrimination, thus contributing to its business stability and sustainably foster trust among its stakeholders.

Challenges and Opportunities

The issue of human rights has garnered increasing attention worldwide, with higher expectations from governments, businesses, and stakeholders. As the Company invests in electricity production and distribution businesses both domestically and internationally and is required by the business nature to hire labor across the value chain, it may incur human rights risks. As such, human rights due diligence, labor rights protection, non-discrimination, occupational health and safety of labor, stakeholders, and vulnerable groups are crucial. To this end, CKPower has identified material issues with consideration to human rights and strives to operate not only with responsibility but also with respect for human rights in order to elevate its human rights actions to internationally accepted standards, reduce social and environmental impacts, mitigate risks to the organization’s image and reputation, and minimize financial impacts.

Commitment

CKPower strives to become a sustainable and socially responsible organization that upholds the rights of humanity throughout its value chain. To this end, it has incorporated human rights among its material topics and established a sustainability framework in adherence to the **United Nations Framework and Guiding Principles on Business and Human Rights (UNGP)**, the **Universal Declaration of Human Rights (UDHR)**, the **International Labor Organization (ILO)’s Declaration on Fundamental Principles and Rights at Work**, and the **Organization for Economic Co-operation and Development (OECD)**. CKPower has also aligned its business operations with the **National Action Plan on Business and Human Right (NAP Implementation)** and joined the **United Nations Global Compact (UNGC)**.



Message from Stakeholder

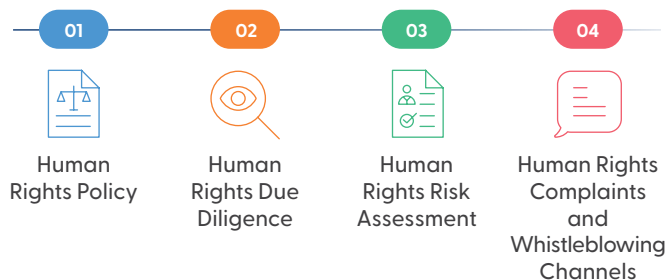


“As an employee who has worked both at the power plant and at the CKPower Office in Bangkok, the Company has consistently communicated its human rights policy as well as other regulations and policies to all employees through various communication channels. These cover the prevention and prohibition of all forms of illegal labor practices, the prevention and prohibition of discrimination and harassment of all forms, the promotion and respect for the freedom of association and rights to assembly and negotiation, the promotion and respect for health, safety, and living standards of employees at all levels. In addition, employees are encouraged to listen, respect, and share diverse opinions at work. As a female employee, I feel that I have been fairly treated by the Company as well as my colleagues. CKPower also issues clear communications to all customers, suppliers, and contractors.”

Ms. Buntita Hansuwan

Senior Specialist – Administration
Stakeholder, Employee

Operational Guidelines



Human Rights Policy

CKPower has announced and enforced its human rights policy and equal labor practices across 100% of the Company, its subsidiaries, Tier 1 Suppliers, and business partners, taking into account the human rights of at-risk and vulnerable groups to prevent human rights violations across the value chain. The human rights policy complies with labor laws of each country where CKPower operates as well as other international standards and requirements. Additionally, the human rights policy is regularly reviewed, taking into consideration changes with significance for the Company. CKPower has also developed and implemented a Human Rights Roadmap, which aligns with its 5-year sustainability strategy (from 2022 to 2026), in order to clearly define the goals and directions for its human rights protection efforts as well as enable risk assessments and prevent human rights violations in the future.

Human Rights Due Diligence

CKPower carries out human rights due diligence systematically and efficiently every three years in adherence to the UN Guiding Principles on Business and Human Rights (UNGPs). An external third-party organization is appointed to conduct human rights due diligence of the Company, covering all sites of operation across its value chain, to identify key human rights issues and

rights holders as well as impacted vulnerable groups across 100% of its business. The process consists of five major steps as follows:

5 Major Steps



01 Policy commitment: Establishing and declaring the human rights policy to both internal and external stakeholders.



02 Human rights risk and impact assessment: Conducting assessments at the national, industry group, operational area, and individual levels, including human rights risks among vulnerable groups.



03 Integration of human rights assessment results: Formulating risk mitigation and control measures.



04 Monitoring and reporting progress of human rights actions.



05 Remediation of those affected by human rights impacts

Human Rights Risk Assessment

CKPower conducts human rights risk assessments on its activities at industrial and national levels and at its significant locations of operation every three years as well as on its business partners, encompassing at-risk or vulnerable groups, with the human resources division of the Company designated as the responsible unit. The risk assessments take into account two key factors, which are likelihood and severity, and are conducted so as to enable the Company to identify human rights risk issues, formulate preventive guidelines, and establish control and mitigation measures for potential impacts, covering nine human rights risk topics. Furthermore, human rights issues relevant to its business operations across the value chain as well as the corresponding control measures are reviewed annually to ensure its action plans and its mitigation, rectification, and remediation measures are effective and aligned with the operational targets.

Human Rights Complaint Handling and Whistleblowing Channels

CKPower has put in place channels for communication and human rights complaints channels for CKPower Group to receive reports or complaints about human rights violations, concerns, and suggestions. Whistleblowers will be protected under whistleblower protection measures. Comprehensive complaint handling procedures and guidelines have been clearly established, along with appropriate and fair mitigation, correction, and remediation measures in the event that the complainants are affected. Complaints can be filed through the following channels:

Whistleblowing Channels



Website

Human rights complaints can be filed via the Company's website under the topic "Respect for Human Rights."



E-mail

directors@ckpower.co.th
humanrights@ckpower.co.th
ir@ckpower.co.th



A seal letter addressed to:

CK Power Public Company Limited
587 Viriyathavorn Building, 19th Floor,
Sutthisan Winitchai Road, Ratchadaphisek
Sub-district, Din Daeng District, Bangkok 10400



Suggestion box

Scan QR codes posted in offices
or click the following link:
Link: <https://forms.office.com/r/bWy6BJfp1l>



Discussion meetings with employees

Private conversations and one-on-one
discussions for feedback and suggestions

As human rights are a major concern for CKPower, it regularly promotes strict adherence to human rights principles among employees in all engagements with stakeholders, such as respecting the human rights of the employees, embracing the diversity of physical appearance and opinion, and undertaking non-discriminatory recruitment on the basis of race, nationality, religion, gender, color, language, ethnicity, socioeconomic status, or any other factors. CKPower also prohibits the use of forced and child labor, both within the Company itself and in the supply chain. The issue of human rights has also been incorporated into the Supplier Code of Conduct, communicated to relevant parties, and included in the annual assessment and auditing of its suppliers to ensure that human rights are upheld in their operations and promoted across the value chain.

Development and Implementation of the Human Rights Roadmap

CKPower has continued to implement its 5-year Human Rights Roadmap. Key activities in 2023 can be summarized as follows:

- To create value and further expand its projects, CKPower fostered human rights awareness and increased engagement with all stakeholders across the value chain on the basis of respect for human rights.
 - Engagement with internal stakeholders: Internal stakeholders refer to employees. CKPower organized a human rights training program for 100% of its personnel, entitled "Promotion of Responsible Business Practices and Respect for Human Rights." The program covered CKPower's human rights policy and sought to develop an understanding of how the issue of human rights could

be applied to the organization. The program also focused on building awareness of respecting fundamental human rights in business operations and embracing diversity in the organization to ensure harmony in the workplace amidst diversity.

- Engagement with external stakeholders:
 - **Suppliers:** CKPower elevated its human rights risk management process to reduce the risk of violation across the value chain and improve the quality of life in the workplace with respect to labor, health, safety, and well-being. In addition, the Company educated the suppliers to foster awareness and understanding and conducted random site visits, during which no human rights violation was found.
 - **Communities:** CKPower fostered engagement and conducted projects on the basis of respect for human rights to foster job security and elevate the quality of life for communities around its power plant and in society at large.
 - **Customers:** CKPower delivered electricity to all customers with reliability and operated with a commitment to safety, which is a fundamental right, in order to enhance the quality of life in the Company and its subsidiaries.
- CKPower joined the progress assessment of the United Nations Global Compact (UNGC).
- CKPower found and investigated zero cases of human rights violations and revised its impact mitigation measures.
- CKPower revised its human rights complaint handling and response process and added one-on-one discussions and suggestion boxes as additional channels.

Project Highlights in 2023

Human Rights Awareness Building Projects and Activities

New Employee Orientation

To raise awareness among new employees, CKPower incorporated content on human rights, the human rights policy, and the complaint procedures into the orientation for new employees on their first day at the Company in order to ensure their understanding of the objectives of CKPower's human rights practices in accordance with international standards.



Promotion of Responsible Business Practices and Respect for Human Rights training course for employees and communities

CKPower conducts training sessions annually to enable employees and communities involved in its operations to apply human rights knowledge and raise awareness about the importance of adhering to human rights principles as a foundation of their activities. In 2023, 100% of its personnel and relevant communities underwent integrated training on social responsibility and respect for human rights.



Labor Treatment

As employees are the key driving force of the organization and enable it to achieve the established goals, CKPower places great emphasis on employee engagement through its human resource management practices, which are guided by fairness without discrimination based on race, nationality, religion, gender, color, language, ethnicity, socioeconomic status, or any other factors towards all stakeholders. CKPower also prohibits the use of forced and child labor, both within the Company itself and in the supply chain. Furthermore, CKPower has established a policy for the determination of fair and suitable remuneration based on employee competency and performance and allocates equal welfare and benefits among employees that are competitive compared to other companies in the same business group in accordance with its human rights policy. In 2023, there was no complaint on labor treatment.

2023 Targets



ZERO

case of human rights violation across the value chain



ZERO

complaint of human rights violation



POLICY

Suppliers and contractors are informed of CKPower's human rights policy and framework.



Human rights risk assessment

EVERY THREE YEARS



REVIEW

of relevant human right risk issues across the value chain are conducted annually.



100%

of personnel at all levels receive human rights training and communications



100%

of CKPower's businesses undergo human rights due diligence, and mitigation, rectification, and remediation measures are established.



100%

of CKPower's high-risk tier-1 suppliers undertake vendor self-assessments of human rights risks.



100%

of CKPower's high-risk tier-1 suppliers undergo human rights training.

2023 Achievements



ZERO

case of human rights violation across the value chain



ZERO

complaint of human rights violation



POLICY

Suppliers and contractors were informed of CKPower's human rights policy and framework.



A human rights risk assessment was

CONDUCTED IN 2021



AN ANNUAL REVIEW

of human right risk issues was conducted.



100%

of personnel at all levels received human rights training and communications



100%

of CKPower's businesses underwent human rights due diligence, and mitigation, rectification, and remediation measures were established.



100%

of CKPower's high-risk tier-1 suppliers undertook vendor self-assessments of human rights risks.



100%

of CKPower's high-risk tier-1 suppliers underwent human rights training.

Human Capital Management



SDGs



2023 Targets

Personnel Development



>90

internal training courses



>90

external training courses



≥30

training hours per person



An average employee satisfaction score of over

3.5



An average score of
3.5

on employee engagement survey



>90%
participation rate

for employee engagement survey



10,000

Baht

Average investment in employee training per person

2023 Achievements



121

internal training courses



92

external training courses



42

training hours per person



An average employee satisfaction score of

3.8



An average score of
3.8

on employee engagement survey



95%
participation rate

for employee engagement survey



17,697

Baht

Average investment in employee training per person

Message from Stakeholder



“CKPower conducts employee training to provide both existing and new employees with work-related knowledge, such as training on the environment, safety, and human rights. Additionally, CKPower encourages its personnel to participate in specialized training and individual development programs, with annual budgets allocated for training with external agencies, and provides opportunities for training, site visits, and participation in various seminars and conferences, both domestically and internationally.”

Mr. Surajate Boonya-aroonnet

Senior Chief Engineer – Hydrology Engineering
Stakeholder, Employee

Impact on Business

For CKPower to achieve stability and sustainable growth, personnel capabilities that are continuously developed are indispensable. In addition, CKPower must provide opportunities for continuous learning and development to ensure efficient and effective operations and the ability to meet stakeholder expectations. Moreover, human capital management not only enhances personnel's skills and expertise and allows them to grow alongside the business, but also instills a sense of ownership among employees and bolsters their long-term engagement with the organization in a sustainable way.

Challenges and Opportunities

In the rapidly changing economic, social, and environmental landscape of the present and future, coupled with ever-evolving regulations and exponential technological advances every year, employees serve as crucial drivers for businesses to achieve sustainable success and growth. Human capital management aimed at ensuring employees' adaptability to changing conditions is both a challenge and an opportunity for business development. Therefore, CKPower regularly develops strategies and places utmost emphasis on its personnel to ensure the Company's preparedness for change while also implementing environmental management, demonstrating social stewardship, and embracing new technologies, which will empower employees' self-development and optimize operational efficiency. All of this represents a significant opportunity to position the organization as one of the largest renewables-based electricity producers in the region.

Commitment

CKpower is committed to human capital management as a crucial component in enhancing its competitiveness and adaptability to continuous change as the Company pursues its goals, vision, and mission. Additionally, CKPower promotes employee well-being, a conducive work environment, welfare, and a good quality of life while enhancing the knowledge and skills of the employees to align with its strategic direction. Given its ambition to achieve regional leadership in renewable energy production and commitment to sustainable development, it is imperative for CKPower to have employees with knowledge and skills essential to renewables-based electricity production that is friendly to the environment, communities, and society, thus contributing to the Company's goal of becoming a leading renewable energy electricity producer with the lowest carbon footprint in the region in a sustainable way.

Operational Guidelines

Guided by its business direction and commitment to establishing itself as one of the largest renewables-based electricity producers in the region with one of the lowest carbon footprints, CKPower has drawn up guidelines for developing employee knowledge and skills in electricity production and resources as well as expertise in related operations, including electricity production and operational management. In addition, CKPower provides proper employee care and has been able to retain talents in the long term. Additionally, CKPower has set guidelines to provide opportunities for suitable career advancement for employees, ensure fair benefits, continuously develop employee competency, offer welfare, and maintain a good work environment. More importantly, the Company has efficiently formulated individual development plans through a performance assessment system aligned with international standards in order to manage employee performance at all levels as well as enhance job performance, promote career advancement opportunities, and retain highly skilled employees through succession planning. CKPower focuses its resource management on five dimensions:

5 Dimensions



Human Capital Management

Operational Competency Development

Training Programs

CKPower continuously develops employee competency through regular training programs every year. These programs include both internal and external courses tailored to enhance competency in accordance with the organization's direction of becoming a leader in sustainable resource-based electricity production. These programs are aimed at enhancing employees' knowledge and essential skills, ensuring they possess the necessary competencies for their job roles and career opportunities. Additionally, they provide opportunities to transfer knowledge and experiences to operational-level employees. The training programs are classified to suit each position as follows:

Training Programs

01

New Joiner

Courses for new employees



02

Soft Skill

Skill and potential enhancement courses for employees



03

Functional Training

Courses for employees with specialization



04

Leadership Program

Team management capacity enhancement courses for managers and supervisor



05

CKP Academy in CKPower Mobile Application

Portal for employees to access and revisit knowledge / courses anytime and anywhere



Internal Training Program

CKPower has strategically developed a diverse range of 121 internal training courses to enhance employee development in various areas. These courses are meticulously categorized into Soft Skills, Functional Training, and Leadership Programs, each designed to align with CKPower's commitment to sustainable energy production and organizational excellence. Below are examples of courses within each category:

- **Soft Skill Development:** Facilitate Effective Meeting, Knowledge Sharing ex. DISC & 7 Habits
- **Functional Training:** Electrical Appliance Selection for Energy Conservation in Offices and Factor, Power Plant Safety, Power Purchase Agreement Instrumentation, Plant Shutdown, Planning and Management, Major Maintenance Service Agreement (MMA), Waste to Value, Innovation Program in Bangpa-in Power Plant
- **Leadership Program:** NN2 Leadership Transformation

Waste to Value Course for transforming organic waste into soil conditioners



Innovation courses at Bangpa-in Cogeneration Power Plant



Effective Meeting Facilitation Course



Attending Hydro 2023 in Scotland



NN2 Leadership Transformation Course



Canva Training Course



External Training Program

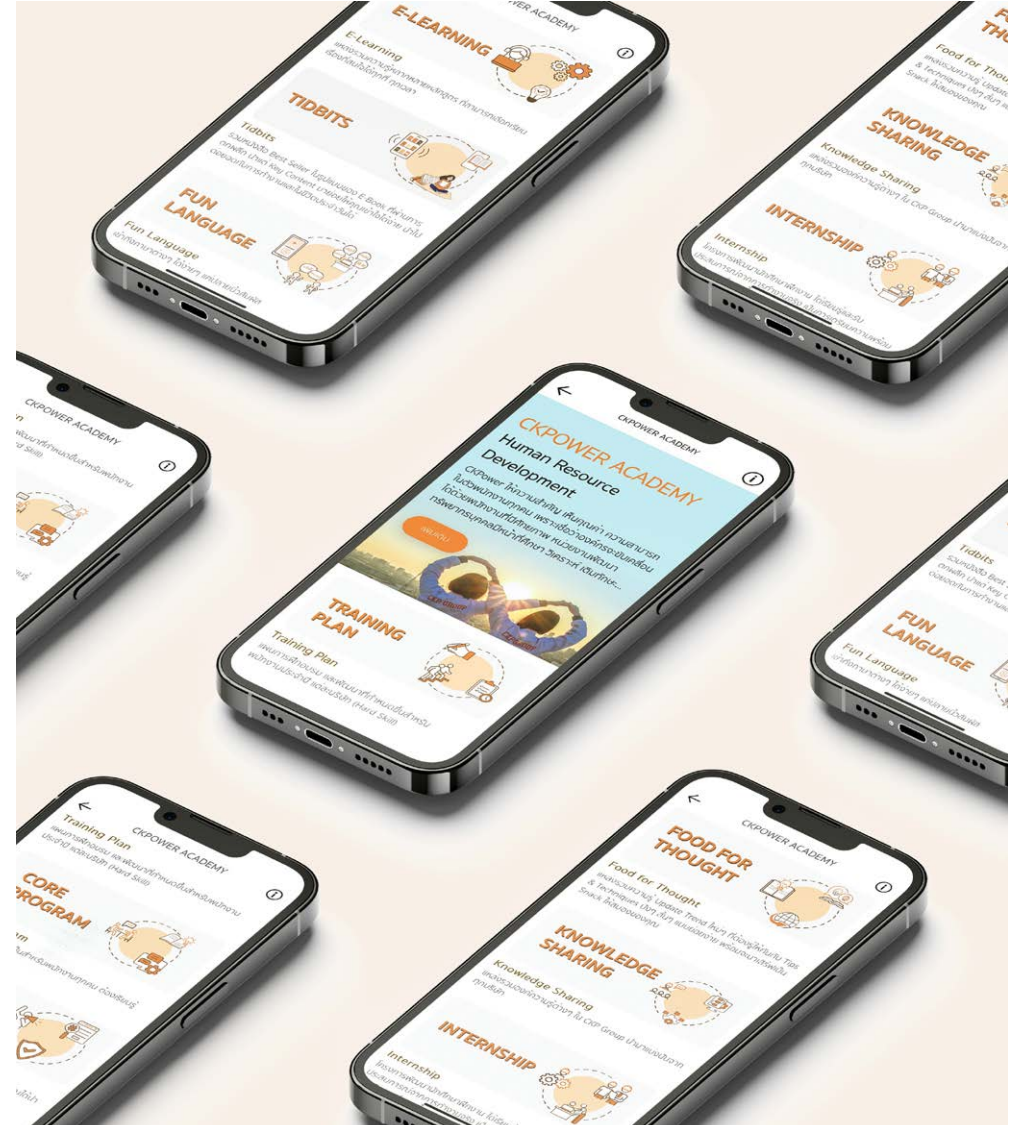
CKPower is dedicated to enhancing its workforce capabilities through a comprehensive suite of external training courses. With 91 offerings, these courses are strategically categorized into Soft Skills, Functional Training, and Leadership Programs, tailored to meet the dynamic needs of employees and align with CKPower's sustainability and innovation goals. Below is an overview of courses within each category

- **Soft Skills Development:** Leading at the Speed of Trust Public Workshop, Key insights into the complexities of contract review processes
- **Functional Training:** Energy Consumption Optimization: Techniques for optimizing energy use within industrial settings, Personal Data Protection Law Compliance for Internal Audit Work, Natural Gas Facility Operator, Air Pollution Control Operator, Project Management in Practice, Extreme Risk Management Guidelines for Emergency Response to Severe Weather Events.
- **Leadership Programs:** YourNextU Program for Line Managers Company Secretary Program (CSP), Sustainable Supply Chain Management, Infrared Research and Training Center Course, Operation of Extensive PLC Programs with SIMATIC S7

Employee Competency Development Tool: CKP Academy Application in CKPower Mobile Application

CKPower has created the CKP Academy in CKPower Mobile Application as a tool for developing personnel potential. It serves as a database of knowledge and skills for setting new mindsets and trends. Additionally, it facilitates lifelong learning and fosters a culture of self-initiated study through virtual training and E-learning. Furthermore, it encourages employees to create their own individual development plans, promoting the development of strengths and ensuring continuous improvement for enhanced productivity.

CKP Academy in CKPower Mobile Application



Employee Competency Development Tool: CKP Academy in CKPower Mobile Application

Training Plans: Annual technical and functional skill development plans tailored to each employee.

Core Programs: Core and mandatory training programs for all employees, such as on the Company's core values, Kaizen, sustainability fundamentals, human rights principles, the Personal Data Protection Act (PDPA), and the importance of safety in the workplace.

Guidelines: A database of various recommendations and practices necessary for each line of work within the Company.

New Joiner: Compulsory training that every new employee must undergo on topics such as core values, Kaizen, occupational safety and health, waste management, and biodiversity.

E-Learning: A hub of information and various courses, which employees can select for self-study based on their interests anywhere, anytime, such as Individual Development Plans, Law Knowledge, Enterprise Risk Management, and Team Decision Leader.

Tidbits: Key content extracted from bestsellers in the form of e-books, presented in an easy-to-understand format ready for application in both work and daily life. Examples include "The Magic of Thinking, Simplify with One-Sheet-of-Paper Thinking, and the Lazy Person's Guide to Presentation.

Fun Language: A feature developed to aid CKP Group employees in learning Lao and other languages easily and directly from native-speaking employees. It also serves as a database of Lao vocabulary for everyday usage, technical terminology for essential business communication, and insights into Lao culture and recommended local sites, all presented by native speakers. Additionally, this feature provides opportunities to learn regional Thai and Indian languages as well as English from native-speaking employees through short, easy-to-digest clips.

Food for Thought: A database of knowledge on different mindsets on management, teamwork, goal setting, team building, and relating to colleagues, as well as updates on new trends, all presented in an engaging, easy-to-understand Micro Learning format. Examples of content include Three Steps to Start a New Year with Success and Executive Presence.

Knowledge Sharing: A database of information from each affiliated company which allows employees to share knowledge, expertise, job-specific skills, and field experience through virtual classes, face-to-face interactions, or digital documents. Examples of content include finance and tax planning, waste management under the Grow Green Hero project, solar PV systems, solar roof installation, energy-saving innovation for power plants, and waste management.

Internship: An internship program that enables participants to learn and gain practical experience through field work, serving as a valuable preparation for future employment. The program also aims to cultivate awareness of work ethics and social responsibility. Initiatives under the internship program include internship presentation projects and internship interviews

Environment and Safety

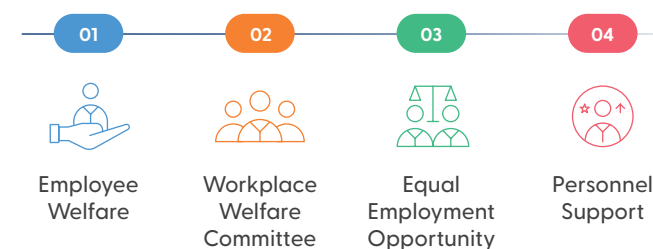
CKPower prioritizes workplace safety, occupational health, and environmental concerns by preventing potential safety risks and ensuring compliance with relevant legal requirements. In addition, CKPower has prescribed regular inspections, monitoring, assessments, and reviews of operations to enable employees to prevent and correct activities that may have safety, health, and environmental impacts as well as continuously develop work methods.

Workplace Welfare Committee

CKPower has specified the details, policies, and procedures of employee welfare as well as the employment termination process in accordance with applicable laws, which apply to 100% of employees, to ensure that they are informed. CKPower has also

established the Workplace Welfare Committee in accordance with Thai labor standards (TLS 8001-2553) and international human rights principles. The Committee consists of five members who represent all employees and are responsible for proposing welfare suggestions and guidelines to the Labor Welfare Committee. The Committee also monitors and supervises the continuous allocation of welfare to comply with labor laws. The Committee also serves as a point of contact for employees to exercise their right to organize, express opinions, and provide suggestions for welfare provisions through the channels specified by CKPower and of which all employees have been informed.

Employee Welfare



CKPower has established clear a remuneration policy and structure. Remuneration, raises, and wages are determined by the Managing Director based on various factors, namely salary and wage rates that are competitive in the labor market, qualifications, knowledge, skills, experience, and scope of authority according to position levels. This is to ensure that employees are appropriately compensated according to their positions, roles, and responsibilities. In addition, CKPower offers welfare and benefits to permanent employees and other employees who work at its significant locations of operation. These benefits include life insurance, health insurance, disability coverage, parental leave, and pension.

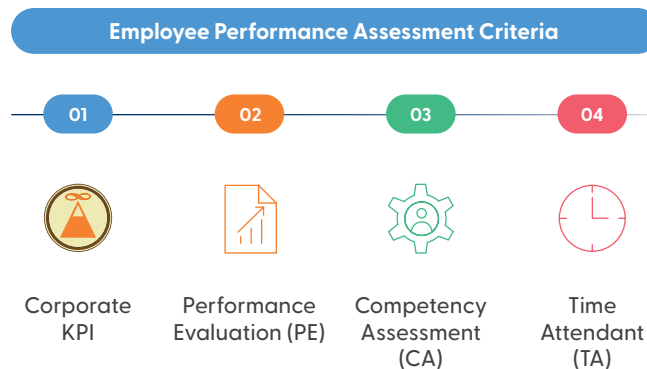
In terms of recruitment, CKPower supports hiring practices that embrace diversity and value the differences among individuals, without discrimination on the basis of ethnicity, gender, religion, socioeconomic status, age, nationality, education, and physical fitness. CKPower recognizes that diversity in its human resources enables it to effectively respond to the diverse needs of stakeholders and operate sustainably. Additionally, CKPower has implemented policies and guidelines to provide job opportunities for disabled and underprivileged groups, based on their suitability to the positions available, including hiring policies and welfare rights. The aim is to promote a better quality of life for individuals with disabilities.

Furthermore, salary adjustments are based on employee assessment against key performance indicators (KPIs), which are utilized to assess the performance of employees of both CKPower and its subsidiaries, in conjunction with other factors, such as job success, behavior, and work potential. In addition, salary adjustments are benchmarked against other companies of a similar size in the same industry. Additionally, CKPower Group's personnel management adheres to the business code of conduct, personnel management policies, and other relevant ethical standards to ensure efficient management practices and compliance with good corporate governance principles. All employee benefits, policies, and protocols, as well as the procedure for employment termination as stipulated by the law have been set forth and communicated to all employees and enforced on 100% of the workforce.

Opportunities for Career Advancement

Performance Tracking and Assessment

Talents play a vital role in bolstering the organization's competitiveness and enhancing its capacity to adapt to market dynamics, particularly in the electricity business. To improve the competency of employees at all levels, CKPower conducts performance assessments in alignment with its policies and business expansion trends. Performance targets are established using criteria consisting of corporate key performance indicators (Corporate KPIs), performance evaluation (PE), competency assessment (CA), and time attendance (TA). These assessments are conducted annually, with direct supervisors assessing each employee based on predefined criteria agreed upon between supervisors and employees to ensure alignment with the business plans.



This process ensures the maintenance of standards and the continuous development of all employees.

Individual Development Plan (IDP) Revision

CKPower reviews training plans for employees at all levels on a yearly basis and encourages employees to develop their own individual development plans to efficiently enhance their strengths and productivity. As part of this process, SMART Goals (Specific, Measurable, Attainable, Relevant, Time-bound) are set according to each level and the increased roles and responsibilities. Additionally, CKPower provides upskilling and reskilling tools for employees at all levels, allowing them to choose and plan their development annually to achieve their own efficiency and competency development goals through their individual development plans coupled with training roadmaps. This ensures the preparedness of employees at each level and promotes continuous and sustainable development for all employees, as detailed below

Individual development plans

Individual development plans are formulated based on training roadmaps and training plans for employees at each level to promote career advancement and enhance their competency through a diverse range of domestic and international training courses. The formulation of individual development plans consists of the following steps:

Training Roadmaps

Training roadmaps are tools that specify the courses or learning modules necessary for the development of job-specific competency and leadership skills. These roadmaps vary according to job types and positions.

Shared drive system

The shared drive system enables knowledge sharing and the conveyance and dissemination of training materials between employees within each line of work.

5 steps for IDP formulation

01

Communication and explanation of IDP formulation

Review the steps for IDP formulation at CKP Academy App.



02

Discussion between supervisors and team members

- Set 1-2 self-development goals
- Use the 70:20:10 tool.
- Define the timeframe and success indicator.
- Fill out and file the IDP to SharePoint.



03

IDP implementation

Supervisors monitor the outcome (quarterly).



04

Progress tracking

HR serves as a mentor and tracks development progress (quarterly).



05

Outcomes

Gauge outcomes from documents or tangible proofs of success



Succession Planning

CKPower recognizes the necessity and importance of operational planning and places great emphasis on its personnel, which are vital assets in business operations. Therefore, CKPower has established a succession plan in accordance with its policy to recruit quality personnel within the Company to fill vacant positions and ensure business continuity and sustainability. The succession plan is drawn up for vital positions in major lines of work so as to develop necessary knowledge, capabilities, and skills in preparation for succession. These positions include directors, senior management, and others requiring specialized expertise. This is to ensure smooth succession and business continuity

Employee Engagement

CKPower's CAWTA core values serves as the foundation for fostering unity among employees at all organizational levels. Through annual activities and communications, CKPower aims to enhance employee engagement with the organization. This approach provides employees with guiding principles to adhere to and implement, fostering common goals and a positive organizational culture.

CKPower prioritizes and carries out efforts to obtain insights into employee needs and promote the well-being of its personnel at all levels across CKPower Group. To this end, it conducts employee satisfaction and engagement surveys every two years.

Furthermore, the Company has applied the principle of Kaizen to the operation of its personnel to improve and enhance their competency through various activities. In addition, CKPower welcomes work-related feedback and suggestions from employees to further improve the organization, foster employee engagement, and set CKPower's operations on an upward trajectory.

Project Highlights in 2023



YourNextU Project

The YourNextU Project, conducted by the SEAC Institute, aimed at enhancing leadership skills among new supervisors. It provided an immersive learning experience with courses from international leaders on essential management techniques and leadership qualities, including Growth Mindset, Emotional Intelligence, Step in Leader, E3s (Empower, Engage, Execution), Design Thinking, and Outward Leadership.

Project Target



The project's objective is to equip participants with a broad set of tools for effective team management and leadership.

2023 Achievement



In 2023, new supervisors completed the YourNextU Project, gaining valuable insights and skills for their leadership roles.

7
people



IDP Coaching Line Manager Project

The IDP Coaching Line Manager Project was designed to enhance employee potential and productivity through a comprehensive gap analysis and coaching process. Aimed at identifying development areas for team leaders and supervisors, the project facilitated the creation and execution of individual development plans (IDPs). By focusing on leveraging existing strengths and addressing developmental gaps, the initiative aimed to enhance team dynamics and overall organizational engagement. The Human Resources Development (HRD) team played a pivotal role as coaches, providing ongoing support and monitoring progress to ensure the continuous and effective implementation of IDPs.

Project Target



The ultimate goal is to cultivate a culture of self-improvement and sustainable growth within leadership roles, thereby enriching competency development across the board.

2023 Achievement



HRD team actively tracked IDP progress from supervisors and team leaders and discussed the progress, and the topics therein, of each employee's IDP in order to analyze and provide courses that could promote their development.



Team Building Project

The project fostered employee engagement with the organization and strengthened relationships among employees from different sites of operation to promote solidarity. The organizational culture CAWTA Core Value and various tools were employed during brainstorming sessions to create outcomes capable of creating value and collaboratively come up with approaches to optimizing operational efficiency. The project brought inspiration to all the participants and included content that promoted communication and the exchange of ideas.

Project Target



To promote participation in brainstorming, problem-solving, adaptation, and co-creating a conducive environment and a positive work atmosphere, all of which contribute to the fostering of employee engagement.

2023 Achievement



Interactive workshops were conducted to foster significant shifts in areas like involvement, connection, and mutual understanding. The overall satisfaction rating from participants for this year's team building activities achieved a notable score of 4.56

โครงการปรับปรุงการบริหารค่าตอบแทน เพื่อเพิ่มความสามารถในการแข่งขันในตลาดแรงงาน



Remuneration Adjustment Project to bolster its competitive edge in the labor market

CKPower established attractive remuneration packages for employees, especially those requiring high skills in their work or those with scarce and in-demand skills, to enhance the Company's short and long-term competitiveness in the labor market and draw talents in the job market.

Project Target



To enhance employee motivation and ensure CKPower remains a preferred employer within the competitive landscape

2023 Achievement



The turnover rate among talents decreased.



Improvement of Communication on Performance Assessment project

To enhance employee awareness regarding the establishment of operational goals, the intricacies of performance evaluations, and the direct correlation between these assessments and opportunities for career progression and annual salary increments.

Project Target



The initiative is committed to achieving comprehensive communication, with the goal of reaching 100% of employees across all company locations.

100%
of Employees Across All
Company Locations.

2023 Achievement



100%
of employees being fully briefed on how performance assessments are intricately linked to their professional development and financial recognition

2023 Achievements



An Average
Score of

3.8
on Employee
Engagement Surveys



An average employee
satisfaction score of

3.8



42
Training Hours
Per Person



121
Internal Training
Courses



Training
Courses
92
External Training
Course

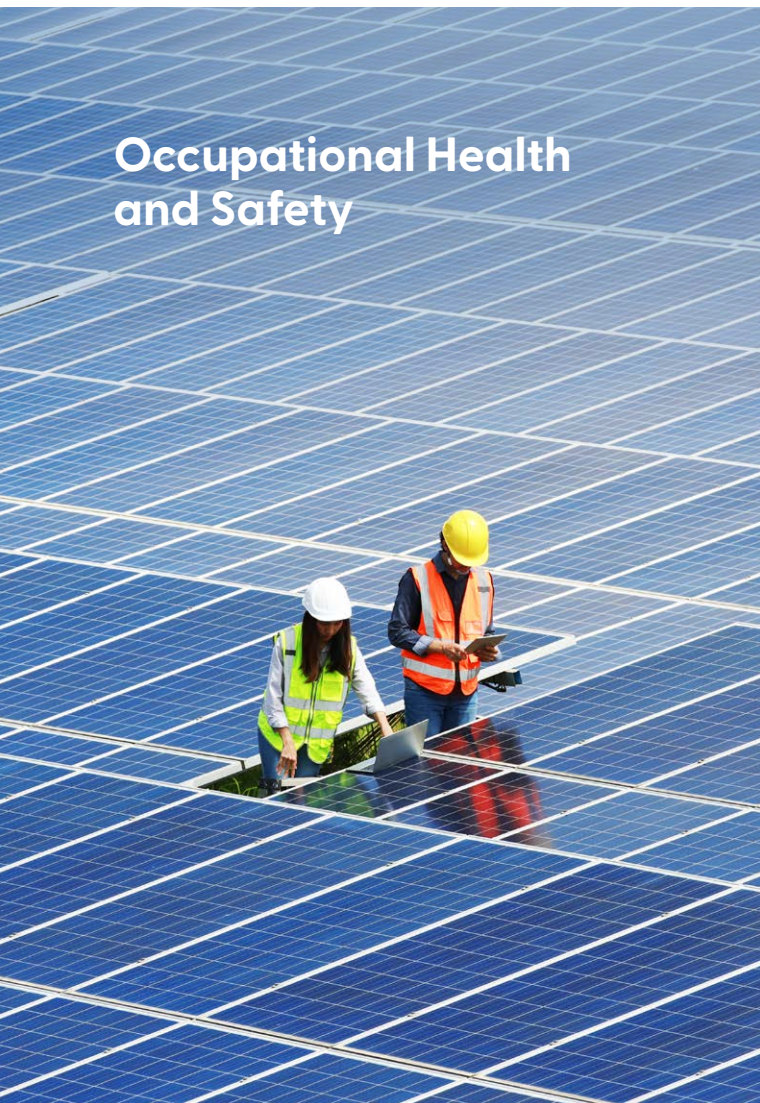


Average Investment
in Employee Training
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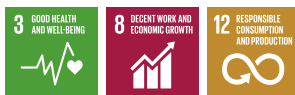


95%
participation rate for
employee engagement
surveys

Occupational Health and Safety



SDGs



2023 Targets



0

case

Fatalities from work-related injuries



0

case

Lost-time injuries (LTI)



0

case / 1,000,000 hours

Lost-time injuries frequency rate (LTIFR)

2023 Achievements



0

case

Fatalities from work-related injuries among employees and contractors



0

case

Lost-time injuries (LTI) among employees



0

case / 1,000,000 hours

Lost-time injuries frequency rate (LTIFR) among employees

Message from Stakeholder



“CKPower’s oversight includes accessing safety equipment and defining the scope of GE’s work as being focused on the control room rather than the entire power plant. In GE’s experience, CKPower’s supervision of the power station has been thorough, and it adheres to comprehensive and appropriate standards set by EGAT. For instance, in the case of accidents at any site, doctors and nurses are available on-site for treatment. Furthermore, CKPower organizes toolbox meetings before commencement of work to stress the importance of safety procedures. Additionally, there is an annual rehearsal plan in place for handling gas leaks within the industrial estate.”

Mr. Natchanon Pariyatdulapak
Sale Manager Supplier GE Grid
Stakeholder, Suppliers and Contractors group

Impact on Business

Occupational health and safety is materiality of CKPower’s business operations. Effective safety management is essential, directly impacting the well-being and livelihoods of employees, contractors, and their families, while also preventing operational disruptions that can affect the entire supply chain. CKPower actively promotes occupational health and safety policies, coupled with comprehensive training aligned with international standards and local regulations in Thailand and Laos. This approach not only enhances the safety and efficiency of our workforce, including suppliers and contractors, but also extends to ensuring the safety of communities surrounding our power plants. Implementing these measures not only ensures workplace safety but also reduces accidents among suppliers, contractors, and the broader community. On the other hand, overlooking such important safety practices can lead to non-compliance with international standards, risks to workers’ lives and property, and negatively impacting their families and the broader community.

Challenges and Opportunities

Amid routine business operations, there are inherent risks associated with environmental factors and unsafe working conditions, such as fluctuating weather patterns and increasing levels of pollution. These conditions can lead to accidents, injuries, illnesses, fatalities, and damage to property. This poses a significant management challenge for CKPower in achieving its goal of continuing to be an **“accident-free and injury-free organization.”** To address this challenge, the company has developed a robust occupational health and safety management

system, encompassing both preventive measures and effective remedial strategies. Employees, contractors, suppliers, customers, and the surrounding communities are all engaged in this culture, enhancing their awareness of occupational health and safety. This comprehensive approach is aimed not only at safeguarding the well-being and quality of life of all involved parties but also at minimizing and mitigating any potential adverse impacts across the entire supply chain.

Commitment

CKPower is deeply committed to occupational health and safety, recognizing it as a fundamental aspect of its business operations. This commitment entails overseeing and managing the work processes of employees, contractors, and related personnel, ensuring compliance with the highest standards of excellence and sustainable development objectives. The primary objective is to prevent and manage work-related accidents, injuries, and illnesses while promoting occupational health across the organization. These efforts underscore CKPower’s commitment to remaining an accident-free by actively embedding a culture of safety and prioritizing both Operation Safety (OS) and Personal safety (PS) for all staff and contractors. To this end, CKPower has established an occupational health and safety management system which is aligned with company policy and international safety standards. This system ensures that everyone working with CKPower operates in a safe environment, thereby preventing serious accidents and minimizing adverse effects on stakeholders and the environment.

Message from CKPower



“Occupational health and safety oversight at CKPower’s power plants begins with mandatory safety training for all employees, contractors, and partners working on-site. This training is crucial to ensure everyone is aware of the safety regulations and recognizes potential hazards in power plant operations. The safety department is responsible for pinpointing risks associated with specific tasks and defining appropriate preventive measures. Before commencing work, all personnel are required to submit work permit requests and consistently wear specified personal protective equipment for their tasks. Additionally, safety officers conduct thorough inspections at every stage of the work process.

Beyond internal safety measures, the power plants maintain rigorous checks on all aspects of safety, including tools, equipment, emergency response gear, and communication devices, ensuring readiness for any situation. Annual drills for fire and flood emergencies are conducted to prepare both power plant personnel and local communities for any eventuality. These efforts instill confidence in the plants’ ability to safeguard surrounding communities and comply with the Laos government’s regulations, earning the certification. These practices demonstrate CKPower’s dedication to exemplary corporate governance and active responsibility towards community welfare.”

Mr. Pisut Sukkasem

Safety Specialist

Sustainability Supporting and Disclosure Working Team:
Occupational Health and Safety

Operational Guidelines

Occupational Health and Safety Management System

CKPower has implemented a robust occupational health and safety management system, meticulously aligned with legal requisites pertinent to power plant operations in Thailand and Lao PDR. This system adheres to a broad spectrum of laws and regulations, including labor laws, safety officers’ responsibilities, chemical management, fire prevention, drug control, health and sanitation, disease prevention, health promotion, safety in construction sites, traffic control, industrial noise standards, and comprehensive workplace safety regulations. Furthermore, the policy also encompasses the management of health impact assessments, ensuring adherence to electricity and transportation regulations. CKPower’s Occupational Health and Safety Management Policy acts as an exhaustive framework, guiding safe working practices across all operations and locations, and is inclusive of all employees and contractors within the company and its subsidiaries. In addition to this comprehensive legal compliance, CKPower’s occupational health and safety management system is also certified under the international standard ISO 45001: 2018.

In Occupational Environmental, Safety and Health



Quality of Life and Safety of Employees



Compliance with Environment Laws and Requirements



Hazard Prevention Measures and Safety Policies



Improvement of Working Conditions and Environment



Environmental and Safety Activities



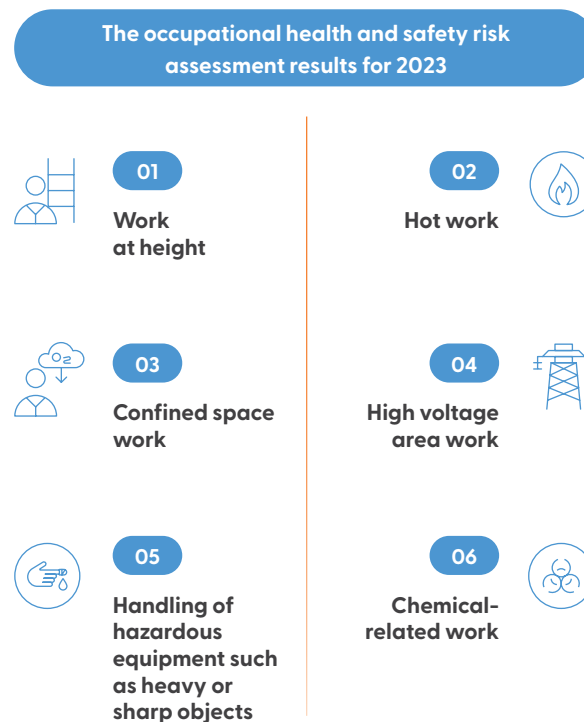
Health Examinations for Existing Employees and New Hires

Hazard Identification and Occupational Health and Safety Risk Assessment

CKPower mandates that the safety department adhere to procedures for identifying hazards and assessing occupational health and safety risks before commencement of work. These procedures were developed with the Job Safety Analysis (JSA) approach, which comprises a total of seven steps as follows:



Employees in the safety department perform Occupational Health and Safety (OHS) Risk and Hazard Assessments and apply the outcomes of hazard identification and risk assessment to make improvements and develop safety management guidelines. Additionally, key performance indicators (KPIs) have been established for effective hazard identification and risk assessment, ensuring compliance with standards and continuous improvement. The occupational health and safety risk assessment results for 2023 are as follows:



Details about the results of the 2023 occupational health and safety risk assessment and additional preventive measures are available on the website.



Occupational Safety and Health Supervision

To foster continuous, tangible, and sustainable improvements in occupational safety and health, CKPower has established a thorough oversight mechanism. This begins with appointing the safety department as the primary entity responsible for monitoring, inspecting, and enhancing the working environment to ensure safety and alignment with international standards. Each power plant sets specific quantitative goals, guiding the implementation of various safety measures, such as maintaining workplace safety statistics and ensuring compliance with employee health and safety standards.

CKPower has formed a dedicated committee for occupational safety, health, and environment, with the power plant manager acting as chairman and representatives from various departments, including Operations, Maintenance, Administration, Resources, and Environment Departments, with the Security Department serving as the secretariat. The primary responsibilities of this committee are to develop and enhance the occupational health and safety management system. Regular safety committee meetings are held to assess the progress of the working group in accordance with company policy and the occupational health and safety management system.

Occupational Safety Management

Incident Reporting Channels

CKPower provides opportunities for employees and contractors to report accidents, unsafe conditions, and activities involving risk of accidents through the various channels listed below. The Company has also established guidelines for conducting investigations and taking the appropriate corrective actions based on employee and contractor safety risk assessments when accident occurs.

Incident Reporting Channels

01



Safety officers or the Occupational Safety, Health, and Environment Committee via telephone and e-mail

02



Power plant managers via telephone and email

03



WE CARE CONVERSATION online form

04



Complaint and suggestion form

CKPower offers employees and contractors the chance to report or decline work upon identification of any potential risks of accidents. This is outlined in the basic safety regulations for both employees and contractors, which stipulate that “employees or involved individuals must cease work on any task deemed unsafe and rectify the situation promptly” to mitigate the risk of accidents.

Furthermore, CKPower evaluates and keeps a register of risks associated with hazardous activities that could emerge from its operations. This is aimed at preventing and mitigating occupational health and safety hazards. The process involves holding discussion meetings to identify management methods for activities posing medium to high risks. These methods are then evaluated based on risk management principles, and the proposed risk management or mitigation plan is presented to executives for approval before further implementation.

The work-related injury or illness investigation process

CKPower has established guidelines for investigating workplace accidents and illnesses. In the case of an accident or a near miss, the Company's safety officer is tasked with preparing a Near Miss and Incident Report and submitting it to the power plant manager for approval. The reports must contain detailed analyses of the causes of the work-related accidents and propose corrective actions. Upon receiving notification of accidents, unsafe conditions, or activities involving risk of accidents through various channels, the Company has a procedure in place for investigating work-related injuries or illnesses with the aim of preventing their recurrence.

The work-related injury or illness investigation process



01

The Occupational Safety, Health, and Environment Committee makes a record of the reported incident.

02



Conduct a meeting within 24 hours for the investigation of injuries or illnesses resulting from work as reported.



03

Establish measures to prevent the recurrence of accidents and/or mitigate the severity of incidents

04



Respond to inquiries within 24 hours from the date of the incident, informing them of the management approach and recording the Results in the system



05

Provide appropriate care and compensation for employees injured at work

06



Monitor, review, and verify the effectiveness of measures and report the results of operations to the committee every month

Work-Related Injuries

In addition to prioritizing the occupational safety, health, and environment of its employees, CKPower extends its commitment to include contractors and suppliers throughout the supply chain, ensuring no workers are excluded from the occupational health and safety management system. The Company is dedicated to being an accident-free and injury-free organization. To this end, it has collected data and set a Lost Time Injury Frequency Rate (LTIFR) target of zero, calculated out of 1,000,000 hours, as an indicator of employee occupational health and safety within the company as well as a performance metric for the organization. Additionally, CKPower gathers other statistical data to analyze its occupational safety and health performance, including Total Recordable Injuries (TRI), Total Recordable Injury Rate (TRIR), Near Misses, and Near Miss Frequency Rate (NMFR). In 2023, incidence of lost time injury along with the compensation and establishment of measures and guidelines for the future management thereof were as follows:

Incident



A contractor sustained an injury from falling down a flight of stairs, resulting in 2 months of lost time.

Remediation



The Company administered first aid and facilitated transportation by a specialized airlift service of the injured worker for treatment by medical professionals.

Management Measures/Guidelines



Establish clearer communication guidelines and install permanent stairs in power plants to prevent repeated accidents.

Work-Related Illnesses

CKPower's safety department employs a hazard assessment method based on **Hierarchy of Control principles**. This system divides hazard control into five levels: **Elimination, Substitution** with less hazardous materials or processes, **Engineering Controls, Warnings, and Administrative Controls** such as training, work planning, alternating shift schedules, and altering work processes or conditions to prevent hazards in the workplace. The final level of control involves the use of Personal Protective Equipment. CKPower applies the aforementioned principle to conduct preliminary assessments and identify control measures for each level of hazard. This proactive approach aims to prevent occupational diseases resulting from exposure to workplace hazards. In addition, CKPower not only emphasizes the occupational health, safety, and environmental well-being of its employees but also extends this concern to contractors and partners throughout the supply chain. There have been no work-related illness incidents reported in the past year, demonstrating the company's commitment to comprehensive occupational health and safety management systems, which encompass all workers, including those outside the direct employment scope.

Project Highlight in 2023

Safety criteria for contractors



The safety rules for contractors when contracting work from the business unit were communicated.

Indicators

% of contractors are informed of safety criteria for contracting.

Targets



100%

of contractors are informed of safety criteria for contracting.

Outcomes



100%

of contractors were informed of safety criteria for contracting.



241

Participants

Provision of medical supplies and medicines for first aid



Medical supplies and medicine for first aid were provided to each unit.

Indicators

% availability of medical supplies and medicines for first aid.

Targets



100%

availability of medical supplies and medicines for first aid.

Outcomes



100%

of first aid medical supplies and medicines were available and ready for use in the treatment of employees and contractors.



279

Participants

Wellness promotion and exercise equipment provision



Individual and team exercise programs were organized. Employees were provided with access to fitness facilities.

Indicators

% of participants exercise regularly.

Targets



>50%

of participants exercise regularly.

Outcomes



79%

of participants exercised regularly.



39

Participants

We CARE Program



To promote a safety culture, employees were encouraged to participate in presenting safety issues by writing safety reports to alert their colleagues about unsafe behaviors. The goal was to raise awareness about safety, thereby encouraging employees to adopt safer behaviors.

Indicators

2 WE CARE suggestions by employees per year.

Targets



2

WE CARE suggestions by employees per year.



0

loss time injury frequency rate in employees.

Outcomes



2

WE CARE suggestions by employees per year.



0

case Lost-time injuries frequency rate (LTIFR) involving employees



192

Participants

Safety Toolbox Meeting



To enhance employee awareness, CKPower provides continuous safety training and guidance on proper work procedures. This helps each power plant employees recognize and remain vigilant about potential risks and hazards, which are common causes of workplace accidents.

Indicators

% of employees attended Safety Toolbox Meetings.

Targets



>75%

of employees attend monthly Safety Toolbox Meetings.



0

case Lost-time injuries frequency rate (LTIFR) involving employees



Safety Awareness

To communicate safety information to employees and raise safety awareness, To enable correct and safe operations.

Outcomes



>90%

of employees attended Safety Toolbox Meetings.



192

Participants

Partnership for Life

112 →

Corporate Governance

121 →

Risk and Crisis Management
and Cybersecurity and
Data Privacy

131 →

Business Model Resilience

137 →

System Reliability
and Availability

146 →

Innovation Management



Corporate Governance

Long-Term Targets



100%

of employees and executives are aware of and understand the company's code of ethics, anti-corruption policies, and corporate values.



ZERO

internal and external reports of corruption



EXCELLENT

CKPower participates in Corporate Governance Report of Thai Listed Company (CGR) by the Thai Institute of Directors Association (IOD) and achieves an excellent score.

2023 Targets



100%

of employees and executives are aware of and understand the company's code of ethics, anti-corruption policies, and corporate values.



ZERO

internal and external reports of corruption



EXCELLENT

CKPower participates in Corporate Governance Report of Thai Listed Company (CGR) by the Thai Institute of Directors Association (IOD) and achieves an excellent score.

2023 Achievements



100%

of employees and executives are aware of and understand the company's code of ethics, anti-corruption policies, and corporate values.



ZERO

internal and external reports of corruption



EXCELLENT

The Company received an excellent score for the 6th consecutive year.

Message from CKPower



“CKPower produces renewable energy in support of an energy transition and operates under the principles of good corporate governance. We have established fundamental governance policies and ethical procedures for business operations, including anti-corruption guidelines. The Company prioritizes good corporate governance, emphasizing the instillation of corporate DNA with an emphasis on instilling corporate DNA and the importance of operating within a standardized sustainability development framework for in employees and stakeholders across the supply chain. Communication is facilitated through policies and announcements across multiple channels, ensuring comprehensive disclosure of various reports to the public.”

Ms. Jiraporn Putiparsoed

Senior Manager – Compliance Division
Sustainability Supporting and Disclosure Working Team

Impact on Business

CKPower operates with a strong emphasis on good corporate governance as the foundation of its business conduct, aimed at ensuring transparency, fairness, and ethics. This approach leads to an efficient management system, equitable treatment for all stakeholders, and enhances the organization's adaptability and competitiveness amidst business, societal, and environmental changes. It also fosters trust and confidence, meets stakeholders' expectations throughout the supply chain, and mitigates risks associated with non-compliance to regulations and laws, contributing to the sustainable value creation for the business.

Challenges and Opportunities

Amid the global demand for businesses to adopt sustainable practices, there have been increased changes to various rules and regulations governing good corporate governance. In 2023, the ASEAN CG Scorecard criteria were adjusted to align with the principles of good corporate governance outlined by the G20/OECD at the Thai Institute of Directors Association, in collaboration with the Securities and Exchange Commission. As a result, CKPower was required to strategize and study the corporate governance principles to ensure efficient business management and sustainable organizational, societal, and environmental practices. CKPower is committed to upholding the principles and policies of good corporate governance, maintaining transparent and accountable operational guidelines,

and prioritizing the interests of all stakeholders to show its dedication and responsibility to ethical business conduct and zero tolerance for corruption. In doing so, CKPower aims to establish a standard of corporate governance on par with international norms. As the largest producer of renewable energy in the region, operating under the principles of good corporate governance and transparency, the Company seeks to instill confidence among stakeholders and cultivate a positive corporate image.

Commitment

CKPower is committed to conducting business on the principles of good corporate governance. To this end, it has established a corporate governance policy, which encompasses the business code of conduct, guidelines for combating corruption, and related matters. The goal is to create clear, transparent, accountable, and fair operational guidelines. Additionally, CKPower endeavors to foster awareness among employees at all levels, including executives and committee members, regarding business ethics and corporate governance principles so that they may comply with such principles as well as laws and related requirements. This initiative aims to ensure that all stakeholders throughout the supply chain benefit equally from the Company's operations, thereby elevating the standard of corporate governance and setting a positive example both domestically and internationally.

Operational Guidelines

Corporate Governance

CKPower prioritizes transparent and fair business conduct. As such, it has established corporate governance policies and guidelines applicable across all affiliated entities. These include information disclosure policies, risk management protocols, guidelines for combating corruption, and a business

code of conduct. By adhering to these policies, CKPower ensures compliance with the roles and responsibilities outlined for stakeholders throughout the supply chain. Such supervisory practices inform CKPower's strategy, goals, and operational plans.

Corporate Governance Policy Structure



The Rights of Shareholders

- The right to profit sharing
- The right to sufficient information regarding the business
- The right to attend shareholders meetings and exercise voting rights to appoint and remove directors and to appoint an auditor
- The right to participate in decision-making regarding company matters of consequence.
- Measures for promoting and facilitating the exercise of shareholders' rights.



The Equal Treatment for Shareholders

CKPower shall treat and protect the rights of all shareholders equally and fairly, whether they be Thai or foreign shareholders, institutional investors, major shareholders, or minor shareholders. Additionally, guidelines on confidentiality and the use of inside information have been established for directors, executives, and employees to ensure that inside information is not illegally exploited.



The Role of Stakeholders

CKPower has established policies and operational guidelines that take into account all stakeholders and enable them to participate in the management of the Company.



Responsibilities of the Board of Directors

The authority, duties, and responsibilities of the Board of Directors and the management are clearly segregated. Board members perform their duties with honesty, integrity, prudence, and care to strictly protect the interests of the company under the principles of good corporate governance.



Disclosure and Transparency

CKPower prioritizes accurate, complete, transparent, and timely disclosure of information, especially information that affects the decision-making process or is significant to its performance.

Message from Stakeholder



“CKPower discloses information comprehensively and transparently, providing suppliers with access to valuable data. The policy has been clearly announced and communicated, ensuring that various reports and information are disclosed to the public in accordance with regulations for SET-listed companies”

Mr.Natchanon Pariyatdulapak
GE Grid Solutions Company Limited
Stakeholder, Supplier

Corporate Governance Policy Structure

Board Composition

In 2023, the Board of Directors comprised eleven directors, with ongoing selection for one vacant position. Ten members were non-executive directors, and one was an executive director. The Board of Directors also consisted of four independent directors, the definition and qualifications of which were as specified in the Notification of the Stock Exchange of Thailand (SET) and the Office of the Securities and Exchange Commission (SEC) Regarding the Qualifications of Independent Directors. All directors possess the full set of qualifications stipulated in and are free of the characteristics prohibited by the relevant laws and regulations. They also have a variety of knowledge, expertise, skills, and experience in line with the Company's business strategies. In the past year, the Company convened a total of 7 Board of Directors meetings to discuss key operational issues. Details regarding meeting attendance and the governance issues under discussion can be found in the 56-1 One Report for the year 2023.

Nomination of the Board of Directors

The Company has placed the nomination of directors under the responsibility of the Nomination and Remuneration Committee, which is charged with the responsibility of nominating suitable candidates with a diverse range of qualifications for directorship, such as professional skills and specialization, without discrimination based on age, gender, nationality, religion, cultural background, or other differences, as the Company places importance on inclusivity and non-discrimination. In nominating directors, the Committee considers their knowledge and expertise based on education, training records, practical experience, and specializations based on the Board Skills Matrix to ensure that the Board consists of directors with a diverse range of skills and experience that are in alignment with corporate strategies and support CKPower's sustainable business growth.

Board Composition

Independent Directors



Number of independent directors/
total number of directors

36.36%

Non-Executive Directors



Number of non-executives/
total number of directors

90.91%

Female



Number of female directors/
total number of directors

0%

Average tenure



Average tenure of
board members

5.90 Years*

*Tenure as of 31 December 2023

Board Skill Matrix

	Management, Strategy, and Organization	Accounting and Finance	Engineering	Economics	Energy and Utilities	Business Laws and Regulations	Risk and Crisis Management	Sustainable Development	Corporate Social Responsibility	Corporate Governance	Tenure	Age	Gender	Independence
Dr. Thanong Bidaya	✓	✓		✓	✓		✓	✓	✓	✓	11	76	Male	yes
Mr. Plew Trivisvavet	✓		✓		✓	✓	✓	✓	✓	✓	12	78	Male	no
Dr. Jon Wongswan	✓	✓		✓			✓	✓	✓	✓	5	48	Male	yes
Dr. Patarut Dardarananda	✓	✓	✓			✓	✓	✓	✓	✓	4	65	Male	yes
Dr. Pavich Tongroach	✓				✓		✓	✓	✓	✓	1	77	Male	yes
Mr. Chaiwat Utaiwan	✓	✓	✓				✓	✓	✓	✓	8	70	Male	no
Mr. David Van Dau	✓			✓	✓		✓	✓	✓	✓	3	40	Male	no
Mr.Sittidej Trivisvavet	✓				✓		✓	✓	✓	✓	1	70	Male	no
Mr. Nattavut Trivisvavet	✓	✓	✓		✓		✓	✓	✓	✓	1	43	Male	no
Mr. Vorapote Uchoepaiboonvong	✓	✓			✓	✓	✓	✓	✓	✓	7	62	Male	no
Mr. Thanawat Trivisvavet	✓			✓	✓	✓	✓	✓	✓	✓	12	45	Male	no

*Tenure as of 31 December 2023

Board Performance Assessment

The Company assesses the performance of the Board of Directors annually so that the Board may participate in assessing their own performance and the problems and obstacles faced in the year prior. Three forms of assessment are used: group assessment, individual assessment (self-assessment and cross-assessment), and sub-committee assessment (group), in accordance with the corporate governance guidelines for listed companies. The Managing Director's Office is charged with sending the aforementioned assessment forms to each director. In 2023, the results of the performance assessment of the Board of Directors, sub-committees, and individual directors out of a full score of four for each category are as follows:

Form of Assessment

2023 Score



Group Assessment
Board of Directors

3.71



Individual Assessment
(Self-Assessment and Cross-Assessment)

3.78



Sub-Committee
Assessment (Group)

3.93



Business Code of Conduct

CKPower adheres to a business code of conduct that is transparent, accountable, and mindful of its responsibility to all stakeholders. Directors, executives, and employees at all levels are required to strictly adhere to and perform their duties in accordance with the corporate governance policy and related guidelines and the business code of conduct. Additionally, directors and executives of the Company and its subsidiaries have a responsibility to reinforce the expectation and culture of following the code of conduct. This includes encouraging employees to willingly comply with the code of conduct, using it as a guideline for their work, and continuously addressing various issues accordingly. CKPower has communicated and disseminated policies, the code of conduct, and various practices related to corporate governance through its website, the CKPower Mobile Application, and the company's intranet to provide easy

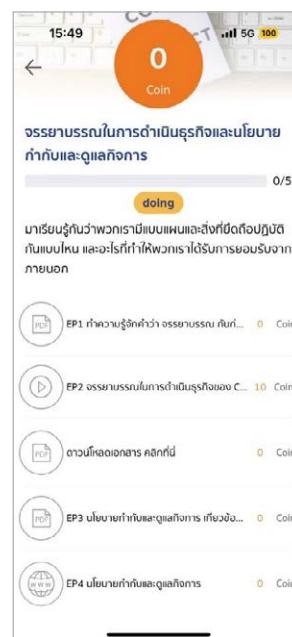
access to all directors, executives, and employees for further implementation. The guidelines in the business code of conduct also encompass preventing conflicts of interest, anti-corruption measures, combating unfair competition, and other practices related to society.

Moreover, CKPower organized training and various related activities for both new and current employees. For current employees, the Company has published the Compliance Journal to offer clarification on the code of conduct and anti-corruption policy. The journal is disseminated to employees at all levels, including executives and directors, via email. Additionally, employees' knowledge and understanding on each issue are assessed through comprehension questionnaires.

Anti-Corruption in the Company and Affiliates

In addition to complying with corporate governance regulations and code of conduct, CKPower has set down in writing anti-corruption guidelines with a **zero-tolerance** approach to provide clear guidance for business operations, which the personnel of the company and its affiliates are required to strictly follow. The Company has also announced a no-gift policy as well as communicated the principles of business ethics and anti-corruption to all groups of stakeholders in a concrete manner through a variety of communication channels, such as its website, internal public relations screens, digital signage, intranet, and the CKPower mobile application. In addition, employees are encouraged to attend anti-corruption training to foster knowledge and understanding on the guidelines for fighting and preventing corruption in the hopes that employees can implement the knowledge in their operations as well as further disseminate it to other employees in the Company.

In 2023, the Company set the goal of encouraging employees to attend a Code of Conduct training course via the CKPower Mobile Application. New employees, in particular, are required to complete an onboarding training course to obtain certification. This course covers content related to business ethics, regulatory policies, and various anti-corruption measures. The Company has communicated these policies and practices to employees and affiliated companies through the CKPower Mobile Application and its website. The aim is to foster understanding and knowledge about anti-corruption measures and guidelines, enabling employees to apply this knowledge in their work and share it within the organization.



Anti-Fraud and Anti-Corruption Guidelines



Use of insider information, stakeholder accountability, and the roles and responsibilities of directors and executives of the Company and its subsidiaries



Establishment of a corruption investigation unit



Establishment of a whistleblowing channel and whistleblower protection measures



Establishment of an external corruption prevention policy

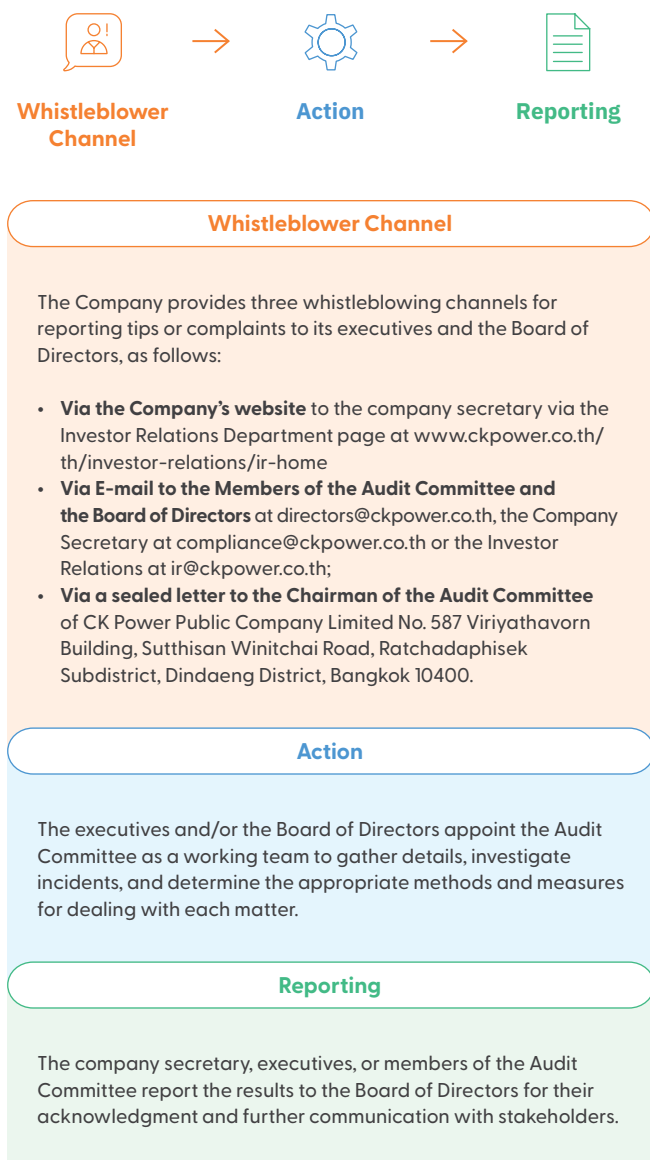


Inclusion of a corruption risk assessment in the Company's risk management plan

CKPower has established a Risk Management Working Group, encompassing both the Company and its subsidiaries. The working group's duty is to monitor, analyze, and assess various risks to ensure consistency in risk management guidelines across the Company and its subsidiaries. This includes assessing corruption risks in the operations of each power plant and the Shared Service Center quarterly. A report on the results of the monitoring, analysis, and assessment of corruption risks and efforts undertaken to manage and reduce such risks are included in the Corporate Governance Performance report to the Corporate Governance, Risk Management, and Sustainability Committee annually or as deemed appropriate.

Handling of Complaints and Corruption Cases

The Company has established a whistleblowing channel for both internal and external reporting of incidents that are in violation of the code of conduct or the law, potential corruption, or misconduct by personnel of the Company and its subsidiaries, as well as deficiencies in the internal control system reported by both employees and stakeholders. Additionally, CKPower has implemented guidelines to protect whistleblowers and outlined procedures for reporting tips and complaints.



The Company has implemented measures to safeguard the confidentiality of complaints, as outlined in the stakeholder participation guidelines available on the Company's website and whistleblowing channels. Information regarding complaints and whistleblowing is restricted to individuals designated to receive such information and is disclosed solely to those directly involved in order to instill confidence and a sense of security for the whistleblower.

Preventive Measures for the Violation of the Code of Conduct

In addition to the regular communication of the code of conduct and comprehension among employees, executives, and directors through the Compliance Journal distributed via email and accessible on the intranet system, an assessment of knowledge and comprehension regarding the journal's content is also conducted. This measure ensures that all personnel are aware and in full comprehension of the Company's code of conduct, thereby reducing the likelihood of violations. Additionally, penalties are enforced in the case that violations of the code are identified.



Highlight Projects in 2023

Compliance Journal

To ensure that personnel at all levels understand the Company's prioritization of corporate governance principles and commitment to fulfilling social and environmental responsibilities, CKPower issues communications and fosters comprehension among its personnel regarding the regulations, principles and business code of conduct it adheres to. This includes disseminating various information pertaining to the potential risks involved in business operations through the Compliance Journal on a quarterly basis. This journal serves to inform executives and employees about operational guidelines and the principles of corporate governance. Additionally, employees are encouraged to participate in quizzes included in the journal to assess and reinforce their understanding of the content presented each quarter.



Determine



Communicate



Participate



Evaluate

The content presented each quarter

1. Determine the topic of the journal each quarter.
2. Communicate through various channels within the organization, including 26 digital signage screens in office building across all five power plants, email, the intranet, and the CKPower Mobile Application.
3. Participate through questionnaires.
4. Determine the participation rate by calculating the percentage of questionnaires completed and the percentage of respondents who pass the assessment with a score of at least 80 points.

In the four issues tailored to employees and executives, communication has focused on the Company's corporate governance policy and code of business conduct. 75 Seventy percent of employees participated in completing the evaluation form, with 88 percent of respondents meeting the evaluation criteria with a score of 80 or higher.

Participation rate of questionnaires



Employees participated in completing the evaluation form

75%

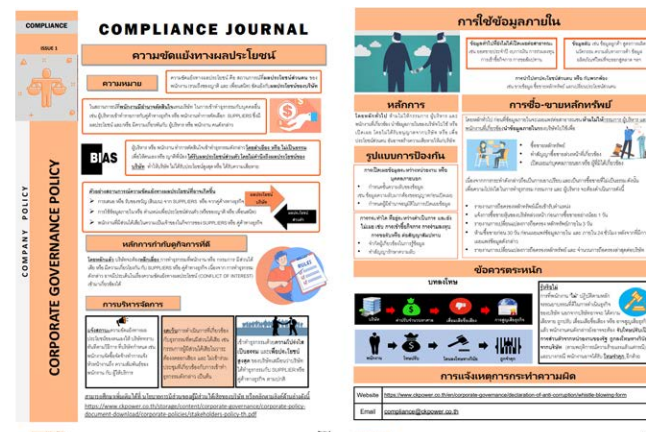


Respondents meeting the evaluation criteria with a score of 80

88%

The publishing of the Compliance Journal helps enhance organizational understanding and foster participation in creating a culture of responsible business practices in relation to corporate governance and responsibility to society and the environment.

Compliance Journal



Compliance Journal - Corporate Governance topic in January issue 2023



Compliance Journal - Business of Code of Conduct topic in July issue 2023

Risk and Crisis Management and Cybersecurity and Data Privacy

Long-Term Targets



Risk Management



A risk management culture is fostered

100%

across CKPower Group.

2023 Targets



100%

of the directors undergo training on climate risks and business risks.



100%

of the executives and employees recognize and understand climate risks.



80%

of the executives and employees pass an assessment test on climate risks.

2023 Achievements



100%

of the directors underwent training on climate risks and business risk.



100%

of the executives and employees recognized and understood climate risks.



88%

of the executives and employees passed an assessment test on climate risks.

Long-Term Targets



Cybersecurity



A cybersecurity culture is fostered

100%

across CKPower Group.

Personal Data Protection



A culture of personal data protection is fostered

100%

across CKPower Group.

2023 Targets



NO

case of cybersecurity breaches or other cyber threats



NO

case of data leakage, theft, or loss



NO

customer or employee are affected by data leakage.



NO

fine for data breaches or cyber threats



NO

complaint on personal data breaches from individuals or agencies



NO

complaint on personal data breaches from regulatory agencies



75%

of the executives and employees undergo training on legal risk management related to the Personal Data Protection Act (PDPA).

2023 Achievements



NO

case of cybersecurity breaches or other cyber threats



NO

case of data leakage, theft, or loss



NO

customer or employee were affected by data leakage.



NO

baht paid in fine for data breaches or cyber threats



NO

complain on personal data breaches from individuals or agencies



NO

complaint on personal data breaches from regulatory agencies



76%

of the executives and employees underwent training on legal risk management related to the Personal Data Protection Act (PDPA).

Message from Stakeholder



“EGAT has drawn up plans in preparation for various risks, especially cyberattacks, and has notified suppliers of these security plans. For instance, CKP must obtain authorization first when wishing to access EGAT’s data. Conversely, EGAT cannot access CKP’s data without permission, either. So far, there have been no instances of data breaches or safety issues with the power plants. While mismanagement can impact EGAT, we have every confidence that CKPower is already taking excellence care of its systems.”

Mr. Nakarin Ratjarit

Foreign Power Purchase Agreement Management Department,
Electricity Generating Authority of Thailand (EGAT)
Stakeholder, Customer

Impact on Business

Comprehensive and prudent risk and crisis management as well as cybersecurity and data privacy management are crucial in enabling CKPower achieve its established goals and objectives, as they result in effective and efficient management systems, minimize potential impacts, and enhance the organization’s adaptability and competitiveness. Such management is aimed at fostering trust and confidence and meeting the expectations of all stakeholders across the value chain, thus enabling the Company to create value and growth in the long term.

Challenges and Opportunities

The world is currently faced with constant and rapid changes, such as the global inflation, economic volatility, geopolitical conflicts, policy shifts and energy transition initiatives, climate change and global boiling, exponential advances in information technology and cyber threats, and personal data protection. These are all challenges that can potentially impact stakeholders, undermine confidence, and adversely affect business continuity. Therefore, it is essential for CKPower to monitor and establish an organizational risk management process in compliance with international standards and applicable laws, while also fostering a corporate culture and continuously examining such issues in preparation for future risks and crises, prevent or mitigate

potential damage, reduce impacts on stakeholders and investors, and enhance business opportunities. Through the years, CKPower has analyzed both challenges and opportunities to inform the development of its strategies and operational guidelines so as to efficiently enhance its adaptability and competitiveness.

Commitment

CKPower is committed to risk and crisis management, cybersecurity, and data privacy in adherence to guidelines and practices that are in line with international standards and applicable laws. This encompasses everything from policy formulation, organizational structure, operational processes, all the way to performance monitoring and the anticipation of emerging risks to ensure preparedness as well as appropriate and timely response to changes that may affect business operations as well as efficiently enhance the Company’s adaptability and competitiveness. Furthermore, CKPower seeks to cultivate an organizational culture by fostering knowledge and awareness among all personnel about the importance of risk and crisis management, cybersecurity, and data privacy, enabling them to enhance their own capabilities and create opportunities for the Company’s businesses.

Message from CKPower



“CKPower has established directions and provided support for maintaining information security for executives and prescribed general rules for the implementation of information security guidelines for all employees and external individuals who engage in business with the organization. Additionally, CKPower has been certified to ISO 27001 and undergoes audits by both internal and external assessors annually to ensure compliance with standards. Furthermore, the Company has planned security awareness training for all employees in the organization to reduce the risk of cyberattacks, which could impact its overall operations, including power generation and distribution.”

Mr. Burahan Madeh

Manager - Information Technology
Sustainable Development Steering Committee

Operational Guidelines

Risk Management

CKPower adheres to enterprise risk management (ERM) guidelines based on the international COSO-ERM 2017 Framework by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), which is a framework for managing and keeping enterprise risk within the risk appetite/risk tolerance. The Company has also established a Risk Management Working Group for itself and its affiliates comprising executives from all lines of work, such as business planning, engineering, operations and maintenance, and power plant managers. The Working Group is tasked with preparing annual risk mitigation

plans to manage CKPower’s strategic, operational, financial, and compliance risks, environmental, social, and governance (ESG), risks, and emerging risks. Risk management outcomes are to be reported every quarterly to assess and monitor risk management measures, keep enterprise risk within the risk appetite, and ensure preparedness as well as appropriate and timely response to changes that may affect business operations. The Corporate Governance, Risk Management, and Sustainable Development Committee convenes at least four meetings a year to consider various issues on its agenda.

CKPower assesses the following four risk categories

01



Strategic risk: S

02



Operational risk: O

03



Financial risk: F

04

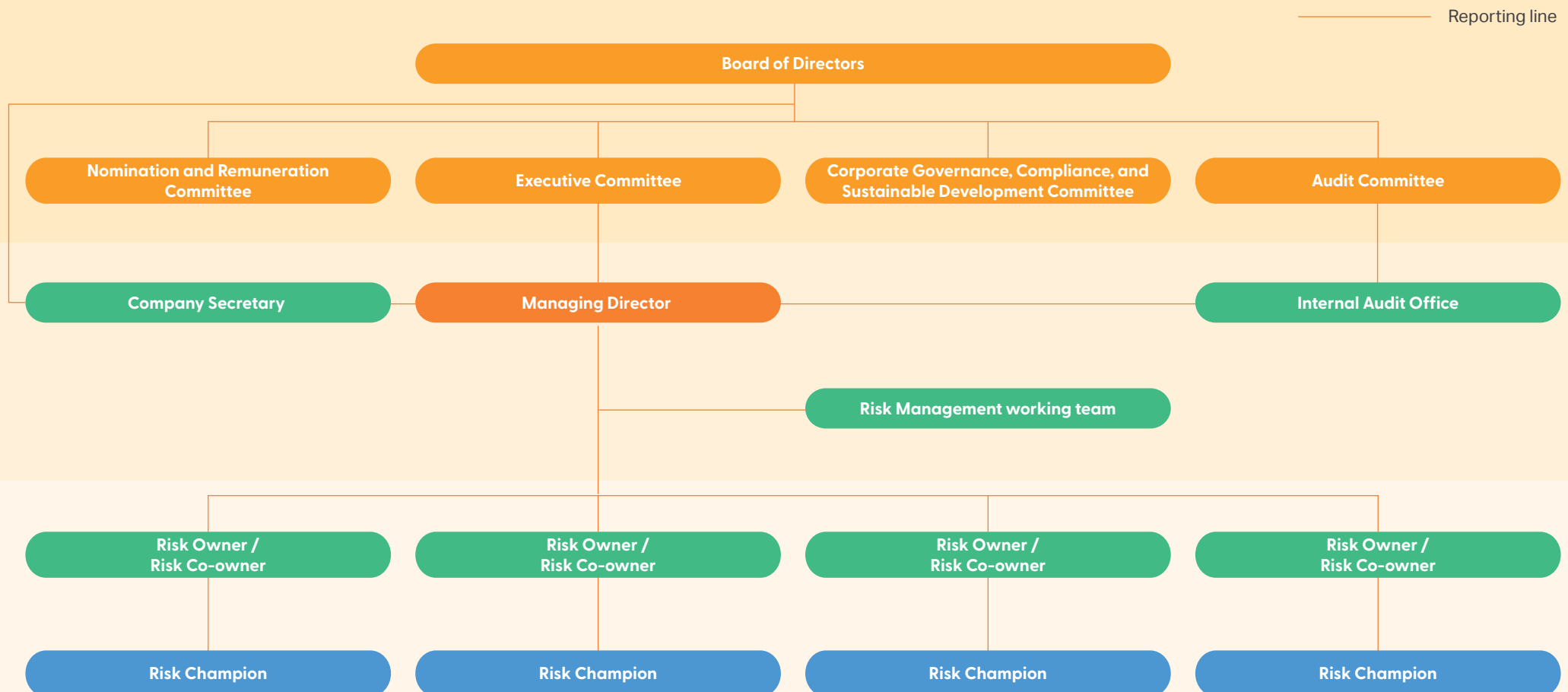


Compliance risk: C

Risk Management Structure

CKPower's Board of Directors has charged the Corporate Governance, Risk Management, and Sustainable Development Committee with the duties of considering and approving the risk management activities of the Company and its affiliates as well as establishing policies, giving recommendations, and verifying risk management effectiveness. In addition, CKPower has tasked

the Internal Audit Department with monitoring and reviewing its risk management process to provide an additional layer of oversight independent from the Risk Management Working Group to further increase confidence.



Risk Management Process

The risk management process is utilized to identify, analyze, and manage potential risks in the Company's business operations. To ensure effective risk management, CKPower's risk management process consists of the following six steps:



In 2023, the majority of risks were deemed to be at a moderate level, for which CKPower crafted a comprehensive mitigation plan. However, there were four high-level risks: investment and business growth, climate change, personnel, and power plant efficiency. To effectively address each risk, CKPower formulated mitigation plans, assigned responsible risk managers, as well as clearly defined timeframes for risk monitoring and management.

Crisis Management and Business Continuity

To instill confidence in stakeholders across the value chain, ensure business continuity, and uphold good corporate governance, CKPower has formulated a business continuity policy, a business continuity plan (BCP), an emergency response plan, and a crisis management plan. In addition, as part of business continuity management, annual training and drills are conducted to address all risks that could potentially disrupt the Company's business operations in order to ensure efficient production and distribution of electricity from various energy sources in alignment with international standards.

Emerging Risks

CKPower strives to actively address emerging risks in the short, medium, and long term that may impact the Company, its business continuity, competitiveness, and sustainability, considering both the risks and opportunities arising from risk management. Two major emerging risks have been identified: evolution of energy technology and cybersecurity and personal data protection. As such, CKPower has assessed, analyzed, and developed approaches to mitigate these risks in order to maintain business stability and continuity on the basis of sustainability, as detailed below.

Evolution of energy technology



Timeframe of Impact **1 - 2 years**

The downward trend in the consumption of nonrenewable energy sources, such as fossil fuels, gas, petroleum, coal and nuclear power, etc., and rising demand for alternative clean energy which is produced in an environmentally friendly way and can be infinitely circulated, such as solar energy, hydropower, wind energy, and geothermal energy, as well as electric vehicles powered by renewable energy sources and hydrogen, has mobilized energy innovation in Thailand, especially in renewable energy, in the past year. This has caused a reverberating impact on the electricity generation industry and triggered changes in consumer behavior and future energy sources.

Potential Impact on Business

- Nowadays, technology tends to change rapidly in response to the energy consumption behavior of consumers in the public and industrial sectors. Moreover, power generation methods are also evolving quickly. CKPower sees a need to establish guidelines for managing energy technology risks to mitigate disruption to the Company's business from new innovations and limitations to its competitiveness if the Company is unable to adapt to these technological changes.
- To this end, CKPower is accelerating its efforts to promote innovation and modern technology, both in adapting its operations and in increasing the efficiency of its personnel to support new innovations. CKPower is in the process of researching and developing renewable energy projects in various forms in conjunction with business partners.

Management/ Opportunity

- CKPower has studied the rules, regulations, and laws that may be relevant in Thailand and in ASEAN to seek new opportunities and mitigate various restrictions that the Company may encounter in its business operations.
- CKPower prioritizes business model resilience as one of the key issues in sustainable business operations and has formulated strategies, guidelines, and operational frameworks for a period of 5 years (2022-2026) in order to achieve concrete results. CKPower has also appointed a unit responsible for mobilizing and monitoring the implementation of the strategies, guidelines, and frameworks.
- CKPower has researched and assessed the viability of conducting business in renewable energy and has made preparations by establishing an exploration team consisting of executives and employees from the business development department and expert engineers to study and research new ways to develop the power generation business.
- CKPower is researching solar power plants and solar and battery energy storage system (BESS) as a case study for future investments.
- CKPower has signed a memorandum of cooperation with suppliers to study green hydrogen production technology and green ammonia. A memorandum of cooperation was also signed with suppliers to study the use of hydrogen mixed with liquefied natural gas (LNG) as fuel for power generation at Bangpa-in Cogeneration Power Plant.

Cybersecurity and personal data protection



Timeframe of Impact 1 - 2 years

Cybersecurity is the application of technology, tools, processes, and practices that are designed to prevent and respond to potential attacks on information technology equipment, network, equipment, infrastructure, system, or program that may be damaged by unauthorized access by a third party as well as the maintenance of data integrity and confidentiality. CKPower foresees this risk, as currently, the targets and formats of cyberattacks are becoming more and more varied. Thus, it has the potential to cause significant impact on any organizations affected.

Potential Impact on Business

- CKPower is prepared for all forms of threats that may affect the loss of important company data. As CKPower stores sensitive data in its server, such as data related to the management of its power plants, the stability of which is vital for energy security, and sensitive financial information, malicious agents may be motivated to attack its various data storage systems and networks, resulting in financial loss to the Company from theft or the cost of recovering stolen data. In 2023, no case of data leakage was reported.
- Additionally, in the event that the personal information of employees, suppliers, or customers is leaked or used for transactions, there would be a wide-ranging impact on CKPower's stakeholders. These losses would result in incalculable damage to its reputation, and it would take a long time to restore the confidence of stakeholders.

Management/ Opportunity

- CKPower manages information technology risks in accordance with its Enterprise Risk Management Policy. IT system security is stipulated as part of business continuity management to ensure that the IT system is always ready for use.
- CKPower has established the ISO 27001:2013 IT system security standards to systematically provide guidelines for and promote understanding of the risks and weak points of data protection. This is part of the effort to strengthen data security systems, reduce risks, and protect data from theft. CKPower has also instituted the management of incidents that may affect the security of the IT system by establishing procedures and administrative processes, appointing responsible parties, and requiring prompt and up-to-date situation reporting by the person or agency responsible for receiving the notification of the incident to ensure that incidents and vulnerabilities related to the security of IT systems are properly and effectively handled in a timely manner.
- CKPower has assigned personnel with the duties and responsibilities of properly securing its key IT assets.
- CKPower has issued communications on cybersecurity and personal data protection to executives and employees at all levels through internal communication channels, email, and CKPower Mobile Applications.
- The Information Technology Unit has studied the evolution and formats of cyberattacks to prevent them and minimize potential impacts.
- CKPower regularly evaluates the efficiency of its IT security system and power plant operation security system.

Fostering a Corporate Risk Culture

Prioritizing the promotion of an organization-wide risk management culture, CKPower has established policies and operational guidelines and measures risk management performance using key performance indicators (KPIs), consisting of leading indicators and lagging indicators, to monitor risk management, create motivation, and foster confidence in the Company's efforts to achieve its goals through effective risk management. To foster an enterprise risk management culture within CKPower Group, initiatives have been undertaken to build awareness of a corporate risk culture and risk management among personnel through training sessions and talks. Key activities for the promotion of a risk management culture in 2023 are summarized below.



1. Training and Talks

- Directors: All board members underwent training on climate change risks as well as climate change-related trends and opportunities, carbon credits, and energy attribution certificates. The training was aimed at enhancing their

knowledge, understanding, and skills that could be utilized in steering and assessing the Company's strategic risks. The directors also underwent training on laws related to business operations.

- Executives and employees: CKPower Group's executives and employees attended training in courses related to risk management associated with the Personal Data Protection Act (PDPA), which aimed at ensuring that all personnel were equipped with knowledge and understanding to comply with the law and aware of the risks associated with non-compliance.

2. Communication Through Various Channels

- Compliance Journal: The journal has been launched to foster awareness of the significance of good corporate governance principles and laws related to CKPower's business operations in an easy-to-understand format, with examples of key cases provided. The journal also serves to foster engagement and assess both awareness and knowledge through quizzes, games, and employee interviews. In 2023, the journal fostered awareness and understanding for 100% of the organization's directors, executives, and employees.
- E-learning courses: CKPower has developed e-learning courses to encourage self-directed learning among employees at all levels. The topics include:

1. The management of risk associated with the Personal Data Protection Act (PDPA)
2. Risks of legal violations
3. Risk mitigation practices
4. Cybersecurity risks, and
5. Guidelines for protection against threats related to computer usage and climate risks.



Cybersecurity and Personal Data Protection

Cybersecurity Policy

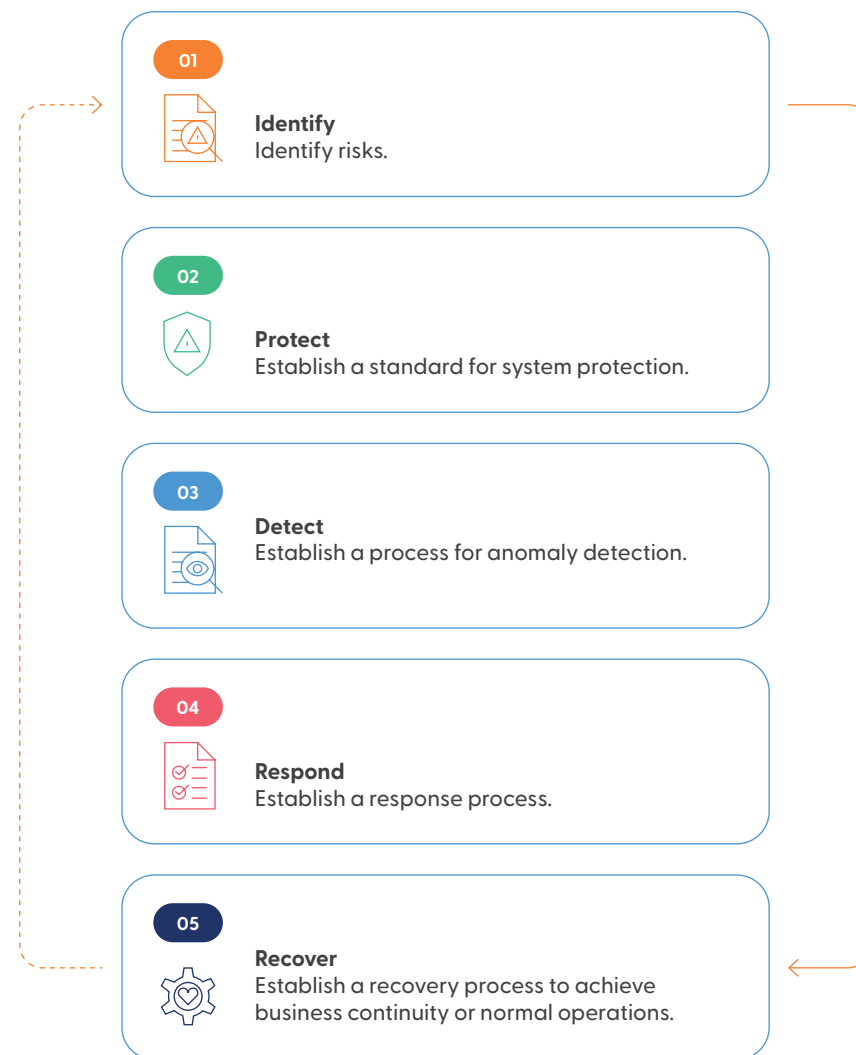
CKPower prioritizes cybersecurity risks of all forms, which may lead to the loss of critical company data, such as sensitive data stored in the server system and significant financial data. The Company also places utmost emphasis on its production and power plant management systems to ensure reliability and foster confidence that CKPower's business operations are prepared to cope with and respond to potential threats. To this end, CKPower has assessed and identified the critical scope of cybersecurity risks in order to develop an information security policy, which is in compliance with relevant standards and laws, and establish cybersecurity procedures for all employees across the organization and its supply chain. Furthermore, the information security policy is reviewed on a yearly basis, and relevant roles and responsibilities within the organization are clearly defined.

Cybersecurity Management

In preparation for risks of cyber threats that may lead to the loss of critical company data, CKPower has implemented risk management in accordance with its policies and enterprise risk management practices and integrated the cybersecurity of the information systems into its business continuity management so as to ensure their availability and compliance with relevant laws, regulations, and standards, such as ISO 27001:2013.

To strengthen the data security system, mitigate risks, and protect data from theft, CKPower has established a monitoring protocol, preventive control measures, and a response process for incidents that may impact the integrity of the information systems as well as clearly assigned responsible parties to ensure prompt reporting of incidents through designated individuals or units responsible for incident notification. This ensures that incidents and vulnerabilities related to the security of the information systems are addressed correctly, efficiently, and in a timely manner. The management framework is as detailed below:

Cybersecurity Management Framework



Personal Data Protection

Personal Data Protection Policy

CKPower has formulated an external personal data protection policy in accordance with the Personal Data Protection Act B.E. 2562 and other relevant laws. The policy delineates the definition of personal data, types of personal data, purposes of personal data collection, use, and disclosure, entities or individuals to whom the Company may disclose information, duration of data retention, personal data storage formats, and rights of data owners. Additionally, CKPower has appointed a Data Protection Officer and established procedures for handling complaints related to its data processing activities. Guidelines for information security have also been developed to prevent loss of personal data or unauthorized or unlawful access, use, alteration, modification, or disclosure of personal data.

Personal Data Protection Management

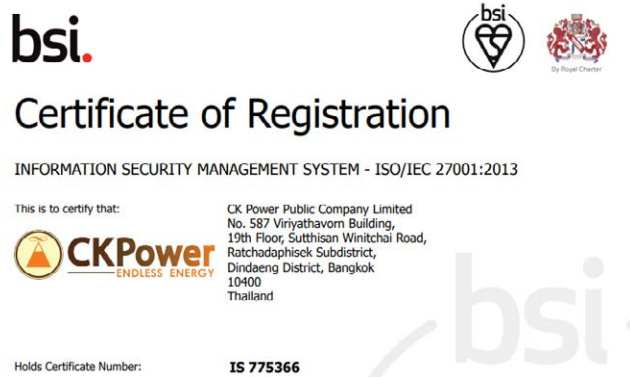
CKPower has defined access rights to personal data, information, information processing systems, and other information technology assets according to business purposes on the need-to-know and need-to-use basis. Access rights are organized into security clearance levels, with which all executives and employees must comply, to prevent leakage of vital data, whether personal data or information, to external parties. This has also been incorporated into the Business Code of Conduct, whereby all executives and employees are required to comply and not to disclose any confidential information obtained during the performance of their duties for any kind of benefit.

Cybersecurity and Personal Data Protection Auditing

CKPower conducts internal Information Security Management System audits annually to ensure that the objectives of control, control measures, processes, and system regulations align with the specified requirements for information security, are efficiently implemented and maintained according to the established goals, and comply with ISO 27001:2013 standards and relevant laws. The company was certified to the ISO/IEC 27001:2013 Information Security Management System standard by BSI in 2022. Additionally, the Company's data protection system undergoes annual external assessments and vulnerability analysis based on ISO/IEC 27001:2013 standards by BSI annually.

Safeguarding customer data is paramount in business operations. Recognizing the importance of respecting individuals' privacy and the necessity of handling personal data appropriately in compliance with the law, CKPower has formulated an external personal data protection policy and information security maintenance practices that align with the guidelines set forth by the Stock Exchange of Thailand. CKPower promotes the use of information technology systems with systematic risk monitoring and management processes to ensure cybersecurity. Additionally, measures are in place to safeguard the security of information technology systems, covering operational activities and technology risk management.

In addition, CKPower has defined responsibilities for the maintenance of information asset security to ensure that critical information assets are adequately protected. Moreover, CKPower offers training and knowledge transfer sessions and provides employees with access to ISMS (Information Security Management System) Intensive Training and Security Awareness Training via internal communication channels, such as email and CKPower Mobile applications, enabling employees to enhance their technological knowledge and fostering awareness of information technology security for all personnel in the organization. The Company also studies the evolution and patterns of cyberattacks and assesses the efficiency of its information security system and power plant operation systems on a regular basis.



Business Model Resilience

Long-Term Targets



95%

Renewable Energy Capacity by 2043.



Establish at least

1

operation

in a new country in ASEAN by 2024.



Acquire at least

3

new customer groups

by 2027 and achieve the planned enhancements for increased business model resilience within the same timeframe.

2023 Targets



93%

Renewable Energy Capacity.



EXPAND

renewable energy business.

2023 Achievements



93%

Renewable Energy Capacity.



EXPAND

renewable energy business and sold 6,500 RECs of Bangkhengchai Company Limited.



3,395
MW

of installed capacity from renewable energy.

SDGs



Message from Stakeholder



“As an investor, I prioritize business model resilience and carefully assess a company’s capital management, particularly its ability to maintain cash flow without burdening shareholders. Given the Company’s expertise in hydropower and its increasing expansion into renewable energy, I trust that CKPower has thoroughly evaluated projects before undertaking them, as errors in assessment could significantly impact cash flow, given the substantial investment required for hydroelectric power plants.

Moreover, CKPower’s consistent and transparent communication of vital information to investors instills confidence and provides valuable insights for investment decisions.”

Mr.Hatsapong Songsiri
Deputy Managing Director
RKF Group
Stakeholder, Investors

Impact on Business

CKPower seeks to build resilience in its business model in order to diversify risks, gain competitive advantage, and navigate crises. In planning business advancement, it is vital for CKPower to ensure the reliability and availability of its operations in order to instill confidence in stakeholders. In addition, CKPower must seek out new businesses and opportunities to expand into new markets as well as integrate more cutting-edge technology into its business operations to enhance its resilience and adaptability. Business model resilience thus aligns with a sustainable business management framework and will play a crucial role in steering the operations in the right direction, earning the Company acceptance, bolstering its competitiveness, and enhancing the confidence of customers and stakeholders, all of which are vital drivers of business operations and reflect the Company’s efficiency in handling various risks and potential scenarios.

Challenges and Opportunities

The rising demand for energy, the fast-paced transition toward renewable sources, technological advances, changes in laws and regulations, global conditions, and economic volatility pose great challenges for business operations. Therefore, it is essential for CKPower to establish an operational plan to drive stable and sustainable business growth. This includes managing potential impacts on current production and preserving stakeholder returns across the supply chain. Additionally, the company must cultivate resilience to prepare for future opportunities and risks, such as undertaking new ventures and expanding into the international market. By forming partnerships in renewable and alternative energy sectors, CKPower aims to sustainably generate value and meet stakeholder expectations.

Commitment

CKPower strives to drive its business on the basis of sustainable development and social responsibility throughout the supply chain as well as foster business resilience. As a leader in renewable energy production, the Company aims to maintain the stability and availability of its production system through technology and innovation management as well as corporate governance. This is to preserve stakeholder returns across the supply chain. Furthermore, the Company prioritizes the development of personnel potential and fostering partnerships to distribute economic value among all stakeholders. Additionally, in response to the energy transition and to address global warming, the Company is dedicated to continuously developing and adjusting its investment and market expansion strategies to seize future business opportunities.

Operational Guidelines

Managing Business Resilience

Due to climate change, energy companies are encountering shifts in consumer demands, as consumers express concerns about the environmental impacts associated with energy production, including the procurement of raw materials, the energy production process, and potential environmental impacts. CKPower’s vision is to become a leading electricity producer in Thailand and ASEAN that operates with efficiency on the basis on environmental responsibility in response to changes in state policies and technology, with the **three key components being electricity production excellence, process reliability, and personnel potential**. In pursuit of this vision, CKPower has prescribed uniform operational guidelines across the organization based on the main concepts of potential enhancement in anticipation of challenges, sustainable business growth through investments in new business opportunities in Thailand and Southeast Asia, and the integration of digital innovation and technology into business operations throughout the business chain to foster regional energy security and generate optimal and fair returns

for customers and shareholders in accordance with its principal strategies **"P – Partnership for Life"**. The Company strives to expand its investments in clean energy production to account for over 95% of its installed capacity by 2043 and become the biggest provider of clean energy in Thailand and Southeast Asia through collaboration with partners. Furthermore, the Company is exploring the potential of hydrogen energy derived from renewable sources, a cutting-edge technology that aligns with environmentally friendly standards and is regarded as a new frontier in energy innovation, offering increased opportunities and potential for business expansion in the future. CKPower also prioritizes the development of personnel at all levels, fostering learning and growth and encouraging the adoption of innovative practices within the operational framework to enhance efficiency. This readiness positions the company to embrace future business operations in the green hydrogen sector.

Business Resilience Action Plan

CKPower developed a five-year business resilience action plan (2022-2026) in 2022 and has integrated it into its sustainable business strategies in order to strive towards achieving its short-term and long-term targets. This includes establishing a plan to fully implement digital technology and innovation by 2023, thereby expanding business opportunities in the renewable energy sector.

Personnel Development – Appointment of CKP Exploration Team

CKPower is dedicated to expanding its investments to become the largest green energy producer and distributor in Thailand and the ASEAN region. This commitment involves adopting modern technology that adheres to eco-friendly standards, thereby reducing pollution to the environment. Furthermore, the Company aims to increase the knowledge and potential of personnel at all levels in adopting innovative practices within the operational system to enhance workflow efficiency. To this end, CKPower has appointed the CKP Exploration Team, consisting of a new generation of engineers and executives from different units

across the Company, including the Administrative Department, Business Development Department, Engineering Department, and the Sustainability Management Department, to serve as a research and development unit to look for new power production models and define the Company's directions and strategies to keep up with challenges and opportunities brought on by global trends. This endeavor not only enhances CKPower's business resilience but is also part of the strategy to minimize risks, especially emerging risks in the future.



Business Resilience Strategy

Diversification is key for building business resilience, mitigating risks, and expanding opportunities. CKPower's business model focuses on sustainability and the investment portfolio and seeks to achieve balanced and flexible power generation from different types of energy as well as to establish strategies that are consistent with its investment in sustainable assets.

Develop Action Plan

CKPower created an action plan to enable comparison of operating results every six months, performed risk assessment, and prepared a contingency plan in the event that operating results deviate from expectations.

Collaborate with Partners

- CKPower signed a memorandum of understanding with business partners to increase potential in leveraging various new technological innovations in business operations.
- Efforts were undertaken to develop solar power projects with companies in the shareholder group and/or other private operators in order to incorporate electricity from clean energy sources into business operations. For instance, a solar power project collaboration between Bangkok Expressway and Electric Railway Public Company Limited and Bang Khen Chai Company Limited resulted in the signing of a power purchase agreement.

Build Market Strength

- CKPower studied the Thai market and identified opportunities for investing in additional renewable energy power plants.
- CKPower increased its installed capacity.

Enhance Digital Technology

- A system was installed for remotely monitoring the performance of the solar power plant via the internet.
- A system was implemented for monitoring the water flow at the Xayaburi Hydroelectric Power Plant via the internet, with plans to develop a predictive program for water flow in the future.

Expand Opportunities in Renewable Energy

CKPower sold Renewable Energy Certificates (RECs) issued by Bangkhengchai Company Limited and made preparations to further expand the sale of Renewable Energy Certificates (RECs) of its hydroelectric power plants.

Message from CKPower



“Leveraging its proficiency in the hydroelectric power plant sector, CKPower conducts comprehensive analyses of both domestic and international energy markets to assess feasibility and identify potential investment prospects in renewable energy and alternative energy sources. Presently, we are exploring investment opportunities in a solar power plant project in collaboration with the Bangkok Expressway and Electric Railway Public Company Limited, aligning with Thailand’s efforts to mitigate greenhouse gas emissions.

Furthermore, CKPower is actively researching emerging energy technologies and innovations, such as energy storage systems and green hydrogen, in anticipation of future investment opportunities from evolving energy consumption trends among consumers.”

Mr. Supawit Supapa

Manager - Project Control and Development
Head of Ambition – Business Model Resilience

Project Highlights in 2023

1. Increasing the Total Installed Capacity of Hydroelectric and Solar Power Plants

In 2023, CKPower increased its installed capacity by a total of 1,466 MW through its hydroelectric and solar power projects. Below is a summary of the results of the installed capacity expansion:

Luang Prabang Hydropower Project

Luang Prabang Hydroelectric Power Project: All terms and conditions outlined in the concession contract for the Luang Prabang Hydroelectric Power Plant Project were duly met in May 2023. The project will have an installed capacity of 1,460 megawatts, and all electricity generated will be sold to the Electricity Generating Authority of Thailand (EGAT), with commercial operations anticipated to commence at the onset of the year 2030.



Pakthongchai Solar Project

Pak Thong Chai Solar Power Project: On December 22, 2023, a power purchase contract was signed for a renewable energy project operating under the Feed-in Tariff (FiT) scheme, entailing zero fuel costs. The project, boasting an installed capacity of 6 megawatts, is set to commence commercial electricity production and distribution in 2027. The contract spans a duration of 25 years from the onset of commercial electricity production and distribution.



The undertaking of the two aforementioned projects put the total installed renewable energy capacity at 3,633 megawatts, increasing CKPower’s renewables-based installed capacity from 89% in 2022 to 93%. These initiatives align with the Company’s ongoing commitment to sustaining its renewable energy power plant business. (Further details of the project are outlined in the 56-1 One Report under Section 1: Business Structure and Operations)



**Luang Prabang
Hydropower Project**
(Under Construction)

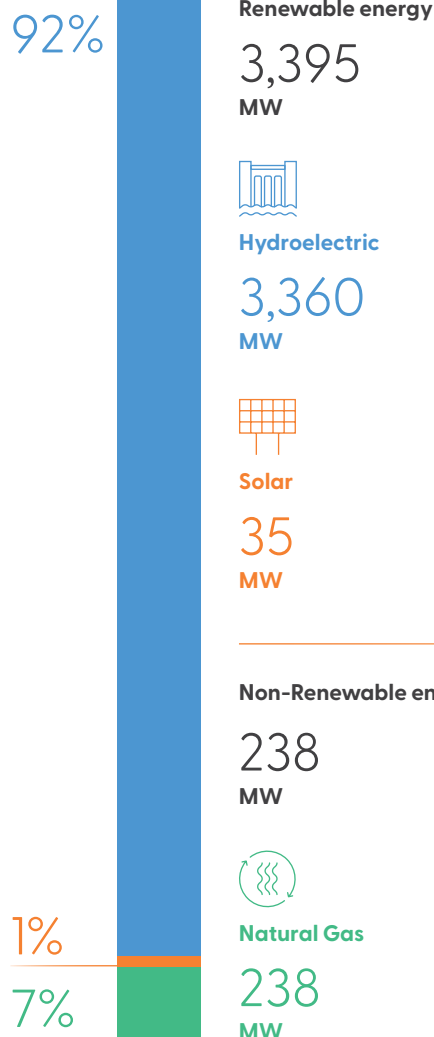
**1,460
MW**



Pakthongchai Solar Project
(Under Construction)

**6
MW**

Installed Capacity in 2023



2. Sale of 6,500 Renewable Energy Certificates (RECs)

In 2023, CKPower expanded business opportunities related to carbon credits and Renewable Energy Certificates (RECs). The Company sold 6,500 RECs from the PAKTSOLA001 project of Bangkhengchai Company Limited to customers interested in purchasing such certificates through Innopower Company Limited. This expansion has broadened the Company's business scope beyond electricity production, reinforcing its position as a leader in clean energy and enhancing business competitiveness.



3. Issuance of Green Bonds by Xayaburi Power Company Limited

In 2023, a key project aimed at promoting the Company's renewable energy electricity business was the issuance of green bonds by Xayaburi Power Company Limited, a joint venture company of CK Power Public Company Limited. The bond offering attracted interest from institutional investors and high net worth investors, resulting in subscriptions totaling 3,500 million baht. This exceeded the initial reservation amount of 2,000 million baht, with an additional offering of greenshoe worth 1,500 million baht. This success further reinforces investor confidence.

The Company offered baht-denominated name-registered, unsecured, and unsubordinated green bonds no. 1/2023 in Thai baht with a debentureholders' representative to institutional investors and/or large investors in Thailand. These bonds are divided into 3 tranches:

- Tranche 1, with a tenor of 3 years maturing in October 2026 at a fixed interest rate of 5.15% per annum

- Tranche 2, with a tenor of 4 years maturing in October 2027 at a fixed interest rate of 5.30% per annum
- Tranche 3, with a tenor of 5 years maturing in October 2028 at a fixed interest rate of 5.55% per annum

The baht-denominated green bonds offered by XPCL received a credit rating of "BBB+" ("stable") on September 11 by TRIS Ratings Company Limited. Meanwhile, XPCL was given a corporate credit rating of A-/stable, reflecting the Company's stable cash flow due to a long-term power purchase agreement with the Electricity Generating Authority of Thailand (EGAT), structured to reduce risk and ensure competitive electricity production costs. Moreover, the debentures fully complied with the Green Bond Principles 2021 and ASEAN Green Bond Standards 2018 and were audited by DNV, the world's leading classification society that serves as an independent external reviewer.

The Company will utilize the proceeds to repay loans with floating interest rates in an effort to mitigate the risk associated with fluctuations in loan interest rates and reduce financial costs, with the ultimate goal of stabilizing XPCL's financial status. The funds will also serve as working capital and investment for the Company's expansion of operations in pursuit of its vision "clean energy for a low-carbon society," thereby supporting the region's sustainable energy transition.



Xayaburi Power

Successfully Issues THB 3.5 Billion Green Bonds

Underscoring Investor Confidence and Commitment to Low-Carbon Society

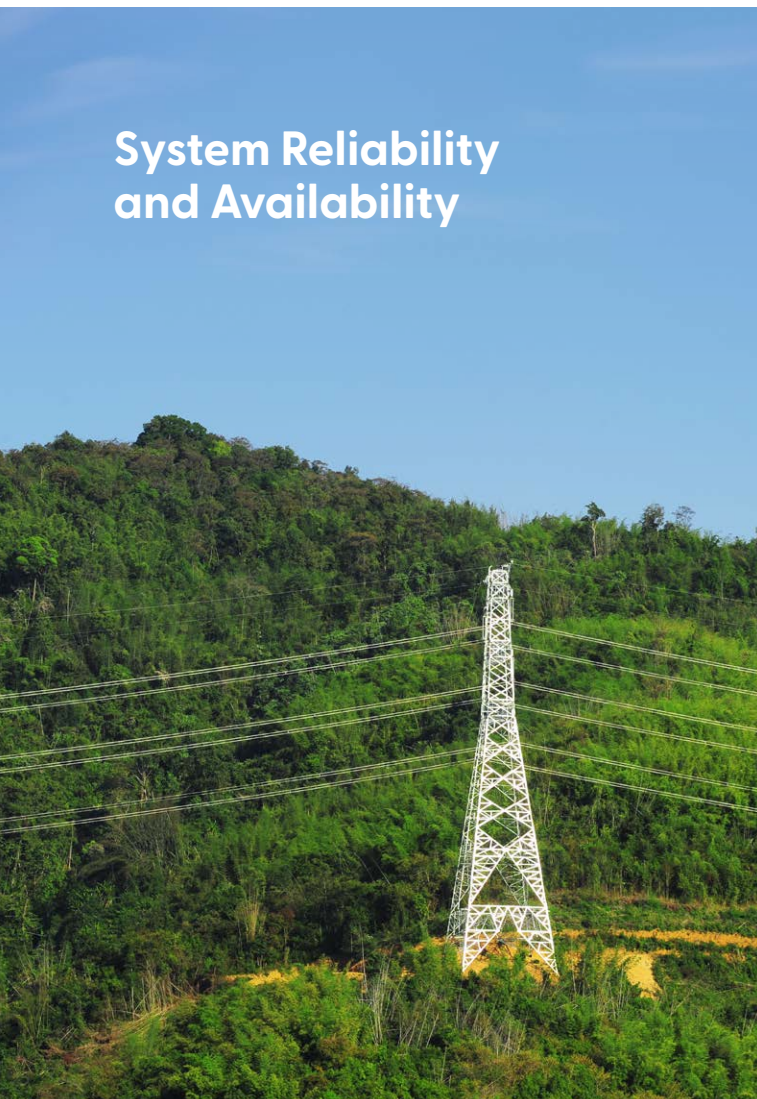
4. Collaboration between CK Power Public Company Limited (CKP) and Bangkok Expressway and Metro Public Company Limited (BEM) to supply solar electricity to power Thailand's mass transit system for the first time

CKPower has devised a business strategy aimed at spearheading the energy transition and advocating for the adoption of clean energy, particularly within the transportation sector, which is a significant contributor to greenhouse gas emissions. The Company has entered into a partnership with Bangkok Expressway and Metro Public Company Limited to supply clean electricity generated from solar energy to power the MRT Blue Line and Purple Line (Chaleom Ratchamongkon Line and Chalong Ratchadham Line), marking a historic milestone as the first such initiative in Thailand.

By pioneering renewable energy solutions in the ASEAN region, the Company is committed to driving the energy transition and capitalizing on growth opportunities in clean electricity production for mass transit systems, specifically the MRT Blue and Purple Lines, covering a combined distance of over 71 kilometers and serving 54 stations across Bangkok. This initiative results in avoided emissions and represents the initial phase of a significant partnership between CKPower and BEM. Plans have also been put in place to explore and expand the integration of renewable energy into the expanding transportation network. As energy demand continues to rise, the goal is to contribute to Thailand's efforts to achieve net zero greenhouse gas emissions by 2065.



System Reliability and Availability



SDGs



2023 Targets



>8.0

million MWh

Total Renewable Energy Generated



>90%

Average Plant Availability factor



<2

times/year

Number of Unplanned Power Outages



8.7

million MWh

Total Renewable Energy Generated



94%

Average Plant Availability factor



1

time*

Number of Unplanned Power Outages

Remark: *The Xayaburi Hydroelectric Power Plant experienced one unplanned power outage due to a high flow emergency in August 2023.

Message from Stakeholder



“In terms of system reliability and availability, CKPower has been able to manage its engineering risks well and has effectively planned its operation, especially with respect to preventive maintenance, which minimizes the risk of disruptions to the energy production and impacts on power supply to Stars Microelectronics (Thailand) Public Company Limited.”

Mr. Pairat Chaloeysap

Facility Engineering Manager
Stars Microelectronics (Thailand) Public Company Limited
Stakeholder - Client

Impact on Business

Due to the increasing demand for electricity from customers and the ongoing energy transition alongside environmental promotion measures, the power generation industry is experiencing heightened competition and rapid technological advancements. The stability, reliability, and readiness of electricity production and distribution, along with environmental promotion, are at the core of the company's and its affiliates' electricity production. CKPower is committed to maintaining system reliability and environmental stewardship to foster customer trust and strives to enhance business capabilities, competitiveness, as well as supplier and investor confidence to create positive impact on the business. To achieve these goals, CKPower focuses on consistently maintaining the efficiency of its electricity production and distribution systems and managing its innovations in order to continuously deliver electricity to all customers, meet their needs, and enhance their satisfaction in the Company's services. Additionally, we implement preventive maintenance plans to mitigate the potential negative impacts of operational shutdowns, which could disrupt the delivery of clean electricity and impact future business operations.

Challenges and Opportunities

The system reliability and availability of the Company and its subsidiary are crucial for their strength, stability, and sustainability in the clean power generation business. This is particularly significant amid the increasing demand for green energy and rapid advancements in production technologies, both of which have heightened competition in the market. Producers capable of maintaining system reliability and availability will be better positioned to seize opportunities, foster customer and consumer trust, and contribute to the economic and social development of the country. Therefore, in addition to focusing on routine

system enhancements and innovation management, CKPower has implemented policies to expand investments in electricity production and distribution businesses, both in Thailand and across ASEAN. The objective is to enhance energy reliability and security, with a focus on energy transition and investment in projects that generate affordable clean electricity from environmentally friendly renewable energy sources, minimize pollution, and optimize resource consumption in production processes.

Commitment

CKPower recognizes the paramount importance of ensuring the reliability and availability of its power production and distribution systems to instill confidence among its clientele. To achieve this objective, the company has implemented various protocols and initiatives to enhance the efficiency of its electricity distribution infrastructure, thus ensuring a dependable electricity supply to all customers of CKPower and its subsidiaries. Additionally, CKPower meticulously oversees the implementation of maintenance schedules at each power facility and invests in the professional development of its workforce, equipping them with specialized expertise in clean electricity generation systems, with the overarching aim of optimizing the availability of its production and distribution systems while minimizing environmental impact.

Operational Guidelines

CKPower and its subsidiaries place great emphasis on their invested power plants and have thus introduced advanced technology to ensure power distribution continuity and efficiency as well as put cost management systems in place to achieve competitiveness and eco-friendliness. The Company also

Message from CKPower



“At Bangpa-in Cogeneration Power Plant, we prioritize the reliability and availability of our production and distribution systems, ensuring customer confidence and satisfaction through meticulous preventive maintenance planning and adaptive strategies. Our commitment extends beyond meeting customer objectives; we actively contribute to energy transition by developing production processes that minimize energy consumption and enhance energy efficiency. These efforts are aligned with the company's goal of reducing greenhouse gas emissions, reflecting our dedication to sustainable practices and environmental stewardship.”

Anuwat Sasakul

Manager of Machinery Operation
Sustainability Working Team on System Reliability
and Availability
Bangpa-in Cogeneration Power Plant

focuses on developing knowledge on engineering and efficient resource management among its employees at all levels and encouraging learning and operational system improvement in order to promote the development of innovation that will further enhance operational efficiency as well as contribute to greater system reliability and availability.

CKPower strives to develop efficient electricity delivery systems and has put in place production and distribution control systems with maximum reliability. The Company's power plants are not only designed by experts and equipped with measuring tools of international standards but are also subject to regular inspection by specialists and maintenance according to detailed schedules throughout their life span. To ensure the availability of its power plants for continuous operations with maximum efficiency and manage the readiness of its power plants, machinery, and equipment, CKPower formulates annual preventive maintenance plans, which ensure that equipment and machinery are inspected as scheduled and that maintenance is carried out as planned, and prepares suitable and adequate amounts of critical equipment, supplies, and spare parts for power plant maintenance. In addition, CKPower also operates in accordance with the ISO 9001:2015 standard.

Furthermore, CKPower and its subsidiaries places great emphasis on all power plants and adopted advanced technology to ensure power distribution continuity and efficiency as well as put in place cost management systems to achieve competitiveness and eco-friendliness. The Company also focuses on developing knowledge on engineering and efficient resource management among its employees at all levels.

Operational Knowledge Development

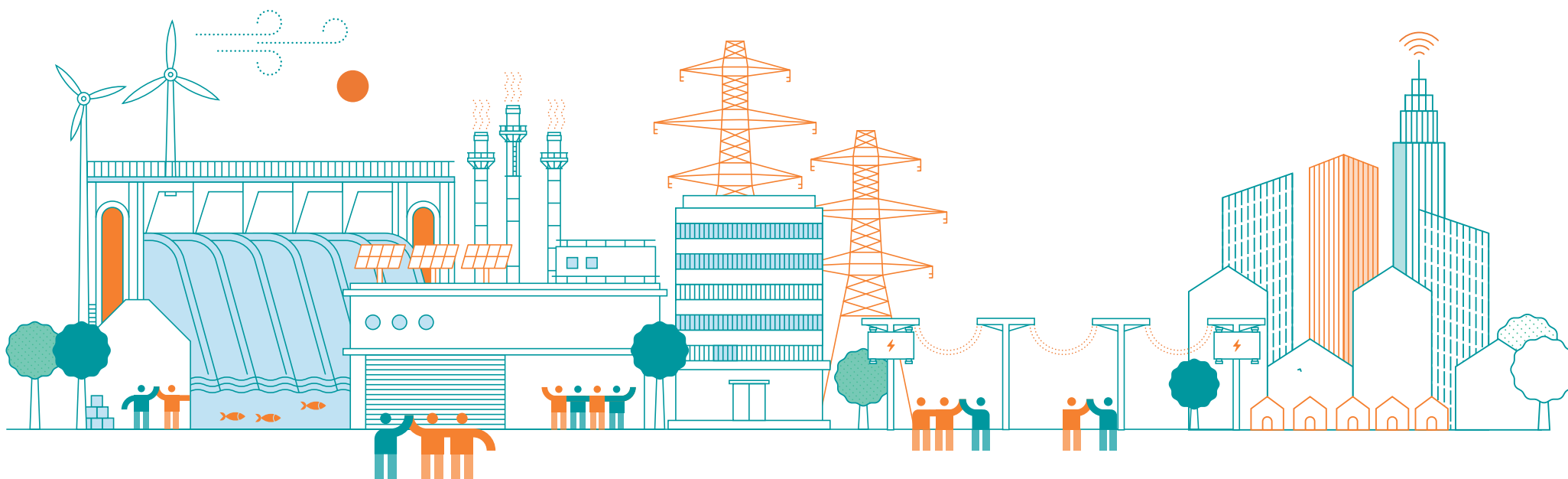
CKPower has established foundational training courses for all employees to ensure confidence among stakeholders that assigned tasks can be carried out according to standardized procedures. This includes supporting job shadowing, attending external training sessions, and knowledge transfer within the organization to enhance skills and learn current best practices at the global level. Continuous sharing of knowledge and experiences within the organization is encouraged to foster the development of innovative work systems aimed at enhancing operational efficiency. Additionally, the company promotes the study of clean energy production technologies to align with its existing business operations, preparing to ensure the stability and readiness of electricity production and distribution in the future.

Crisis Management

To ensure smooth operations, ensuring the stability and readiness of electricity production and distribution at all power plants, CKPower has implemented a comprehensive business continuity management policy for the Company and its subsidiaries. Additionally, emergency manuals are issued, and emergency drills are conducted annually to prepare for unforeseen incidents such as fires, floods, climate change risks, chemical spills, earthquakes, landslides, and other plant-related incidents. conducts yearly analyses and assessments of climate change risks, recognizing their potential direct impacts on operations. While no significant climate change risks have been identified for the short and medium term across all power plants, CKPower has developed proactive mitigation plans alongside existing measures. Furthermore, CKPower has fortified its utility systems against floods, with a dedicated team of engineers and experts assigned to proactively monitor safety through installed sensors and real-time monitoring systems.

CKPower operates three types of power generation and distribution businesses, namely hydroelectric power plants, cogeneration power plants, and solar power plants, with a combined installed capacity of 3,633 MW, of which 3,395 MW is clean energy-based. This has enabled CKPower to deliver electricity produced from clean alternative energy, strengthened the reliability of its power

production and distribution, and helped it meet the increasing electricity demand. As of 2023, CKPower produced 8.7 million MWh cumulatively. To foster reliability and availability for sustainable clean electricity generation, CKPower has devised operational guidelines as detailed below.



01

Develop efficient annual energy production and distribution plans to optimize efficiency and reliability.



02

Evaluate and **monitor** the effectiveness of power plant operations to ensure sustainable practices.



03

Enhance the efficiency of electricity transmission systems through the integration of advanced technology and innovation.



04

Conduct system audits by experts in line with operational plans and international standards, adhering to the highest levels of quality and safety.



05

Establish regular maintenance plans for power plants, prioritizing reliability and long-term operational sustainability.



06

Promote the development of operational knowledge among staff members, fostering a culture of continuous improvement and excellence in sustainability.



Hydropower



Installed capacity

3,360
MW



Total energy generated

8,721,281.85
Mwh



Xayaburi Hydroelectric Power Plant



100

Percentage of customers
satisfaction surveys
in 2023



97.50%

Satisfaction rate
in 2023



Solar Power



Installed capacity

35
MW



Total energy generated

22,806.85
Mwh



Nam Ngum 2 Hydroelectric Power Plant



100

Percentage of customers
satisfaction surveys
in 2023



100%

Satisfaction rate
in 2023



Cogeneration

Electricity



Installed capacity

238
MW



Total energy generated

1,605,762.12
Mwh

Steam



Installed capacity

40
MW



Total energy generated

62,520.68
Mwh



Bangkhenchai Solar Power Plant



100

Percentage of customers
satisfaction surveys
in 2023



96%

Satisfaction rate
in 2023



Bangpa-in Cogeneration Power Plant



100

Percentage of customers taking
satisfaction surveys
in 2023





99.19%

Satisfaction rate
in 2023

Annual maintenance





Xayaburi Hydroelectric Power Plant

Target	Performance
 100% of the maintenance list	 100% of the maintenance list

 As outlined Execution of annual production and distribution plans	 As outlined Performance ratio
-----------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------





Nam Ngum 2 Hydroelectric Power Plant*

Target	Performance
 100% of the maintenance list	 100% of the maintenance list

 As outlined Execution of annual production and distribution plans	 As outlined Performance ratio
-----------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------





Bangkhenchai Solar Power Plant

Target	Performance
 100% of the maintenance list	 100% of the maintenance list

 As outlined Execution of annual production and distribution plans	 As outlined Performance ratio
-------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------



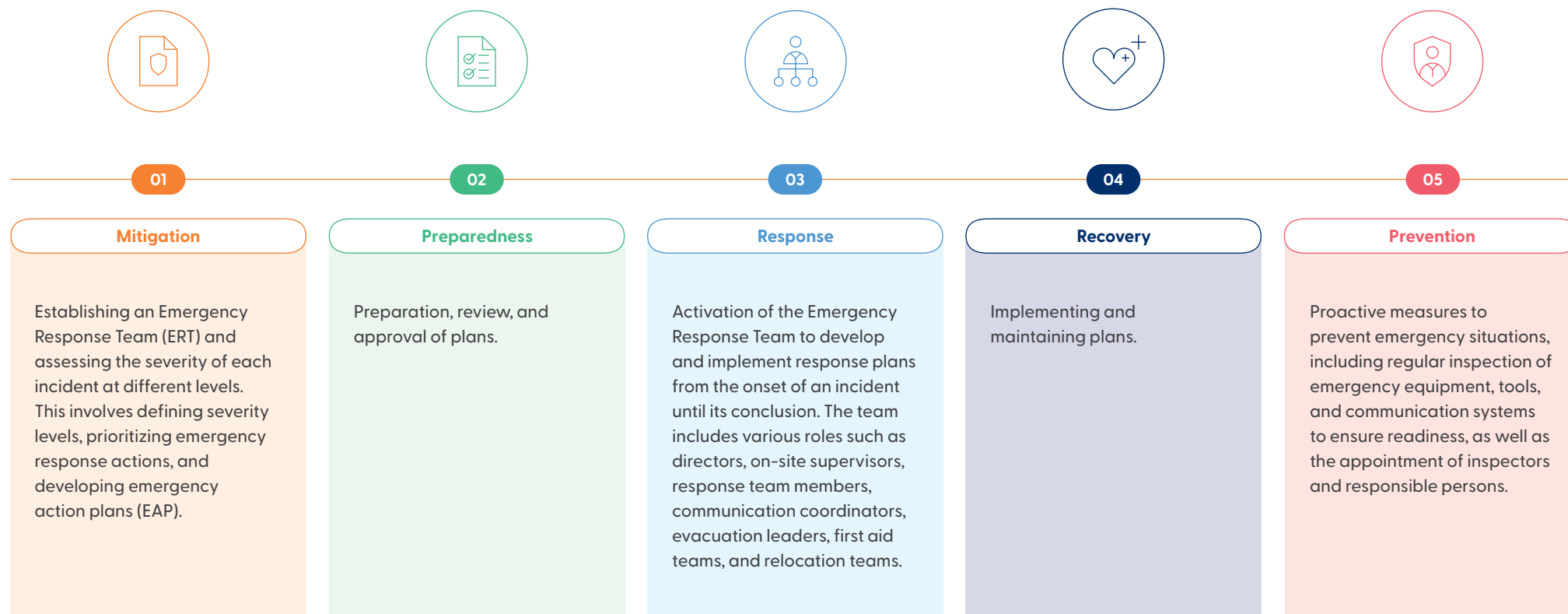
Bangpa-in Cogeneration Power Plant

Target	Performance
 100% of the maintenance list	 100% of the maintenance list

 As outlined Execution of annual production and distribution plans	 As outlined Performance ratio
-------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------

*Nam Ngum 2 Hydroelectric Power Plant underwent a planned major overhaul, which began from November 18, 2023 and was scheduled to be completed by February 14, 2024.

The emergency response plan comprises five clearly-defined and systematic steps





Key activities at each power plant in 2023

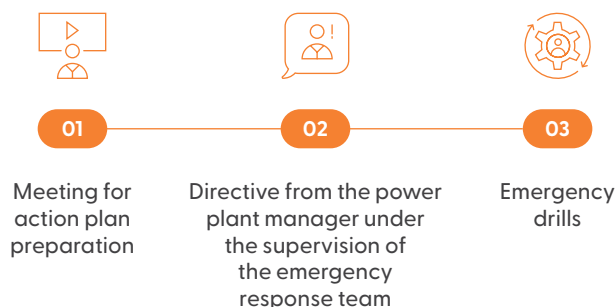
Xayaburi Hydroelectric Power Plant

The Xayaburi Hydroelectric Power Plant monitored climate change and rigorously assessed risks that might impact its business operations as well as formulated action plans to closely keep track of the situation. In addition, SCADA technology was employed to track various operational data to ensure the continuity of the Company's power generation. Moreover, the company evaluated and monitored its operational effectiveness through two key indicators: plant performance ratio and annual maintenance operation outcomes.

In August 2023, heavy and continuous rainfall from Typhoon Khanun, combined with the release of water from the reservoir located upstream from the power plant, resulted in a high-flow emergency situation at the power plant and surrounding areas. The power plant promptly activated its Emergency Response

Plan and managed the emergency according to the established protocols. Operations were successfully restored to normal within 30 hours, adhering to the outlined emergency response plan. Additionally, the power plant provided assistance to nearby residents to safely cope with the emergency. This included informing local authorities about anticipated water levels, advising residents to evacuate to higher ground, and deploying boats and personnel for assistance. All of these efforts were managed under a well-structured and systematic operation plan, with designated working and communication teams. Thanks to active coordination efforts with all stakeholders and rigorous emergency drills, the Xayaburi Hydroelectric Power Plant was able to resume its electricity production in a short amount of time.

The Emergency Response Management Plan



Nam Ngum 2 Hydroelectric Power Plant

The Nam Ngum 2 Hydroelectric Power Plant implemented efficient water management practices to guarantee uninterrupted and sufficient electricity production to fulfill the Company's contractual commitments. This included establishing a strategy to keep water levels above the designated threshold throughout the dry season annually, while ensuring they remained below the level necessitating the opening of floodgates during the rainy season. Furthermore, a significant overhaul was conducted from November 18, 2023, to February 14, 2024, during which the production machinery underwent preparation and inspection to uphold efficiency, meet electricity production targets, and maintain system reliability and availability.



A planned major overhaul at The Nam Ngum 2 Hydroelectric Power Plant



Bangpa-in Cogeneration Power Plant

As part of its strategies, Bangpa-in Cogeneration Power Plant installed a vacuum recloser system, which is circuit interruption equipment and plays a vital role in safeguarding the power network from damage and preventing signal failures from one client to affect the electricity systems of other clients. The objective was to enhance the system average interruption frequency index (SAIFI), thereby maintaining the continuity of stable electricity production.

Bangkhenchai Solar Power Plant

The Bangkhenchai Solar Power Plant assessed and monitored its operational effectiveness using two primary indicators: the plant performance ratio and the outcomes of annual maintenance operations. Monthly operational results were meticulously tracked to analyze factors influencing electricity production efficiency, enabling the adjustment of operational strategies as needed to ensure ongoing production stability.

2023 Performance



Xayaburi Hydroelectric Power Plant



1.50

System Average
Interruption
Frequency Index
(SAIFI)



21.77

System Average
Interruption
Duration Index
(SAIDI)



14.52

Customer Average
Interruption
Duration Index
(CAIDI)



Nam Ngum 2 Hydroelectric Power Plant



1

System Average
Interruption
Frequency Index
(SAIFI)



0.30

System Average
Interruption
Duration Index
(SAIDI)



0.30

Customer Average
Interruption
Duration Index
(CAIDI)



Bangkhenchai Solar Power Plant



0

System Average
Interruption
Frequency Index
(SAIFI)



0

System Average
Interruption
Duration Index
(SAIDI)



0

Customer Average
Interruption
Duration Index
(CAIDI)



Bangpa-in Cogeneration Power Plant



0.08

System Average
Interruption
Frequency Index
(SAIFI)



0.13

System Average
Interruption
Duration Index
(SAIDI)



1.67

Customer Average
Interruption
Duration Index
(CAIDI)

Innovation Management



2023 Targets



1

innovation per year



>30

innovators cumulatively



>1,530

stakeholders

Disseminated knowledge and technology to stakeholder residing in the vicinity of CKPower's power plants

2023 Achievements



3

new innovation projects
(16 accumulated innovations)



50

innovators cumulatively



2,467

stakeholders

Disseminated knowledge and technology to stakeholder residing in the vicinity of CKPower's power plants

Message from CKPower



“Climate change is everyone’s responsibility. CKPower has communicated and encouraged everyone in the organization to take part in utilizing innovation to optimize production and learn about innovation through training and energy saving research in order to support the Company’s energy transition. In addition, CKPower consistently monitors and improves the performance to ensure efficiency, promote innovation development, and support CKPower’s energy transition and decarbonization targets in a sustainable way, thus helping to mitigate global warming.”

Mr. Pirapat Chakkaew

Senior Engineer – Performance Engineer
Sustainability Working Team on Energy Management and Climate Change
Bangpa-in Cogeneration Power Plant

Impact on Business

CKPower recognizes that promoting and developing promotes innovation development to meet the needs of all stakeholders as it encourages learning and skill enrichment among personnel and brings about knowledge exchange with suppliers and customers. CKPower’s innovation management also benefits the communities in the vicinity of its power plants as it ensures uninterrupted power delivery and helps to minimize the potential environmental impacts of power production on them. Furthermore, the utilization of useful innovations bolsters the confidence of investors and shareholders in the Company’s operations and growth and enables it to support the government’s energy security goals and strengthen the energy security of Thailand and Southeast Asia.

Challenges and Opportunities

The growing demand for renewable energy is driven by the trend of energy transition as well as the increase in environmental promotion measures and the adoption of clean energy in many countries worldwide. This is coupled with competition in the power generation industry and rapid technological changes. Therefore, it is vital for CKPower to prioritize innovation management to ensure efficient and effective operations and enhance competitiveness so as to promptly adapt to new businesses. To this end, CKPower has formulated plans for its operations, for technology and innovation development, and for the enhancement of its operation and service provision capabilities to improve efficiency, reduce production losses, decrease resource usage, and manage energy consumption in order to reduce greenhouse gas emissions and minimize impacts on the environment and communities.

Commitment

CKPower is committed to developing innovations to drive the transition from conventional energy to clean energy. Through continuous development, CKPower has demonstrated that “hydroelectricity is sustainable clean energy” and is crucial for our advancement towards a low-carbon society. Furthermore, CKPower seeks to ensure the efficiency and effectiveness of production processes as well as continuously improve them to reduce resource consumption, minimize environmental impacts, and benefit communities. To achieve this, CKPower adopts cutting-edge innovations and technologies and continuously engages its personnel in innovation development to utilize knowledge and technology within the organization to the greatest advantage by integrating innovation management into its code of business conduct.

Operational Guidelines

Innovation Development Policy

CKPower has included innovation management as part of its code of business conduct to enhance the capabilities of its personnel and further optimize the development of engineering knowledge and resource management. In addition, CKPower places greater emphasis on choosing advanced technology and eco-friendly management systems in the power plants projects it invests in to ensure they are eco-friendly and cost-competitive and can generate returns for all related parties in a sustainable manner. At the same time, the Company promotes learning and the development of operational systems and innovations that can further enhance efficiency. It also encourages brainstorming to ensure that the knowledge and technology within CKPower are built upon and utilized to the greatest advantage.

Innovation Development Strategies



1. Collection

Management of databases to facilitate internal knowledge development and exchange and promote innovation within the organization.



2. Partnership

Strengthening innovation capabilities by engaging in partnerships with external agencies or organizations to explore novel technologies and techniques that can drive engineering advancements, foster environmentally sustainable practices, and enhance personnel performance.



3. Exchange and knowledge sharing

Facilitating the dissemination of knowledge and innovation to all stakeholders through training, workshops, and seminars.

Innovation Development Framework

CKPower has established an innovation development framework to serve as guidance for its personnel in utilizing their knowledge and exercising their creativity to contribute to organizational, environmental, and social development.

01



New Innovation:

The development new technology that improve the efficiency or effectiveness of CKPower's operations

02



New Invention:

The development of new and innovative invention or activities that can contribute to its business growth and environmental sustainability

03



Improvement:

The adoption, expansion, and improvement of existing innovations and inventions to suit the Company's operations.

04



Partnership:

Supporting external agencies to promote innovation and invention research and development partnerships.

05



Support ESG:

Innovation must address ESG challenges by enhancing production efficiency, reducing resource consumption, conserving the environment, and improving the quality of life in communities and society as well as for stakeholders.

Innovation Knowledge Development Guidelines



Collection



Exchange



Knowledge application

- 1. Collection:** Handbooks and databases curated by employees with expertise in their respective functions serve as educational materials for all levels of staff. This approach ensures that knowledge is disseminated throughout the organization, thereby fostering collaboration and facilitating the exchange of information to advance innovation.
- 2. Exchange:** CKPower encourages the exchange of knowledge and experiences among employees by offering training programs for engineers and making its data sources widely available. This initiative aids in the transfer of practical knowledge and experiences, contributing to the development of new innovations.
- 3. Knowledge application:** CKPower develops and compiles new work standards, enabling employees to continually.

To facilitate operations amidst its digital transformation, CKPower has embraced technology to modernize its work systems and boost efficiency. This effort aligns with the Industry Framework, which serves as a standardized model for business processes within the industry.

Innovation Diffusion

CKPower has effectively spread its innovative practices and insights on sustainable energy to a broad array of stakeholders. The company facilitated this diffusion by hosting power plant tours and seminars focused on innovation. Additionally, CKPower has been proactive in consistently sharing expertise on clean and renewable energy, alongside innovations aimed at energy savings and optimizing energy consumption. Over the past year, these efforts have engaged a total of 2,467 participants, including visitors to the Xayaburi Hydroelectric Power Plant. These activities not only highlight CKPower's commitment to innovation and environmental stewardship but also foster a wider understanding and appreciation of sustainable energy solutions among the public and industry peers.



Participants engaged in these innovation diffusion activities and visits to the Xayaburi Hydroelectric Power Plant.

2,467
Participants

Effectiveness Monitoring

CKPower's dedication to innovation management and development, aimed at optimizing production and improving environmental sustainability, has yielded significant results. To date, the company has developed 16 cumulative innovations, with two additional innovation projects currently under review. Moreover, the company boasts a team of 50 innovators. At the Bangpa-in Cogeneration Power Plant, innovation is embedded into the core performance metrics. All employees are mandated to explore and develop innovations that address the plant's challenges. Further enhancing this culture of innovation, weekly sessions are held to enable employees to showcase and discuss department-specific knowledge and innovations. These sessions promote the exchange of ideas and collaborative learning among staff. The insights and solutions generated from these gatherings are instrumental in refining work processes and advancing projects at the power plant.



Cumulative Innovations

16
Projects



Total innovators in organization

50
innovators

Performance

Lower gas pressure - better heat rate project

Phase-2 steam turbine load adjustment project

Air dryer deactivation project

Deactivation of cooling fan during 00:00-06:00 A.M. project

Cooling tower optimization project

Adjustment and control of the chloride range in the cooling tower project

Slip ring dust collector project

Main inlet valve spare part project

Gas compressor lubrication reduction projection project

Mekong fish migration detection system project

PIT Tag installation project

Stop online water wash project

Gas compressor power reduction project

Dust remover and slip ring generators 1, 2, and 3 installation project

Of all the implemented innovations, there are cumulatively six projects on energy management. These projects earned CKPower the Power Utility of the Year Award at the Asian Power Award 2023.

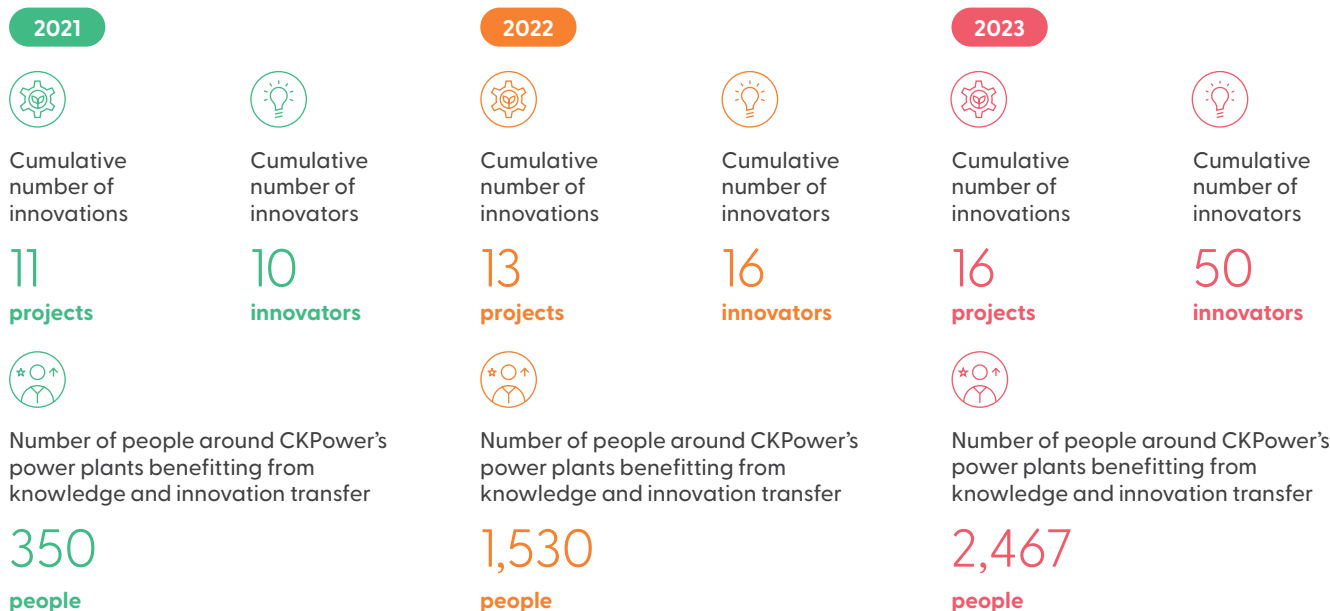


In 2023, CKPower also initiated a project to develop innovation for hydrogen-powered production. In order to minimize environmental impacts from greenhouse gas emissions and create opportunities to venture into new business areas, CKPower is currently conducting the feasibility of the following projects:

1. Green hydrogen and green ammonia plants
2. The utilization of a combination of hydrogen and natural gas as fuel for Bangpa-in Cogeneration Power Plant

Overall Innovation Performance

The numbers of eco-friendly production optimization innovations and innovators developed



Innovation-Enabled Cost and Resource Savings

Description Unit	2021	2022	2023
Energy saving (MWh/year)	3,150	5,980	2,026
GHG emission reduction (tCO ₂ e/year)	1,418	2,763	119,520
Water saving (Cubic meter/year)	58,594	54,387	28,006
Energy cost saving (Million baht/year)	6.5	23.7	16.3

Performance Data

152 →

Environmental Performance

160 →

Occupational Health and Safety Performance

162 →

Human Resources Performance

170 →

System Reliability and Availability Performance



Environmental Performance

Disclosure	Performance			Unit	2020	2021	2022	2023
GRI 302-1	Total energy consumption within the organization ¹			MWh	2,041,213.70	2,074,139.55	2,112,045.00	2,108,270.85
	Total non-renewable energy consumed			MWh	3,532,552.71	3,545,132.72	3,536,148.18	3,559,657.37
	Total non-renewable energy consumed	Stationary combustion		MWh	3,532,005.84	3,543,780.28	3,533,725.50	3,556,936.80
		Stationary combustion	Natural gas ²	MWh	3,531,983.13	3,543,749.63	3,533,666.28	3,556,899.17
				GJ	12,715,037.54	12,757,396.60	12,721,096.85	12,804,734.58
				MMBTU	12,051,629.56	12,091,778.54	12,057,372.73	12,136,646.65
			kg	ND	ND	246,521,343.00	240,663,151.00	
			Diesel	MWh	22.71	30.65	59.21	37.63
				GJ	81.76	110.33	213.17	135.48
				Liter	2,245.00	3,029.50	5,853.00	3,720.00
		Mobile combustion		MWh	546.87	1,352.44	2,422.69	2,720.57
		Mobile combustion	Diesel	MWh	515.43	1,274.33	2,084.46	2,041.27
				GJ	1,855.54	4,587.58	7,504.07	7,348.59
				Liter	50,948.45	125,963.21	206,042.53	201,773.39
			Diesel B7	MWh	ND	ND	ND	337.89
				GJ	ND	ND	ND	1,216.42
				Liter	ND	ND	ND	33,399.69
			Gasoline	MWh	31.45	78.11	338.23	341.40
GJ	113.20			281.21	1,217.61	1,229.03		
Liter	3,596.00			8,933.00	38,678.86	39,041.70		

Remarks :

- ND means No Data Available

1 The Company increased the data coverage of energy indicators to include the Company's Headquarter and number of transmission loss for the first time 2022.

2 The Company consumed natural gas only in the Bangpa-in Cogeneration power plant.

Disclosure	Performance		Unit	2020	2021	2022	2023	
GRI 302-1	Total non-renewable energy sold ³		MWh	1,586,867.46	1,600,174.99	1,593,951.63	1,604,580.92	
	Total non-renewable energy sold	Non-renewable electricity sold	MWh	1,535,429.42	1,543,171.23	1,533,338.61	1,542,060.25	
			GJ	5,527,501.70	5,555,371.97	5,519,974.82	5,551,372.48	
		Steam sold	MWh	51,438.04	57,003.77	60,613.03	62,520.68	
			GJ	185,175.46	205,211.93	218,205.15	225,072.64	
			Metric ton	ND	ND	78,036.00	80,492.00	
		Non-renewable electricity generated and consumed within the organization		MWh	ND	ND	ND	ND
	Total energy purchased and consumed within the organization		MWh	8,708.58	10,521.86	4,491.23	3,703.03	
	Electricity purchased and consumed within the organization		MWh	8,708.58	10,521.86	4,491.23	3,703.03	
			GJ	31,350.90	37,878.71	16,168.31	13,330.82	
	Total renewable energy consumed		MWh	50,041.11	87,596.57	165,357.22	149,491.37	
	Total renewable energy consumed		Renewable electricity from solar energy consumed	MWh	ND	ND	0	0
				GJ	ND	ND	0	0
			Renewable electricity from hydropower consumed	MWh	50,041.11	87,596.57	165,357.22	149,491.37
				GJ	180,147.98	315,347.64	595,281.23	538,164.62
			Total renewable electricity consumption within organization	MWh	ND	ND	52,598.25	51,667.90
				GJ	ND	ND	189,352.18	186,002.94
			Total transmission loss	MWh	ND	ND	112,758.97	97,823.47
				GJ	ND	ND	405,929.04	352,161.68
	Total renewable energy sold)		MWh	7,241,637.74	9,172,747.20	9,883,066.03	8,594,597.34	
	Renewable energy sold		Renewable electricity sold	MWh	7,241,637.74	9,172,747.20	9,883,066.03	8,594,597.34
				GJ	26,069,895.86	33,021,889.92	35,578,753.09	30,940,302.89
GRI 302-3	Energy intensity	Total energy consumption within the organization per total energy generated	MWh	0.23	0.19	0.18	0.20	
			/MWh					
SET ESG Ratings		Total electricity consumption per total energy generated	MWh	ND	ND	0.0004	0.0004	
			/MWh					

Remarks :

- ND means No Data Available

3 The Company sold non-renewable-energy only from the Bangpa-in Cogeneration power plant.

Disclosure	Performance		Unit	2020	2021	2022	2023
GRI 305-1, GRI 305-2	Total GHG emissions scope 1 and 2		tCO ₂ e	717,296.83	721,309.65	717,775.96	721,781.47
GRI 305-1	Total GHG emissions scope 1 and 2	Total GHG emissions scope 1	tCO ₂ e	713,447.64	716,049.77	715,530.79	719,930.32
		Stationary combustion	tCO ₂ e	713,299.86	715,684.30	714,330.78	719,021.43
		Stationary combustion	Natural gas	tCO ₂ e	713,299.80	715,676.10	714,314.93
			Diesel	tCO ₂ e	0.06	8.20	15.85
		Mobile combustion	tCO ₂ e	147.78	365.47	652.55	727.20
		Mobile combustion	Diesel	tCO ₂ e	139.61	345.18	564.68
			Diesel B7	tCO ₂ e	ND	ND	ND
			Gasoline	tCO ₂ e	8.17	20.29	87.87
		Sulfur hexafluoride: SF6	Sulfur hexafluoride: SF6	tCO ₂ e	0	0	253.80
			Weight of sulfur hexafluoride: SF6	kg	0	10.80	5.80
		Refrigerants	tCO ₂ e	ND	ND	293.66	45.39
		Refrigerants	Refrigerant R134a	tCO ₂ e	ND	ND	0
				kg	ND	ND	0
			Refrigerant R32	tCO ₂ e	ND	ND	0
				kg	ND	ND	8.40
			Refrigerant R410a	tCO ₂ e	ND	ND	0
				kg	ND	ND	11.10
			Refrigerant R407C	tCO ₂ e	ND	ND	293.66
				kg	ND	ND	180.80
GRI 305-2	Total GHG emissions scope 2	Total GHG emissions scope 2	tCO ₂ e	3,849.19	5,259.88	2,245.17	1,851.15
		Purchased electricity GHG emissions scope 2	Location-based	tCO ₂ e	3,849.19	5,259.88	2,245.17
			Market-based	tCO ₂ e	3,849.19	5,259.88	2,245.17

Remarks :
- ND means No Data Available

Disclosure	Performance		Unit	2020	2021	2022	2023
GRI 305-3	Total GHG emissions scope 3	Total GHG emissions scope 3	tCO ₂ e	ND	ND	122,367.29	119,586.41
		Category 3: Fuel- and energy-related activities not included in scope 1 or 2	tCO ₂ e	ND	ND	122,367.29	119,586.41
		GHG emissions from transmission & distribution losses of purchased electricity	tCO ₂ e	ND	ND	443.28	365.49
		GHG emissions from upstream fuel uses	tCO ₂ e	ND	ND	121,924.01	119,220.92
		GHG emissions from upstream fuel uses	Natural gas	tCO ₂ e	ND	121,770.14	119,049.42
			Diesel	tCO ₂ e	ND	130.96	149.38
			Gasoline	tCO ₂ e	ND	22.91	22.12
			Liquefied petroleum gas: LPG	tCO ₂ e	ND	0	0
			Natural gas for vehicles: NGV	tCO ₂ e	ND	0	0
GRI 305-4	GHG emissions intensity	Total energy generated ⁴	MWh	8,851,869.97	10,771,901.16	11,704,379.09	10,412,371.50
		GHG emissions scope 1 and 2 per total energy generated	tCO ₂ e/MWh	0.0810	0.0670	0.0613	0.0693
		GHG emissions scope 1 and 2 per total energy sold	tCO ₂ e/MWh	ND	ND	0.0625	0.0708
The GHG Protocol Corporate Accounting and Reporting Standard		Biogenic emissions	tCO ₂ e	ND	ND	0	5.59
		Biogenic emissions	Stationary combustion: Diesel B7	tCO ₂ e	ND	ND	0
			Mobile combustion: Diesel B7	tCO ₂ e	ND	ND	0
		Refrigerant R22	tCO ₂ e	ND	ND	23.41	12.14
			kg	ND	ND	13.30	6.90

Remarks :

- ND means No Data Available

4 Data from 2019-2021 were reported using power purchase agreement (PPA) between the Company and suppliers as reference, while data from 2022-2023 were reported using the Company's actual total energy generation.

Disclosure	Performance		Unit	2020	2021	2022	2023
GRI 305-7	Other air emissions ⁵	Nitrogen oxides: NOx	ppm	ND	ND	168.91	32.49
			kg	597,770.75	598,910.61	636,065.50	703,548.78
		Sulphur oxides: SOx	ppm	ND	ND	1.16	1.29
			kg	17,258.39	24,398.44	34,192.07	37,992.93
		Persistent organic pollutants: POP	kg	ND	ND	0	0
		Volatile organic compounds: VOC	kg	ND	ND	0	0
		Hazardous pollutant: HAP	kg	ND	ND	0	0
		Particulate matter: PM	mg/m ³	ND	ND	14.14	1.67
			kg	21,890.13	33,911.76	28,978.59	16,733.91
		Direct mercury emission	Metric ton	ND	ND	0	0
	Other air emissions intensity	Nitrogen oxides: NOx	kg/MWh	0.068	0.056	0.054	0.068
		Sulphur oxides: SOx	kg/MWh	0.002	0.002	0.003	0.004
		Persistent organic pollutants: POP	kg/MWh	ND	ND	0	0
		Volatile organic compounds: VOC	kg/MWh	ND	ND	0	0
		Hazardous pollutant: HAP	kg/MWh	ND	ND	0	0
		Particulate matter: PM	kg/MWh	0.0025	0.0031	0.0025	0.0016
		Direct mercury emission	Ton/MWh	ND	ND	0	0
-	Avoided GHG emissions		tCO ₂ e	3,226,203.54	4,604,509.49	5,023,206.78	4,371,169.94
-	Total renewable energy generated		MWh	7,299,103.04	9,210,861.16	10,048,423.25	8,744,088.70
-	Grid emission factor for Thailand		tCO ₂ e/MWh	0.4420	0.4999	0.4999	0.4999

Remarks :

- ND means No Data Available

5 The Company had other air emissions only from the Bangpa-in Cogeneration power plant.

Disclosure	Performance		Unit	2020	2021	2022	2023
GRI 303-3	Total water withdrawal from all areas ⁶		Million Liters	1,910.00	1,722.86	10,621.26	8,512.74
	Total water withdrawal from non-water stress areas		Million Liters	1,910.00	1,722.86	10,621.26	6,672.50
	Total water withdrawal from non-water stress areas	Municipal water suppliers Freshwater (≤1,000 mg/L Total Dissolved Solids)	Million Liters	1,910.00	1,722.85	1,837.46	0.60
		Surface water Freshwater (≤1,000 mg/L Total Dissolved Solids)	Million Liters	ND	0.01	8,783.80	6,628.11
		Groundwater Freshwater (≤1,000 mg/L Total Dissolved Solids)	Million Liters	ND	ND	0	43.79
		Water recycled and reused within the organization	Million Liters	ND	ND	0	0
	Total water withdrawal from water stress areas ⁷		Million Liters	0	0	0	1,840.24
	Total water withdrawal from water stress areas	Municipal water suppliers Freshwater (≤1,000 mg/L Total Dissolved Solids)	Million Liters	0	0	0	1,840.24
		Surface water Freshwater (≤1,000 mg/L Total Dissolved Solids)	Million Liters	0	0	0	0
		Groundwater Freshwater (≤1,000 mg/L Total Dissolved Solids)	Million Liters	ND	ND	0	0
	Water intensity	Total water withdrawal from all areas per total energy generated	Million Liters /MWh	0	0	0.0009	0.0008
GRI 303-4	Total water discharged		Million Liters	381.44	344.56	9,042.01	6,837.44
	Total water discharged	Municipal water suppliers Freshwater (≤1,000 mg/L Total Dissolved Solids)	Million Liters	381.44	344.56	367.72	328.70
		Surface water Freshwater (≤1,000 mg/L Total Dissolved Solids)	Million Liters	ND	ND	8,674.29	6,508.73
		Groundwater Freshwater (≤1,000 mg/L Total Dissolved Solids)	Million Liters	ND	ND	0	0
GRI 303-5	Total water consumption from all areas		Million Liters	1,528.56	1,378.30	1,579.25	1,675.30
	Total water consumption from water stress areas ⁷		Million Liters	0	0	0	1,511.88
SET ESG Ratings	Total water consumption per unit total energy generated		m ³ /kWh	0.00017268	0.00012795	0.00013493	0.00016090
S&P Global	Total water consumption from water stress areas per unit total energy generated		m ³ /kWh	0	0	0	0.00017674

Remarks :

- ND means No Data Available

6 The Company increased the data coverage of water indicators to include Xayaburi Hydroelectric Power Plant, Nam Ngum 2 Hydroelectric Power Plant and the Company's Headquarter for the first time in 2022.

7 The Company had water withdrawal and water consumption from water stress areas only from the Bangpa-in Cogeneration Power Plant.

Disclosure	Performance		Unit	2020	2021	2022	2023
GRI 306-3	Total waste generated ⁸		Metric ton	95.96	130.86	136.16	143.58
GRI 306-3	Total non-hazardous waste generated		Metric ton	87.16	114.11	120.53	119.49
GRI 306-4	Total non-hazardous waste generated	Total non-hazardous waste diverted from disposal	Metric ton	15.40	29.19	14.82	21.24
GRI 306-5		Total non-hazardous waste directed to disposal	Metric ton	71.76	84.92	105.71	98.25
GRI 306-3	Total hazardous waste generated		Metric ton	8.80	16.75	15.62	24.09
GRI 306-4	Total hazardous waste generated	Total hazardous waste diverted from disposal	Metric ton	4.84	5.03	4.60	8.21
GRI 306-5		Total hazardous waste directed to disposal	Metric ton	3.96	11.72	11.02	15.87
GRI 306-4	Total waste diverted from disposal [on-site and off-site]		Metric ton	20.24	34.22	19.42	29.46
	Total hazardous waste diverted from disposal [on-site]		Metric ton	4.84	5.03	0	0
	Total hazardous waste diverted from disposal [on-site]	Preparation for reuse [on-site]	Metric ton	2.54	3.00	0	0
		Recycling [on-site]	Metric ton	2.30	2.03	0	0
		Other recovery operations [on-site]	Metric ton	0	0	0	0
	Total hazardous waste diverted from disposal [off-site]		Metric ton	0	0	4.60	8.21
	Total hazardous waste diverted from disposal [off-site]	Preparation for reuse [off-site]	Metric ton	0	0	0	7.00
		Recycling [off-site]	Metric ton	0	0	0	0
		Other recovery operations [off-site]	Metric ton	0	0	4.60	1.21
	Total non-hazardous waste diverted from disposal [on-site]		Metric ton	0	14.58	9.20	16.77
	Total non-hazardous waste diverted from disposal [on-site]	Preparation for reuse [on-site]	Metric ton	0	14.58	0	0
		Recycling [on-site]	Metric ton	0	0	0	1.30
		Other recovery operations [on-site]	Metric ton	0	0	9.20	15.47
	Total non-hazardous waste diverted from disposal [off-site]		Metric ton	15.40	14.61	5.62	4.47
	Total non-hazardous waste diverted from disposal [off-site]	Preparation for reuse [off-site]	Metric ton	0	0	0	0
		Recycling [off-site]	Metric ton	0	0	5.62	4.47
		Other recovery operations [off-site]	Metric ton	15.40	14.61	0	0

Remarks :

8 Major overhaul activity at Nam Ngum 2 Hydroelectric Power Plant in 2023 had caused the Company's amount of waste to increase when compared to last year.

Disclosure	Performance		Unit	2020	2021	2022	2023	
GRI 306-5	Total waste directed to disposal [on-site and off-site]		Metric ton	75.72	96.64	116.74	114.12	
	Total waste directed to disposal [on-site]		Metric ton	48.80	74.94	82.24	73.97	
	Total waste directed to disposal [on-site]	Total hazardous waste directed to disposal [on-site]		Metric ton	2.46	9.19	0	1.42
		Total waste directed to disposal [on-site]	Incineration with energy recovery [on-site]	Metric ton	0	0	0	0
			Incineration without energy recovery [on-site]	Metric ton	2.02	6.83	0	1.42
			Landfilling [on-site]	Metric ton	0.44	1.28	0	0
			Other disposal operations [on-site]	Metric ton	0	1.08	0	0
		Total non-hazardous waste directed to disposal [on-site]		Metric ton	46.34	65.75	82.24	72.55
		Total non-hazardous waste directed to disposal [on-site]	Incineration with energy recovery [on-site]	Metric ton	0	0	0	0
			Incineration without energy recovery [on-site]	Metric ton	42.50	44.86	40.18	31.88
			Landfilling [on-site]	Metric ton	3.84	20.88	42.06	40.67
			Other disposal operations [on-site]	Metric ton	0	0	0	0
		Total waste directed to disposal [off-site]		Metric ton	26.92	21.70	34.50	40.15
		Total waste directed to disposal [off-site]	Total hazardous waste directed to disposal [off-site]		Metric ton	1.50	2.53	11.02
	Total hazardous waste directed to disposal [off-site]		Incineration with energy recovery [off-site]	Metric ton	0	0	10.50	14.06
			Incineration without energy recovery [off-site]	Metric ton	0	0	0.02	0.04
			Landfilling [off-site]	Metric ton	1.50	2.53	0.34	0.24
			Other disposal operations [off-site]	Metric ton	0	0	0.17	0.12
	Total non-hazardous waste directed to disposal [off-site]		Metric ton	25.42	19.17	23.47	25.69	
	Total non-hazardous waste directed to disposal [off-site]		Incineration with energy recovery [off-site]	Metric ton	0	0	0	0
			Incineration without energy recovery [off-site]	Metric ton	13.92	19.17	14.35	10.08
			Landfilling [off-site]	Metric ton	11.50	0	0	4.72
			Other disposal operations [off-site]	Metric ton	0	0	9.12	10.90

Remarks :
- ND means No Data Available

Occupational Health and Safety Performance

Disclosure	Performance		Unit	2020	2021	2022	2023
GRI 403-8	Data coverage	Employees	%	ND	ND	100	100
		Contractors	%	ND	ND	100	100
GRI 403-9	Fatalities from work-related injuries	Employees	Case	0	0	0	0
		Contractors	Case	0	0	0	0
	Fatalities from work-related injuries rate	Employees	Case / 1,000,000 hours	0	0	0	0
		Contractors	Case / 1,000,000 hours	0	0	0	0
	High-consequence work-related injuries	Employees	Case	0	0	0	0
		Contractors	Case	0	0	0	0
	High-consequence work-related injuries rate	Employees	Number of hours worked	633,861.00	678,330.35	928,128.50	985,690.50
		Employees	Case / 1,000,000 hours	0	0	0	0
		Contractors	Number of hours worked	734,031.00	481,414.00	973,395.00	1,177,387.00
		Contractors	Case / 1,000,000 hours	0	0	0	0
	Recordable work-related injuries	Employees	Case	1	0	1	1
		Contractors	Case	0	0	1	2
	Recordable work-related injuries rate	Employees	Number of hours worked	633,861.00	678,330.35	928,128.50	985,690.50
		Employees	Case / 1,000,000 hours	1.58	0	1.08	1.01
		Contractors	Number of hours worked	734,031.00	481,414.00	973,395.00	1,177,387.00
		Contractors	Case / 1,000,000 hours	0	0	1.03	1.70

Disclosure	Performance		Unit	2020	2021	2022	2023
S&P Global	Lost-time injuries: LTI	Employees	Case	0	0	0	0
		Contractors	Case	0	0	1	1
	Lost-time injuries frequency rate: LTIFR	Employees	Case / 1,000,000 hours	0	0	0	0
		Contractors	Case / 1,000,000 hours	0	0	1.03	0.85
GRI 403-10	Fatalities as a result of work-related ill health	Employees	Case	0	0	0	0
		Contractors	Case	0	0	0	0
	Fatalities from work-related ill health rate	Employees	Case / 1,000,000 hours	0	0	0	0
		Contractors	Case / 1,000,000 hours	0	0	0	0
	The number of cases of recordable work-related ill health	Employees	Case	0	0	0	0
		Contractors	Case	0	0	0	0
	Recordable work-related ill health rate	Employees	Case / 1,000,000 hours	0	0	0	0
		Contractors	Case / 1,000,000 hours	0	0	0	0
SASB	Total recordable incident case	Employees	Case	0	0	1	0
		Contractors	Case	0	0	0	1
	Total recordable incident rate (TRIR)	Employees	Case / 1,000,000 hours	0	0	1.08	0
		Contractors	Case / 1,000,000 hours	0	0	0	0.85
	Near miss case	Employees	Case	0	0	1	2
		Contractors	Case	0	0	0	0
	Near miss frequency rate (NMFR)	Employees	Case / 1,000,000 hours	0	0	1.08	2.03
		Contractors	Case / 1,000,000 hours	0	0	0	0

Human Resources Performance

Disclosure	Performance			Unit	2020	2021	2022	2023
GRI 2-7	Employees	Full time employees: FTEs		Persons	509	505	517	533
		Classified by type of employment	Permanent	Persons	392	396	407	419
			Contract	Persons	117	109	110	114
		Classified by country of operation	Thailand	Persons	217	216	227	226
			Lao People's Democratic Republic	Persons	292	289	290	307
GRI 405-1	Employees	Classified by gender	Male	Persons	340	337	348	363
				Percentage	67	67	67	68
			Female	Persons	169	168	169	170
				Percentage	33	33	33	32
		Classified by age	Less than 30 years	Persons	148	120	112	109
				Percentage	29	24	22	20
			30 to 50 years	Persons	328	345	364	384
				Percentage	64	68	70	72
			Over 50 years	Persons	33	40	41	40
				Percentage	6	8	8	8

Disclosure	Performance			Unit	2020	2021	2022	2023
S&P Global	Employees	Classified by nationality	Thai	Persons	314	310	313	323
				Percentage	61.69	61.39	60.54	60.6
			Lao	Persons	184	184	193	200
				Percentage	36.15	36.44	37.33	37.52
			Indian	Persons	5	6	5	6
				Percentage	0.98	1.19	0.97	1.13
			German	Persons	2	2	2	2
				Percentage	0.39	0.4	0.39	0.38
			Costarican	Persons	1	1	1	0
				Percentage	0.2	0.2	0.19	0
			French	Persons	1	1	1	0
				Percentage	0.2	0.2	0.19	0
			Filipino	Persons	1	1	1	1
				Percentage	0.2	0.2	0.19	0.19
			Cambodian	Persons	1	0	1	1
				Percentage	0.2	0	0.19	0.19

Disclosure	Performance			Unit	2020	2021	2022	2023
S&P Global	Employees	Classified by race/ ethnicity	Thai	Persons	314	310	313	323
				Percentage	61.69	61.39	60.54	60.6
			Lao	Persons	184	184	193	200
				Percentage	36.15	36.44	37.33	37.52
			Indian	Persons	5	6	5	6
				Percentage	0.98	1.19	0.97	1.13
			German	Persons	2	2	2	2
				Percentage	0.39	0.4	0.39	0.38
			Costarican	Persons	1	1	1	0
				Percentage	0.2	0.2	0.19	0
			French	Persons	1	1	1	0
				Percentage	0.2	0.2	0.19	0
			Filipino	Persons	1	1	1	1
				Percentage	0.2	0.2	0.19	0.19
			Cambodian	Persons	1	0	1	1
				Percentage	0.2	0	0.19	0.19
		Classified by people with disability	People with disability	Persons	0	0	0	0
				Percentage	0	0	0	0
		Classified by elder	elder employees	Persons	0	0	0	12
				Percentage	0	0	0	0.02

Disclosure	Performance			Unit	2020	2021	2022	2023
S&P Global and GRI 405-1	Empolyees	Top management		Persons	22	21	20	20
		Top management	Male	Persons	18	15	14	15
				Percentage	82	71	70	75
			Female	Persons	4	6	6	5
				Percentage	18	29	30	25
		Middle management		Persons	13	19	22	23
		Middle management	Male	Persons	10	10	13	14
				Percentage	77	53	59	61
			Female	Persons	3	9	9	9
				Percentage	23	47	41	39
		Junior management		Persons	68	62	64	65
		Junior management	Male	Persons	37	36	35	36
				Percentage	54	58	55	55
			Female	Persons	31	26	29	29
				Percentage	46	42	45	45
		Officer/ Non-management		Persons	406	403	411	425
		Officer/ Non-management	Male	Persons	275	276	286	298
				Percentage	68	68	70	70
			Female	Persons	131	127	125	127
				Percentage	32	32	30	30

Disclosure	Performance			Unit	2020	2021	2022	2023
S&P Global and GRI 405-1	Employees	Management of revenue-generating functions		Persons	54	53	59	245
		Management of revenue-generating functions	Male	Persons	50	47	50	226
				Percentage	93	89	85	92
			Female	Persons	4	6	9	19
				Percentage	7	11	15	8
		Science, Technology, Engineering & Mathematics: STEM		Persons	228	236	236	255
		Science, Technology, Engineering & Mathematics: STEM	Male	Persons	216	222	223	237
				Percentage	95	94	94	93
			Female	Persons	12	14	13	18
				Percentage	5	6	6	7
GRI 401-1 and S&P Global	New employee hires	New employee hires		Persons	82	24	34	71
		Classified by gender	Male	Persons	63	17	26	50
			Female	Persons	19	7	8	21
		Classified by age	Less than 30 years	Persons	45	14	22	37
			30 to 50 years	Persons	32	10	11	34
			Over 50 years	Persons	5	0	1	0
		Classified by position	Top management	Persons	ND	ND	ND	0
			Middle management	Persons	ND	ND	ND	2
			Junior management	Persons	ND	ND	ND	3
			Officer/ Non-management	Persons	ND	ND	ND	66
	New employee hiring rate	New employee hiring rate		Percentage	16	5	7	13
		Classified by gender	Male	Percentage	77	71	76	70
			Female	Percentage	23	29	24	30
GRI 401-1 and S&P Global	New employee hiring rate	Classified by age	Less than 30 years	Percentage	55	58	65	52
			30 to 50 years	Percentage	39	42	32	48
			Over 50 years	Percentage	6	0	3	0

Remarks :
- ND means No Data Available

Disclosure	Performance			Unit	2020	2021	2022	2023
S&P Global	Open positions filled by internal candidates/ internal hires			Percentage	30.51	71.62	57.5	56.35
	Average hiring cost per FTE			Baht/staff	20,490	65,258	57,526	34,975
GRI 401-1	Employee turnover	Employee turnover		Persons	29	15	56	34
		Classified by gender	Male	Persons	20	10	37	26
			Female	Persons	9	5	19	8
		Classified by age	Less than 30 years	Persons	11	5	11	5
			30 to 50 years	Persons	16	9	37	25
			Over 50 years	Persons	2	1	8	4
	Employee turnover rate	Employee turnover rate		Percentage	6	3	11	6
		Classified by gender	Male	Percentage	69	67	66	76
			Female	Percentage	31	33	34	24
		Classified by age	Less than 30 years	Percentage	38	33	20	15
			30 to 50 years	Percentage	55	60	66	74
			Over 50 years	Percentage	7	7	14	12
S&P Global	Voluntary employee turnover	Voluntary employee turnover		Persons	23	14	54	34
		Classified by gender	Male	Persons	15	9	35	26
			Female	Persons	8	5	19	8
		Classified by age	Less than 30 years	Persons	8	5	11	5
			30 to 50 years	Persons	13	9	36	25
			Over 50 years	Persons	2	0	7	4
	Voluntary employee turnover rate	Voluntary employee turnover rate		Percentage	5	3	10	6
		Classified by gender	Male	Percentage	65	64	65	76
			Female	Percentage	35	36	35	24
		Classified by age	Less than 30 years	Percentage	35	36	20	15
			30 to 50 years	Percentage	57	64	67	74
			Over 50 years	Percentage	9	0	13	12

Disclosure	Performance			Unit	2020	2021	2022	2023	
GRI 401-3	Parental leave	Parental leave		Persons	509	505	517	533	
		Classified by gender	Male	Persons	340	337	169	170	
			Female	Persons	169	168	348	363	
		Employees that took parental leave		Persons	ND	ND	12	9	
		Classified by age	Male	Persons	ND	ND	6	3	
			Female	Persons	ND	ND	6	6	
		Retention rate of employees that took parental leave		Persons	ND	ND	12	9	
		Classified by gender	Male	Persons	ND	ND	6	3	
			Female	Persons	ND	ND	6	6	
		Employees that took parental leave, returned to work after parental leave ended, and still employed 12 months after return to work		Persons	ND	ND	12	9	
		Classified by gender	Male	Persons	ND	ND	6	3	
			Female	Persons	ND	ND	6	6	
		Retention rate of employees that took parental leave		Percentage	ND	ND	100	100	
		Retention rate of employees that took parental leave		Percentage	ND	ND	100	100	
GRI 405-2	Equal pay assessment of female to male employees	Ratio of base salary and remuneration of female to male employees, classified by position	Top management	Base salary	Ratio	ND	0.86	0.68	0.75
			Middle management	Base salary	Ratio	ND	0.62	0.68	0.74
			Junior management	Base salary	Ratio	ND	0.9	0.91	0.93
			Officer/ Non-management	Base salary	Ratio	ND	1.07	1.04	1.04

Remarks :
- ND means No Data Available

Disclosure	Performance				Unit	2020	2021	2022	2023
GRI 404-1	Training hours	Total training hours			Hours	10,939	16,737	17,173	14,759
		Total training hours			Hours/ FTE	32	40	38	42
		Average training hours per FTE	Classified by gender	Male	Hours/ FTE	30	41	39	40
				Female	Hours/ FTE	37	37	29	29
			Classified by position	Top management	Hours/ FTE	26	21	21	40
				Middle management	Hours/ FTE	65	51	34	77
		Junior management		Hours/ FTE	62	83	47	47	
		Officer/ Non-management	Hours/ FTE	24	33	38	32		
S&P Global	Training budget per FTE	Training budget			Million THB	4.2	4.04	6.08	8.42
		Training budget per FTE			THB/ FTE	12,402	9,624	13,600	17,697
		Classified by gender	Male	THB/ FTE	11,594	10,089	12,635	15,176	
			Female	THB/ FTE	14,017	8,643	13,258	11,497	
		Classified by position	Top management	THB/ FTE	34,192	16,210	12,605	24,750	
			Middle management	THB/ FTE	31,875	13,805	19,125	47,709	
			Junior management	THB/ FTE	27,679	14,098	20,275	17,106	
			Officer/ Non-management	THB/ FTE	6,874	8,364	12,190	11,073	

System Reliability and Availability Performance

Disclosure	Performance		Unit	2020	2021	2022	2023
GRI G4-EU1	Energy generating capacity	Hydropower ¹	MW	1,900.00	1,900.00	1,900.00	1,900.00
		Solar energy ²	MW	14.73	14.73	14.73	14.73
	Cogeneration ³	Electricity	MW	237.50	237.50	237.50	237.50
		Steam	Ton/hr	ND	ND	40.00	40.00
GRI G4-EU2	Total energy generated ⁴	Hydropower ¹	MWh	7,221,506.70	9,149,499.88	10,025,549.39	8,721,281.85
		Solar energy ²	MWh	20,130.04	23,247.32	22,873.85	22,806.85
	Cogeneration ³	Electricity	MWh	1,535,670.45	1,543,851.11	1,655,955.84	1,605,762.12
		Steam	Metric Tons	ND	ND	78,036.00	80,492.00
GRI G4-EU30	Average plants availability factor	XPCL	Percentage	95.99	92.85	90.29	82.27
		NN2	Percentage	97.13	96.96	97.63	93.32
		BKC	Percentage	98.74	99.18	98.51	99.08
		BIC	Percentage	96.00	96.63	96.60	100.00
	Numbers of unplanned power outages	XPCL	Time	ND	ND	0	2
		NN2	Time	ND	ND	1	1
		BKC	Time	ND	ND	0	0
		BIC	Time	ND	ND	2	1
S&P Global	Gas leakage rate	Transportation/Transmission	Percentage	ND	ND	0	0
		Distribution to households	Percentage	ND	ND	0	0
		Storage	Percentage	ND	ND	0	0

- Remarks :**
- ND means No Data Available
 - 1 The Company generates electricity from hydropower only in Xayaburi and Nam Ngum 2 Hydroelectric Power Plants.
 - 2 The Company generates electricity from solar energy only in Bangkhenchai Power Plant.
 - 3 The Company generates electricity and steam only Bangpa-in Cogeneration Power Plant. (Bangpa-in Cogeneration Power Plant 1 has installed capacity of 117.5 MW of electricity and 20 tons of steam per hour and Bangpa-in Cogeneration Power Plant 2 has installed capacity of 120 MW of electricity and 20 tons of steam per hour.)
 - 4. Data from 2020-2021 were reported using power purchase agreement (PPA) between the Company and suppliers as reference, while data from 2022-2023 were reported using the Company's actual total energy generation.

Disclosure	Performance	Unit	2020	2021	2022	2023
S3.3 C	Number of incidents or complaints related to consumer rights violations, along with corrective measures	XPCL	case	0	0	0
		NN2	case	0	0	0
		BKC	case	0	0	0
		BIC	case	0	0	0
S&P	Number of customers who have been assessed for satisfaction	XPCL	Percentage	ND	ND	ND
		NN2	Percentage	ND	ND	ND
		BKC	Percentage	ND	ND	ND
		BIC	Percentage	ND	ND	ND
S3.7R	Customer satisfaction survey results.	XPCL	Percentage	ND	ND	ND
		NN2	Percentage	ND	ND	ND
		BKC	Percentage	ND	ND	ND
		BIC	Percentage	ND	ND	ND

Remarks :

- ND means No Data Available
- XPCL means Xayaburi Hydroelectric Power Plant
- NN2 means Nam Ngum 2 Hydroelectric Power Plant
- BKC means Bangkhenchai Power Plant
- BIC means Bangpa-in Cogeneration Power Plant

GRI Content Index

173 →

General Disclosures

178 →

Material topics



GRI Content Index

Statement of use	CK Power Public Company Limited the “Company” or “CKP” has reported in accordance with GRI Standards for the period of 1 st January to 31 st December 2023
GRI 1 used	GRI 1: Foundation 2021
Applicable GRI Sector Standard(s)	Currently, there is no GRI for Electric Utility Sector Standard, therefore this report is aligned with G4 Electric Utility Sector

General Disclosures

GRI Standards	DISCLOSURE	LOCATION	OMISSION			GRI SECTOR STANDARD REF. NO.
			REQUIREMENT(S) OMITTED	REASON	EXPLANATION	
General Disclosures						
GRI 2: General Disclosures 2021						
1. The Organization in Reporting Practice						
2-1	Organizational details	Sustainability report : Page 25-27 56-1 One Report : Page 19-20,26-27	-	-	-	-
2-2	Entities included in the organization's sustainability reporting	Sustainability report : Page 15	-	-	-	-
2-3	Reporting period, frequency and contact point	Sustainability report : Page 13, 15	-	-	-	-
2-4	Restatement of information	Sustainability report : Page 15 There is not any restatements of information given in previous reports	-	-	-	-
2-5	External assurance	Sustainability report : Page 14, 174-175	-	-	-	-
2. Activities and workers						
2-6	Activities, Value chain, and other business relationships	Sustainability report : Page 25-26 56-1 One Report : Page 85-88	-	-	-	-
2-7	Employees	Sustainability report : Page 162-166	-	-	-	-
2-8	Workers who are not employees	Sustainability report : Page 162	-	-	-	-
3. Governance						
2-9	Governance structure and composition	Sustainability report : Page 29, 115-116 56-1 One Report : Page 152-154	-	-	-	-

GRI Standards	DISCLOSURE	LOCATION	OMISSION			GRI SECTOR STANDARD REF. NO.
			REQUIREMENT(S) OMITTED	REASON	EXPLANATION	
2-10	Nomination and selection of the highest governance body	Sustainability report : Page 115 56-1 One Report : Page 178-180 Website : https://www.ckpower.co.th/storage/content/corporate-governance/corporate-policy-document-download/charters/nomination-remuneration-committee-charter-en-02.pdf	-	-	-	-
2-11	Chair of the highest governance body	56-1 One Report : Page 154 Website : https://www.ckpower.co.th/en/management/board-of-directors	-	-	-	-
2-12	Role of the highest governance body in overseeing the management of impacts	Sustainability report : Page 29 56-1 One Report : Page 139-149, 161-162, 178-180	-	-	-	-
2-13	Delegation of responsibility for managing impacts	Sustainability report : Page 29	-	-	-	-
2-14	Role of the highest governance body in sustainability reporting	Sustainability report : Page 29	-	-	-	-
2-15	Conflicts of interest	56-1 One Report : Page 144,186	-	-	-	-
2-16	Communication of critical concerns	Sustainability report : Page 119	-	-	-	-
2-17	Collective knowledge of the highest governance body	56-1 One Report : Page 181-183	-	-	-	-
2-18	Evaluation of the performance of the highest governance body	Sustainability report : Page 117 56-1 One Report : Page 182-183	-	-	-	-
2-19	Remuneration policies	Sustainability report : Page 115 56-1 One Report : Page 140,166-172 Website : https://www.ckpower.co.th/storage/content/corporate-governance/corporate-policy-document-download/charters/nomination-remuneration-committee-charter-en-02.pdf	-	-	-	-

GRI Standards	DISCLOSURE	LOCATION	OMISSION			GRI SECTOR STANDARD REF. NO.
			REQUIREMENT(S) OMITTED	REASON	EXPLANATION	
2-20	Process to determine remuneration	56-1 One Report : Page 140, 145, 166-173	-	-	-	-
2-21	Annual total compensation ratio	Omission	GRI 2-21 Annual total compensation ratio	Confidentiality constraints	Compensation of Managing Director is considered by the Company as confidential information.	-
4. Strategy, policies and practices						
2-22	Statement on sustainable development strategy	Sustainability report : Page 11-12	-	-	-	-
2-23	Policy commitments	Sustainability report : Page 27-28, 90, 117 Business Code of Conduct Website : https://www.ckpower.co.th/storage/content/corporate-governance/corporate-policy-document-download/code-of-conduct/code-of-conductcode-of-business-conduct-en-02.pdf Sustainability Management Policy Website : https://www.ckpower.co.th/storage/content/corporate-governance/corporate-policy-document-download/corporate-policies/sustainability-managment-policy-en.pdf Human Rights Policy Website : https://www.ckpower.co.th/storage/content/corporate-governance/corporate-policy-document-download/corporate-policies/human-rights-policy-en-03.pdf	-	-	-	-

GRI Standards	DISCLOSURE	LOCATION	OMISSION			GRI SECTOR STANDARD REF. NO.
			REQUIREMENT(S) OMITTED	REASON	EXPLANATION	
2-24	Embedding policy commitments	<p>Sustainability report : Page 11-12, 27-28, 79, 117-120</p> <p>56-1 One Report : Page 150-151</p> <p>Website : https://www.ckpower.co.th/storage/content/corporate-governance/corporate-policy-document-download/code-of-conduct/code-of-conductcode-of-business-conduct-en-02.pdf</p>	-	-	-	-
2-25	Processes to remediate negative impacts	<p>Sustainability report : Page 91, 107, 119</p> <p>56-1 One Report : Page 149, 187</p> <p>Website : https://www.ckpower.co.th/storage/content/corporate-governance/corporate-policy-document-download/code-of-conduct/code-of-conductcode-of-business-conduct-en-02.pdf</p> <p>Website : https://www.ckpower.co.th/storage/content/corporate-governance/corporate-policy-document-download/corporate-policies/human-rights-policy-en-03.pdf</p> <p>Website : https://www.ckpower.co.th/storage/content/corporate-governance/guidelines/guidelines-07-en.pdf</p>	-	-	-	-

GRI Standards	DISCLOSURE	LOCATION	OMISSION			GRI SECTOR STANDARD REF. NO.
			REQUIREMENT(S) OMITTED	REASON	EXPLANATION	
2-26	Mechanisms for seeking advice and raising concerns	<p>Sustainability report : Page 119</p> <p>56-1 One Report : Page 187</p> <p>Website : https://www.ckpower.co.th/storage/content/corporate-governance/corporate-policy-document-download/code-of-conduct/code-of-conductcode-of-business-conduct-en-02.pdf</p> <p>Website : https://www.ckpower.co.th/storage/content/corporate-governance/guidelines/guidelines-07-en.pdf</p> <p>Website : https://www.ckpower.co.th/en/sustainability/partnership-for-life/corporate-governance-risk-management-corporate-compliance</p>	-	-	-	-
2-27	Compliance with laws and regulations	Sustainability report : Page 54, 75, 88, 112	-	-	-	-
2-28	Membership associations	Sustainability report : Page 23	-	-	-	-
5. Stakeholder engagement						
2-29	Approach to stakeholder engagement	<p>Sustainability report : Page 40</p> <p>56-1 One Report : Page 87-88</p> <p>Website : https://www.ckpower.co.th/en/sustainability/stakeholder-engagement</p>	-	-	-	-
2-30	Collective bargaining agreements	<p>Sustainability report : Page 98</p> <p>56-1 One Report : Page 114</p> <p>Website : https://www.ckpower.co.th/en/sustainability/stakeholder-engagement</p>	-	-	-	-

Material topics

GRI Standards	DISCLOSURE	LOCATION	OMISSION			GRI SECTOR STANDARD REF. NO.
			REQUIREMENT(S) OMITTED	REASON	EXPLANATION	
GRI 3: Material Topics 2021						
3-1	Process to determine material topics	Sustainability report : Page 30-33	-	-	-	-
3-2	List of material topics	Sustainability report : Page 32-39	-	-	-	-
Corporate governance						
GRI 205: Anti-corruption 2016						
GRI 3: Material Topics 2021						
3-3	Management of material topics	Sustainability report : Page 112 -114	-	-	-	-
205-2	Communication and training about anti-corruption policies and procedures	Sustainability report : Page 118 -120 56-1 One Report : Page 176, 182	-	-	-	-
205-3	Confirmed incidents of corruption and actions taken	Sustainability report : Page 112	-	-	-	-
GRI 206: Anti-competitive Behavior 2016						
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	56-1 One Report : Page 137	-	-	-	-
Risk & Crisis management and Cybersecurity and data privacy						
GRI 3: Material Topics 2021						
3-3	Management of material topics	Sustainability report : Page 121-125 Website : https://www.ckpower.co.th/en/sustainability/partnership-for-life/corporate-governance-risk-management-corporate-compliance Website : https://www.ckpower.co.th/en/sustainability/partnership-for-life/supply-chain-management	-	-	-	-
GRI 201: Economic Performance 2016						
201-2	Financial implications and other risks and opportunities due to climate change	Sustainability report : Page 124,126-127	-	-	-	-

GRI Standards	DISCLOSURE	LOCATION	OMISSION			GRI SECTOR STANDARD REF. NO.
			REQUIREMENT(S) OMITTED	REASON	EXPLANATION	
GRI 308: Supplier environmental assessment						
308-1	New suppliers that were screened using environmental criteria	Website : https://www.ckpower.co.th/en/sustainability/partnership-for-life/supply-chain-management	-	-	-	-
308-2	Negative environmental impacts in the supply chain and actions taken	Website : https://www.ckpower.co.th/en/sustainability/partnership-for-life/supply-chain-management	-	-	-	-
GRI 414: Supplier Social Assessment 2016						
414-1	New suppliers that were screened using environmental criteria	Website : https://www.ckpower.co.th/en/sustainability/partnership-for-life/supply-chain-management	-	-	-	-
414-2	Negative social impacts in the supply chain and actions taken	Website : https://www.ckpower.co.th/en/sustainability/partnership-for-life/supply-chain-management	-	-	-	-
GRI 418: Customer Privacy 2016						
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	Sustainability report : Page 122,130	-	-	-	-
System reliability and availability						
GRI 3: Material Topics 2021						
3-3	Management of material topics	Sustainability report : Page 137-140	-	-	-	-
Innovation management						
GRI 3: Material Topics 2021						
3-3	Management of material topics	Sustainability report : Page 146-148	-	-	-	-
Business model resilience						
GRI 3: Material Topics 2021						
3-3	Management of material topics	Sustainability report : Page 131-133	-	-	-	-
Respect for Human Rights						
GRI 3: Material Topics 2021						
3-3	Management of material topics	Sustainability report : Page 88-92	-	-	-	-
GRI 406: Non-Discrimination 2016						
406-1	Incidents of discrimination and corrective actions taken	Sustainability report : Page 88, 92	-	-	-	-

GRI Standards	DISCLOSURE	LOCATION	OMISSION			GRI SECTOR STANDARD REF. NO.
			REQUIREMENT(S) OMITTED	REASON	EXPLANATION	
GRI 411: Rights of Indigenous Peoples 2016						
GRI 411-1	Incidents of violations involving rights of indigenous peoples	Sustainability report : Page 88, 92	-	-	-	-
Human capital management						
GRI 3: Material Topics 2021						
3-3	Management of material topics	Sustainability report : Page 94-95 Website : https://www.ckpower.co.th/en/sustainability/kind-neighbor/human-capital-management	-	-	-	-
GRI 401: Employment 2016						
401-1	New employee hires and employee turnover	Sustainability report : Page 166-167	-	-	-	-
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Sustainability report : Page 95-102 Website : https://www.ckpower.co.th/en/sustainability/kind-neighbor/human-capital-management	-	-	-	-
401-3	Parental leave	Sustainability report : Page 168 Website : https://www.ckpower.co.th/th/sustainability/sustainability-overview	-	-	-	-
GRI 404: Training and Education 2016						
404-1	Average hours of training per year per employee	Sustainability report : Page 169	-	-	-	-
404-2	Programs for upgrading employee skills and transition assistance programs	Sustainability report : Page 96-98, 100-102	-	-	-	-
404-3	Percentage of employees receiving regular performance and career development reviews	Sustainability report : Page 99-100 Website : https://www.ckpower.co.th/en/sustainability/sustainability-overview				-
GRI 405: Diversity and Equal Opportunity 2016						
405-1	Diversity of governance bodies and employees	Sustainability report : Page 162, 165-166	-	-	-	-
405-2	Ratio of basic salary and remuneration of women to men	Sustainability report : Page 168	-	-	-	-

GRI Standards	DISCLOSURE	LOCATION	OMISSION			GRI SECTOR STANDARD REF. NO.
			REQUIREMENT(S) OMITTED	REASON	EXPLANATION	
GRI 407: Freedom of Association and Collective Bargaining 2016						
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	Sustainability report : Page 98 Website : https://www.ckpower.co.th/en/sustainability/partnership-for-life/supply-chain-management	-	-	-	-
Social and Community care						
GRI 3: Material Topics 2021						
3-3	Management of material topics	Sustainability report : Page 17,75-80	-	-	-	-
GRI 203: Indirect Economic Impacts 2016						
203-1	Infrastructure investments and services supported	Sustainability report : Page 81-87	-	-	-	-
203-2	Significant indirect economic impacts		-	-	-	-
GRI 413: Local communities 2016						
413-1	Operations with Local Community Engagement, Impact Assessments, and Development Programs	Sustainability report: Page 77-87	-	-	-	-
413-2	Operations with Significant actual and potential negative impacts on local communities	Sustainability report : Page 76-77,79,81 Website : https://www.ckpower.co.th/en/sustainability/stakeholder-engagement	-	-	-	-
Occupational health and safety						
GRI 3: Material Topics 2021						
3-3	Management of material topics	Sustainability report : Page 103-108	-	-	-	-
GRI 403: Occupational Health and Safety 2018						
403-1	Occupational health and safety management system	Sustainability report : Page 105 -107	-	-	-	-
403-2	Hazard identification, risk assessment, and incident investigation	Sustainability report : Page 107	-	-	-	-
403-3	Occupational health services	Sustainability report : Page 109	-	-	-	-
403-4	Worker participation, consultation, and communication on occupational health and safety	Sustainability report : Page 105-107	-	-	-	-
403-5	Worker training on occupational health and safety	Sustainability report : Page 109-110	-	-	-	-
403-6	Promotion of worker health	Sustainability report : Page 109-110	-	-	-	-
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Sustainability report : Page 108	-	-	-	-

GRI Standards	DISCLOSURE	LOCATION	OMISSION			GRI SECTOR STANDARD REF. NO.
			REQUIREMENT(S) OMITTED	REASON	EXPLANATION	
403-8	Workers covered by an occupational health and safety management system	Sustainability report : Page 160	-	-	-	-
403-9	Work-related injuries	Sustainability report : Page 108, 160	-	-	-	-
403-10	Work-related ill health	Sustainability report : Page 108, 161	-	-	-	-
Environmental management						
GRI 3: Material Topics 2021						
3-3	Management of material topics	Sustainability report : Page 54-59	-	-	-	-
GRI 303: Water and Effuents 2018						
303-1	Interactions with water as a shared resource	Sustainability report : Page 57-58	-	-	-	-
303-2	Management of water discharge-related impacts	Sustainability report : Page 57-58	-	-	-	-
303-3	Water withdrawal	Sustainability report : Page 54, 57-58, 157	-	-	-	-
303-4	Water discharge	Sustainability report : Page 54, 57-58, 157	-	-	-	-
303-5	Water consumption	Sustainability report : Page 54, 57-58, 157	-	-	-	-
GRI 306: Waste 2020						
306-1	Waste generation and significant waste-related impacts	Sustainability report : Page 59-60	-	-	-	-
306-2	Management of significant waste-related impacts	Sustainability report : Page 59-60	-	-	-	-
306-3	Waste generated	Sustainability report : Page 55, 59-60, 158-159	-	-	-	-
306-4	Waste diverted from disposal	Sustainability report : Page 55, 59-60, 158-159	-	-	-	-
306-5	Waste directed to disposal	Sustainability report : Page 55, 59-60, 158-159	-	-	-	-
Biodiversity						
GRI 3: Material Topics 2021						
3-3	Management of material topics	Sustainability report : Page 65-68	-	-	-	-
GRI 304: Biodiversity 2016						
304-2	Significant impacts of activities, products and services on biodiversity	Sustainability report : Page 67-68	-	-	-	-
304-3	Habitat protected or restored	Sustainability report : Page 16, 65, 71	-	-	-	-
304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	Sustainability report : Page 71	-	-	-	-

GRI Standards	DISCLOSURE	LOCATION	OMISSION			GRI SECTOR STANDARD REF. NO.
			REQUIREMENT(S) OMITTED	REASON	EXPLANATION	
Energy Management and Climate Change						
GRI 3: Material Topics 2021						
3-3	Management of material topics	Sustainability report : Page 45-49,54,60	-	-	-	-
GRI 302: Energy 2016						
302-1	Energy consumption within the organization	Sustainability report : Page 45, 153	-	-	-	-
302-3	Energy intensity	Sustainability report : Page 45, 153	-	-	-	-
302-4	Reduction of energy consumption	Sustainability report : Page 52-53	-	-	-	-
302-5	Reductions in energy requirements of products and services	Sustainability report : Page 52-53	-	-	-	-
GRI 305: Emissions 2016						
305-1	Direct :Scope 1 GHG emissions	Sustainability report : Page 46, 50, 154	-	-	-	-
305-2	Energy Indirect (Scope 2 GHG emissions)	Sustainability report : Page 46, 51, 154-155	-	-	-	-
305-3	Other indirect (Scope 3 GHG emissions)	Sustainability report : Page 155	-	-	-	-
305-4	GHG emissions intensity	Sustainability report : Page 46, 51,155	-	-	-	-
305-5	Reduction of GHG emissions	Sustainability report : Page 46, 50-53	-	-	-	-
305-7	Nitrogen oxides (NO _x), Sulfur oxides (SO _x), and other significant air emissions	Sustainability report : Page 56, 60-61, 156	-	-	-	-
G4 Sector disclosure: Electric utilities						
Organizational profile						
EU1	Installed capacity, broken down by primary energy source and by regulatory regime	Sustainability report : Page 170	-	-	-	-
EU2	Net energy output broken down by primary energy source and by regulatory regime	Sustainability report : Page 170	-	-	-	-
Access						
EU12	Transmission and distribution losses as a percentage of total energy	Website : https://www.ckpower.co.th/en/sustainability/partnership-for-life/system-reliability-and-availability	-	-	-	-
EU28	Power outage frequency	Sustainability report : Page 137	-	-	-	-
EU29	Average power outage duration	Sustainability report : Page 137	-	-	-	-
EU30	Average plant availability factor by energy source and by regulatory regime	Sustainability report : Page 170	-	-	-	-



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Independent Limited Assurance Report

To the Directors of CK Power Public Company Limited

Scope

We have been engaged by CK Power Public Company Limited ("CKP") to perform a "limited assurance engagement," as defined by International Standards on Assurance Engagements, here after referred to as the engagement, to report on CK Power Public Company Limited's identify subject matters (the "Subject Matters") contained in CK Power's Sustainability Report for the year ended 31 December 2023 ("the report").

Our limited assurance engagement covers the following Subject Matters:

Subject Matters	Scope
GRI 302-1 Energy consumption within organization	CK Power head office
GRI 305-1 Direct (Scope 1) GHG emissions	
GRI 305-2 Energy indirect (Scope 2) GHG emissions	
GRI 305-4 GHG emissions intensity	Hydropower Nam Ngum 2 Power Company Limited; Xayaburi Power Company Limited
GRI 303-3 Water withdrawal	
GRI 303-4 Water discharge	
GRI 303-5 Water consumption	Cogeneration Power Bangpa-in Cogeneration Limited
GRI 306-3 Waste generated	
GRI 306-4 Waste diverted from disposal	Solar power Bangkhenchai Company Limited
GRI 306-5 Waste directed to disposal	
GRI 403-9 Work-related injuries	Cogeneration Power Bangpa-in Cogeneration Limited
GRI 305-7 Nitrogen oxides (NOx) and sulfur oxides (SOx) emissions and other significant air emissions	

Other than as described in the above table, which sets out the scope of our engagement, we did not perform assurance procedures on the remaining information included in the Sustainability Report, and accordingly, we do not express a conclusion on this information.

Criteria applied by CKP

In preparing the Subject Matters, CKP applied the Global Reporting Initiative Sustainability Reporting Standards ("GRI Standards") and the requirements under the 56-1 One Report pronounced by the Capital Market Supervisory Board, the Security and Exchange Commissions of Thailand (Criteria).



CKP's responsibilities

CKP's management is responsible for selecting the Criteria, and for presenting the Subject Matters in accordance with that Criteria, in all material respects. This responsibility includes establishing and maintaining internal controls, maintaining adequate records and making estimates that are relevant to the preparation of the subject matters, such that it is free from material misstatement, whether due to fraud or error.

EY's responsibilities

Our responsibility is to express a conclusion on the presentation of the Subject Matters based on the evidence we have obtained.

We conducted our engagement in accordance with the International Standard for Assurance Engagements Other Than Audits or Reviews of Historical Financial Information ("ISAE 3000 (Revised)"), and the terms of reference for this engagement as agreed with CKP on 23 June 2023. This standard require that we plan and perform our engagement to express a conclusion on whether we are aware of any material modifications that need to be made to the Subject Matters in order for it to be in accordance with the Criteria, and to issue a report. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risk of material misstatement, whether due to fraud or error.

We believe that the evidence obtained is sufficient and appropriate to provide a basis for our limited assurance conclusions.

Our independence and quality management

We have maintained our independence and confirm that we have met the requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, and have the required competencies and experience to conduct this assurance engagement.

EY also applies International Standard on Quality Management 1, Quality Management for Firms that Perform Audits or Reviews of Financial Statements, or Other Assurance or Related Services engagements, which requires that we design, implement and operate a system of



quality management including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Description of procedures performed

Procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed. Our procedures were designed to obtain a limited level of assurance on which to base our conclusion and do not provide all the evidence that would be required to provide a reasonable level of assurance.

Although we considered the effectiveness of management's internal controls when determining the nature and extent of our procedures, our assurance engagement was not designed to provide assurance on internal controls. Our procedures did not include testing controls or performing procedures relating to checking aggregation or calculation of data within IT systems.

A limited assurance engagement consists of making enquiries, primarily of persons responsible for preparing the Subject Matters and related information, and applying analytical and other appropriate procedures.

Our procedures included:

- Conducted interviews with personnel to understand the business and reporting process
- Conducted interviews with key personnel to understand the process for collecting, collating and reporting the subject matters during the reporting period
- Checked that the calculation criteria have been correctly applied in accordance with the methodologies outlined in the Criteria
- Undertook analytical procedures of the data and made inquiries of management to obtain explanations for any significant differences we identified
- Identified and testing assumptions supporting calculations
- Tested, on a sample basis, underlying source information to check the accuracy of the data

We also performed such other procedures as we considered necessary in the circumstances.



Other matters

Our report does not extend to any disclosures or assertions relating to future performance plans and/or strategies disclosed in the Sustainability Report.

The maintenance and integrity of CKP's website is the responsibility of CKP's management. Our procedures did not involve consideration of these matters and, accordingly we accept no responsibility for any changes to the Subject Matters and related disclosures, the Sustainability Report or to our independent limited assurance report that may have occurred since the initial date of presentation on CKP's website.

Conclusion

Based on our procedures and the evidence obtained, we are not aware of any material modifications that should be made to the Subject Matters for the year ended 31 December 2023, in order for it to be in accordance with the Criteria.

Restricted use

This report is intended solely for the information and use accordance with our engagement terms agreed with CKP, and intended solely for the Directors of CKP for the purpose of reporting the Subject Matters in the Sustainability Report and is not intended to be and should not be used by anyone other than those specified parties. To the fullest extent permitted by law, we do not accept or assume any responsibility for any reliance on this assurance report to any persons other than the Directors of CKP, or for any purpose other than that for which it was prepared.

Wilaiporn Ittiwiroon
Partner
EY Office Limited

Bangkok, Thailand
8 March 2024

