Task Force on Climate-Related Financial Disclosures 2025

Introduction

Climate change is a key component of RATCH's Sustainability Strategy under the environmental dimension, particularly as the energy and power generation sector plays a critical role in addressing global greenhouse gas (GHG) emissions. Stakeholders increasingly expect energy companies to contribute to climate change mitigation by reducing emissions and supporting the transition to a low-carbon economy in order to limit the rise in global temperatures and minimize climate-related impacts.

As a leading power and energy company, RATCH has established a comprehensive Climate Change Strategy to support its commitment to achieving **Net Zero greenhouse gas emissions by 2050**. The strategy, endorsed by the Board of Directors, assesses feasible decarbonization pathways and carbon reduction measures to develop a clear **Decarbonization Roadmap** with measurable and achievable targets aligned with Thailand's national climate commitments. The strategy also guides the company's operational practices and investment direction, while supporting the **United Nations Sustainable Development Goals (SDGs)**, particularly **SDG 12: Responsible Consumption and Production** and **SDG 13: Climate Action**.

In managing climate-related risks and opportunities, RATCH has adopted the recommendations of the **Task Force on Climate-related Financial Disclosures (TCFD)** as a framework for evaluating potential climate impacts on the company's business strategy and long-term resilience. The TCFD framework also guides the company's climate-related disclosures, which are structured around four core elements: **Governance, Strategy, Risk Management, and Metrics and Targets**. This approach enhances transparency and enables stakeholders to better understand how the company manages climate-related risks and opportunities while progressing toward its Net Zero ambition.

Governance
The organization's governance around climate-related risks and opportunities

Risk Management
The processes used by the organization to identify, assess, and manage climate-related risks

Strategy
The actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning

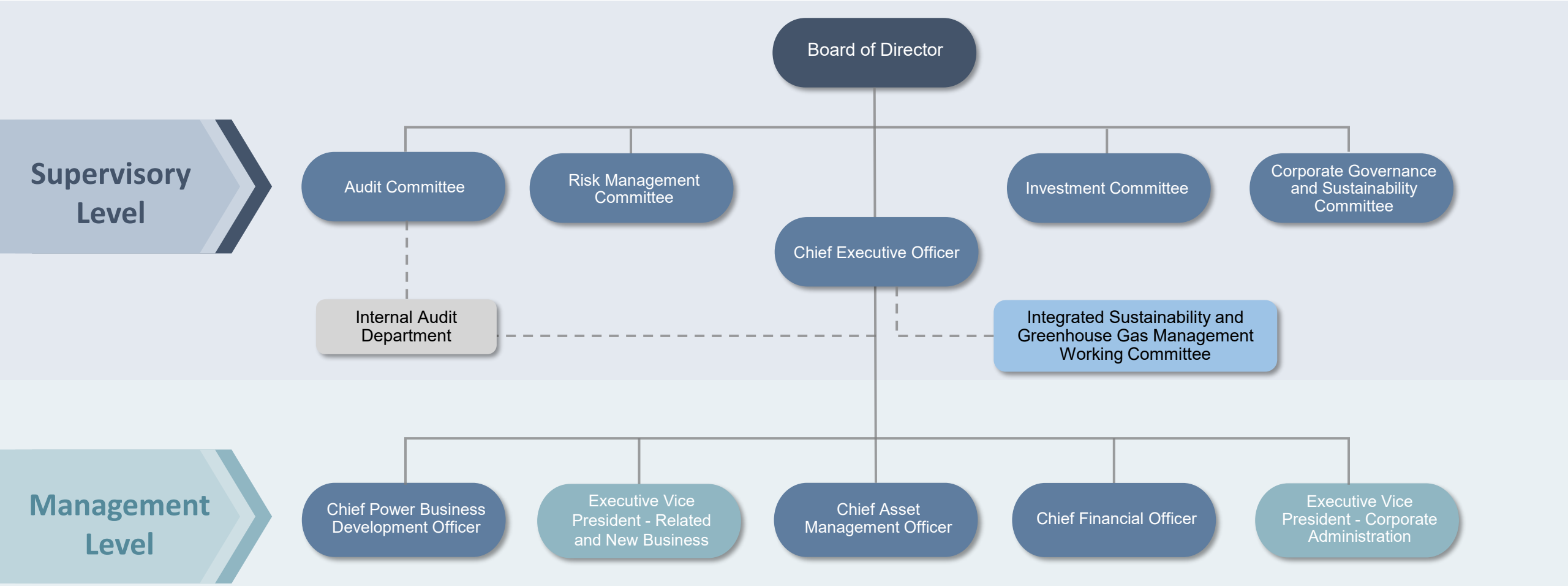
Metrics and Targets
The metrics and targets used to assess and manage relevant climate-related risks and opportunities

Core Elements of TCFD Disclosure

Implementation of TCFD Recommendations

Governance

Climate governing structure



Climate supervisory level

RATCH Function	Climate Related Roles and Responsibilities
Board of Directors	▪ Extend its supervisory role to cover climate change, by integrating it with the corporate risk management system, the internal control system, business strategies and targets ▪ Define vision, missions, business direction and strategies that ensures the company's readiness for the energy transition and the journey towards low-carbon businesses ▪ Supervise and give guidance on sustainability and climate strategies, action plans and targets as well as monitor the implementation ensuring to achieve the targets ▪ Endorse climate strategy and action plans including related indicators and targets, ensuring the compatibility with the company's condition and business context ▪ Monitor progress of climate actions, with supports from the Risk Management Committee, the Audit Committee, and the Corporate Governance and Sustainability Committee
Risk Management Committee	▪ Integrate climate risks and opportunities with the enterprise risk management and risk assessment processes ▪ Supervise and monitor the efficiency of the risk management system and the internal control system as well as the alignment between the Company's business strategy, targets and the Climate Strategy and targets
Corporate Governance and Sustainability Committee	▪ Supervise and monitor the progress of Sustainability Strategy and Climate Strategy implementation as well as the management of ESG risks ▪ Approve and give guidance on climate related policies, action plans and targets under the strategy and submit the guidance for the Board of Directors' approval
Audit Committee	▪ Follow and give advice on compliance of climate related regulations
Investment Committee	▪ Supervise the investment decision-making process concerning climate risk and impact assessment as well as carbon cost risk management, likelihood and impact to the enterprise and projects

Climate management level

RATCH Function	Climate Related Roles and Responsibilities
Chief Executive Officer (CEO)	▪ Cascade the Board of Directors' guidelines through the preparation of an action plan in alignment with Climate Strategy ▪ Follow up on the operational efficiency and progress against the plan compared with the targets
Chief Power Business Development Officer	▪ Integrate climate risks, likelihood and impact assessment with project feasibility studies and due diligence in support of the investment decision-making process ▪ Monitor the operations and compliance with laws, regulations, EIA measures and other relevant conditions during the construction stage ▪ Consider climate risks and relevant regulations a part of the assessment of new projects' suitability ▪ Explore investment in renewable and future-fuel power projects and energy storage system in response to energy transition
Chief Asset Management Officer	▪ Control the efficiency of risk management and ESG operations of the Company, subsidiaries and joint ventures ▪ Monitor asset operations, greenhouse gas emissions and climate risk management of power plants and projects ▪ Execute carbon emission reduction projects and manage related climate impact at power plants/assets
Chief Financial Officer	▪ Source green or sustainable funds for the Company Group's development and investment in renewable and green projects ▪ Monitor and ensure the conformity of responses to climate risks with creditors' conditions, accounting standards and action-report reporting to relevant authorities
Executive Vice President - Related and New Business	▪ Integrate climate risks, likelihood and impact with project feasibility studies and due diligence in support of the investment decision-making process ▪ Explore new businesses with low carbon emission to support energy transition and the company's GHG reduction target. ▪ Monitor the operations performance and compliance with laws and regulations.
Executive Vice President - Corporate Administration	▪ Execute actions under the Sustainability and the Climate Strategies, roadmap and targets, as well as support and advise operational controlled entities on climate risk assessment, GHG reduction and reporting ▪ Develop reforestation and forest conservation projects under Thailand Voluntary Emission Reduction scheme for carbon credits ▪ Monitor the execution and progress of action plans and targets and report the performance to the Board of Directors, relevant external authorities and stakeholders
Internal Audit Department	▪ Examine the completeness and sufficiency of climate change management in line with specified strategies and targets and report to Chief Executive Officer and the Audit Committee
Integrated Sustainability and Greenhouse Gas Management Working Committee	▪ Provide recommendations to align the strategic business plan, sustainability plan, targets, and the integration of material sustainability issues into business activities and work processes. ▪ Support the development of the Decarbonization Roadmap and the establishment of emission-reduction targets. ▪ Drive the integration of sustainability and emission-reduction initiatives at the department and division levels. ▪ Collect stakeholder feedback, key risks, and sustainability impacts, and report them to the working committee. ▪ Coordinate with relevant units, subsidiaries, and joint ventures to communicate sustainability policies and targets, and consolidate greenhouse gas management data across the Company Group. ▪ Compile and support required information for sustainability disclosures to regulators and sustainability rating agencies.

Implementation of TCFD Recommendations

Strategy

Climate Strategy

The Fundamental of RATCH Climate Strategy

RATCH GROUP

CLIMATE STRATEGY

RATCH is committed to taking decisive actions to mitigate climate change impacts while strengthening the long-term resilience of its business operations. In line with this commitment, the Company has set an ambitious target to achieve **Net Zero greenhouse gas emissions by 2050**, reinforcing its role in supporting the global transition toward a low-carbon economy.

To develop an effective climate strategy aligned with this goal, RATCH conducted comprehensive climate impact and adaptation assessments across **short-, medium-, and long-term time horizons**, taking into account the expected lifespan of power generation assets and related activities. Scenario analysis was undertaken to evaluate potential **physical and transition risks** that could affect the Company's operations, financial performance, and long-term business strategy.

The assessment of **physical climate risks** incorporated climate modelling and simulation under multiple climate pathways, including scenarios consistent with **a 2°C or lower temperature increase**, such as **RCP2.6**, as well as a high-emission pathway represented by **RCP8.5**, to evaluate potential impacts under different climate conditions.

In parallel, the Company assessed **transition risks** associated with the global shift toward a low-carbon economy through several policy and market transition scenarios. These included the **Stated Policies Scenario (STEP)**, **Sustainable Development Scenario (SDS)**, and **Net Zero Emissions Scenario (NZE)**, which help evaluate potential implications from regulatory developments, technology shifts, and changing market expectations.

Based on the findings from these analyses, RATCH has developed a set of **practical mitigation measures and adaptation strategies** designed to address identified risks and opportunities at different levels of impact. These measures support the Company's transition toward a low-carbon portfolio while enhancing operational resilience.

The **RATCH Climate Strategy Framework**, developed in response to the scenario analysis and aligned with the Company's **Net Zero 2050 target**, is structured around **3 key milestones**, which are presented in the following section.

Climate Change Strategy

Goal: Net Zero Emission by 2050

Rationale

- Climate Change could drastically impact our business and sustainability.
- The world is putting pressure to organizations in particularly energy sector to reduce GHG emission and move away from non-renewable energy or coal phase out.
- Future regulation related to GHG emission is on the horizon.

Roadmap

The idea is to achieve 2050 net zero emission, the equilibrium state of GHG emission in and out, by

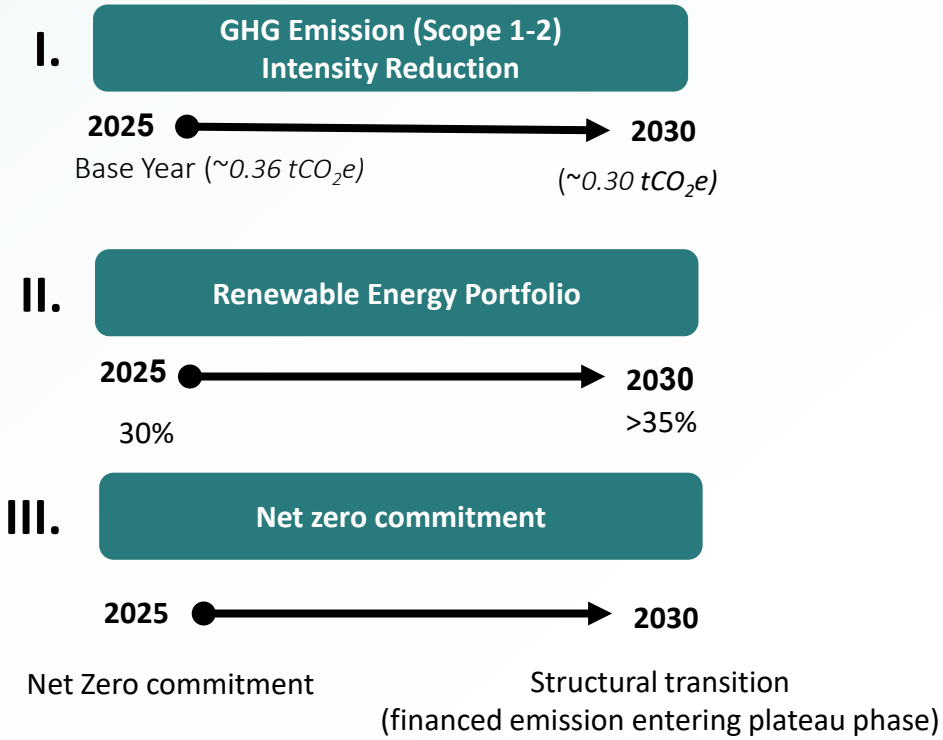
(1) Finding ways to reduce intensity /absolute GHG emission, and

(2) Funding ways to increase renewable and low carbon investment portfolios.

(3) Seeking carbon removal actions, such as natural carbon sink investment or reforestation offset to reduce any remaining emissions carbon.

(4) By 2030, RATCH expects to complete structural transition of its portfolio. Financed emissions are expected to peak and enter temporary plateau phase, reflecting legacy asset lifecycles rather than ongoing carbon-intensive growth. This milestone marks the transition from emissions expansion to managed decline, underpinned by renewable scale-up and capital allocation.

Key Milestones in 2030



RATCH Climate Strategy

External Engagement

- Collaboration from stakeholders such as supplier and customer to promote GHG reduction and circularity
- Partnership with industry association and policy maker

Internal Climate Management

- Climate Governance
- Incentive for climate-related performance at all levels
- Integration of climate risks management process in enterprise risk management
- Implementation of internal carbon pricing

Efficiency & Transformation

Grow Green/ Low Carbon Portfolio

Offsetting and Trading Carbon

Long Term Goal | **Net Zero Emissions by 2050**

RATCH Decarbonization framework

Portfolio shift: Grow green assets

to decrease GHG intensity and increase revenue from low-carbon assets

- Renewables; solar, wind, hydro, biomass
- Hybrid plants
- New energy and future fuel
- Expand cross-border green assets

Asset Decarbonization: Transform existing assets

To facilitate direct GHG removal from fossil-based portfolio

- Efficiency improvement
- Technology upgrade for repowering plants, digital optimization
- Fuel transition
- Hydrogen-ready CCGT

Managed Phase-down: Exit /Harvest

To reduce exposure to high-carbon assets

- Run-to-end–of PPA of conventional plants
- Strategic Selective divestment
- Decommissioning governance

Carbon offsetting & Trading

To navigate residual emissions carbon and create carbon optionality

- Forestation development projects
- Carbon credit procurement strategy
- Internal carbon pricing
- Carbon Market participation

Implementation of TCFD Recommendations

Risk Management

Climate-Related Risks

Physical Risks
Arise from the change in weather and climate

Acute

event-driven, including increased severity of extreme weather events, such as cyclones, hurricanes, or floods.

- **Flood** can cause sediment load in the dam leading electricity generating turbine to be damaged
- **Water Stress** can lead the operation site to face water scarcity and have no water to use in electricity generation
- **Lighting** can shutdown operation site and cause damage to electricity generation systems

Chronic

longer-term shifts in climate patterns (e.g., sustained higher temperatures) that may cause sea level rise or chronic heat waves.

- Sustain **heat waves** can reduce worker availability and electricity generation efficiency

Transition Risks
Arise from the change in Stakeholder mindset, Policies, Regulations and Technology

Market

Changing in consumer/customer behavior

- **Customers request more on renewable source** and other services to verify the use of renewable energy for scope 2 emission limitation

Technology

Changing in technological innovation

- The **disruption of new products and services** such as new renewable energy and energy management services

Regulation

Changing in Regulations/policies

- The **legislation** that related to GHG emission limitation e.g. Cap & Trade and Renewable energy plan that enforce the energy sector to invest more on climate mitigation

Reputation

Changing in Stakeholder mindset

- More and more **stakeholders**, particularly investors are looking for corporate climate action; moreover, some investors started to divest from fossil fuel-based electricity generation companies

Scenario analysis

RATCH considered Scenario RCP2.6: Average global temperature could be 1.6 degree Celsius warmer in 2050 and Scenario RCP8.5: Average global temperature could be 4.3 degree Celsius warmer in 2050 as the basis for worst-case for analyzing physical and transitional risks.

Scenarios	Description	Global mean temperature Change	Maintain at 2.0 C by 2050
RCP 2.6	• Mean Radiative forcing at earth surface is 2.6 W/m2; • High effort on the implementation of decarbonization • Medium intensity & low frequency in extreme weather	1.6 C in 2050	Possible
RCP 8.5	• Mean Radiative forcing at earth surface is 8.5 W/m^2; • Low effort on the implementation of decarbonization • High intensity & high frequency in extreme weather	4.3 C in 2050	Impossible

Scope of climate risk analysis

The climate risk analysis was conducted with 25 equity-owned power projects in key markets; Thailand, Australia, Indonesia and Vietnam.

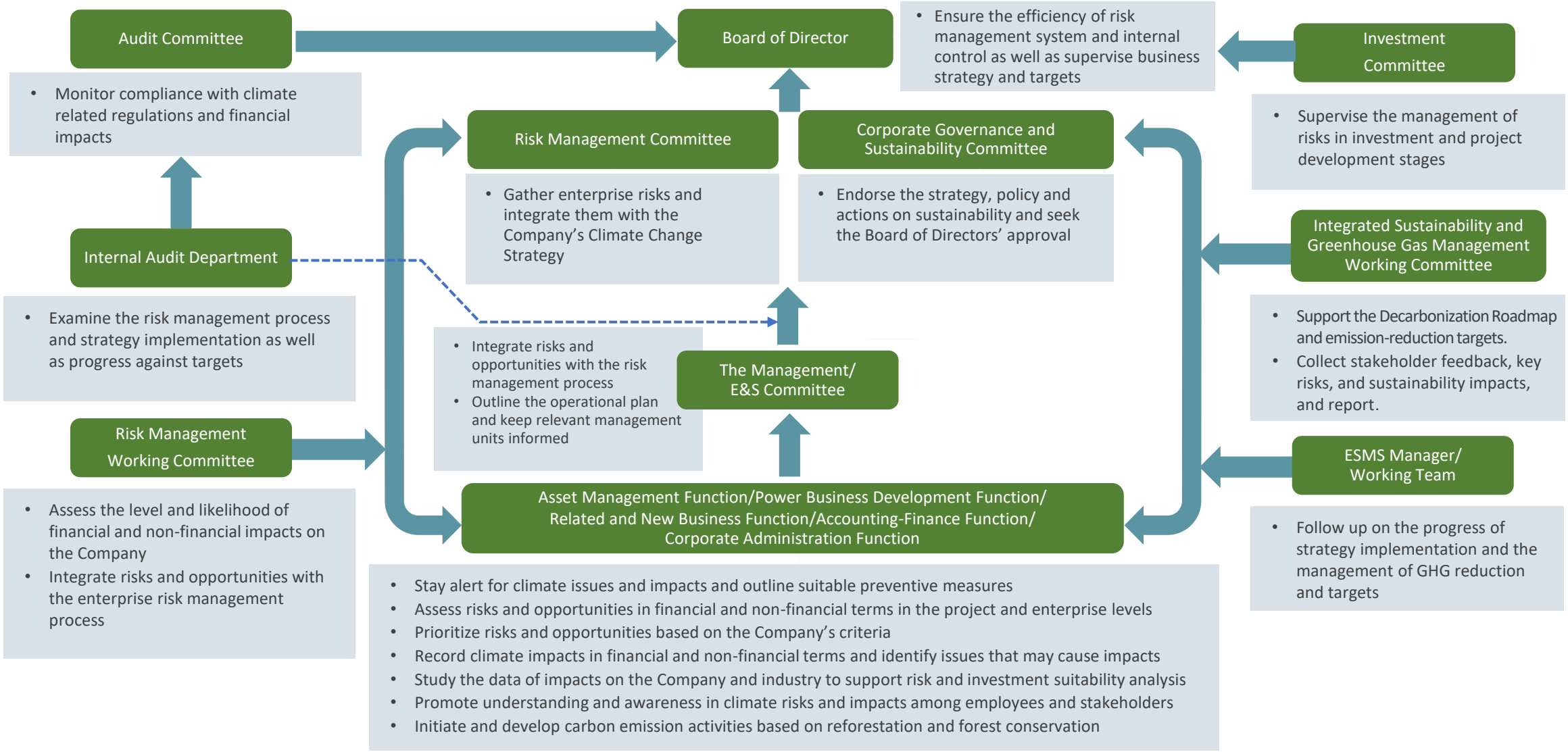
Thailand
Ratchaburi Power Plant
Nava Nakorn SPP Power Plant
Berkprai Cogeneration SPP Power Plant
RATCH Cogeneration SPP Power Plant
Songkla Biomass Power Plant
RATCH Energy Rayong SPP Power Plant
REN Korat Energy Power Plant
Hinkong Power Plant

Australia
Townsville Power Station
Kemerton Power Plant
Kemerton Power Plant (Black Start)
Windy Hill Wind Farm
Toora Wind Farm
Starfish Hill Wind Farm
Mount Emerald Wind Farm
Collinsville Solar PV
Yandin Wind Farm
Collector Wind Farm
Snapper Point
Lincoln Gap Wind Farm 1 & 2
Lincoln Gap Wind Farm 3
Maluran Solar Farm

Indonesia
Riau Combined-Cycle Power Plant
Paiton Energy Coal-Fired Power Plant

Vietnam
Ecowin (Thanh Phong) Wind Farm
Ben Tre Wind Farm (Under-construction)

Climate risk management procedure



Climate risk identification and assessment process

Identify Climate-related Risks and Opportunities

Process

- Review historical data on natural hazard in the area of interest and identify future physical risks based on climate change projection
- Identify potential transition risks and opportunities relevant to RATCH's business regarding change of market, technology, policy and legal, and business reputation

Responsible Function

- Corporate Planning and System Development Department
- Asset Management Function
- Power business Development Function
- Related and New Business Function

Prioritize Climate Related Risks and Opportunities

Process

- Evaluate level of impact and likelihood both financial and non-financial impacts on RATCH's business
- Prioritize risks and opportunities using RATCH's Risk Criteria

Responsible Function

- Corporate Planning and System Development Division
- Asset Management Function
- Power business Development Function
- Related and New Business Function
- Risk Management Working Committee

Integrate Climate Related Risks and Opportunities to Enterprise Risk Management

Process

- Integrate risks and opportunities into enterprise risk management process
- Develop mitigation plan based on and report to relevant executive-levels
- Consolidate and integrated corporate risks into RATCH's climate strategy

Responsible Function

- Senior Management Level
- Risk Management Committee
- Corporate Governance and Sustainability Committee
- Board of Directors

Physical Risks Analysis

Scenario analysis of physical risk

Criteria for identifying risks with substantive impact:
The topics that can potentially cause significant impact on RATCH's strategy in terms of (1) financial, (2) health, safety and environment, (3) business partner/customer, (4) regulation, (5) brand/reputation/social, and (6) goal/achievement

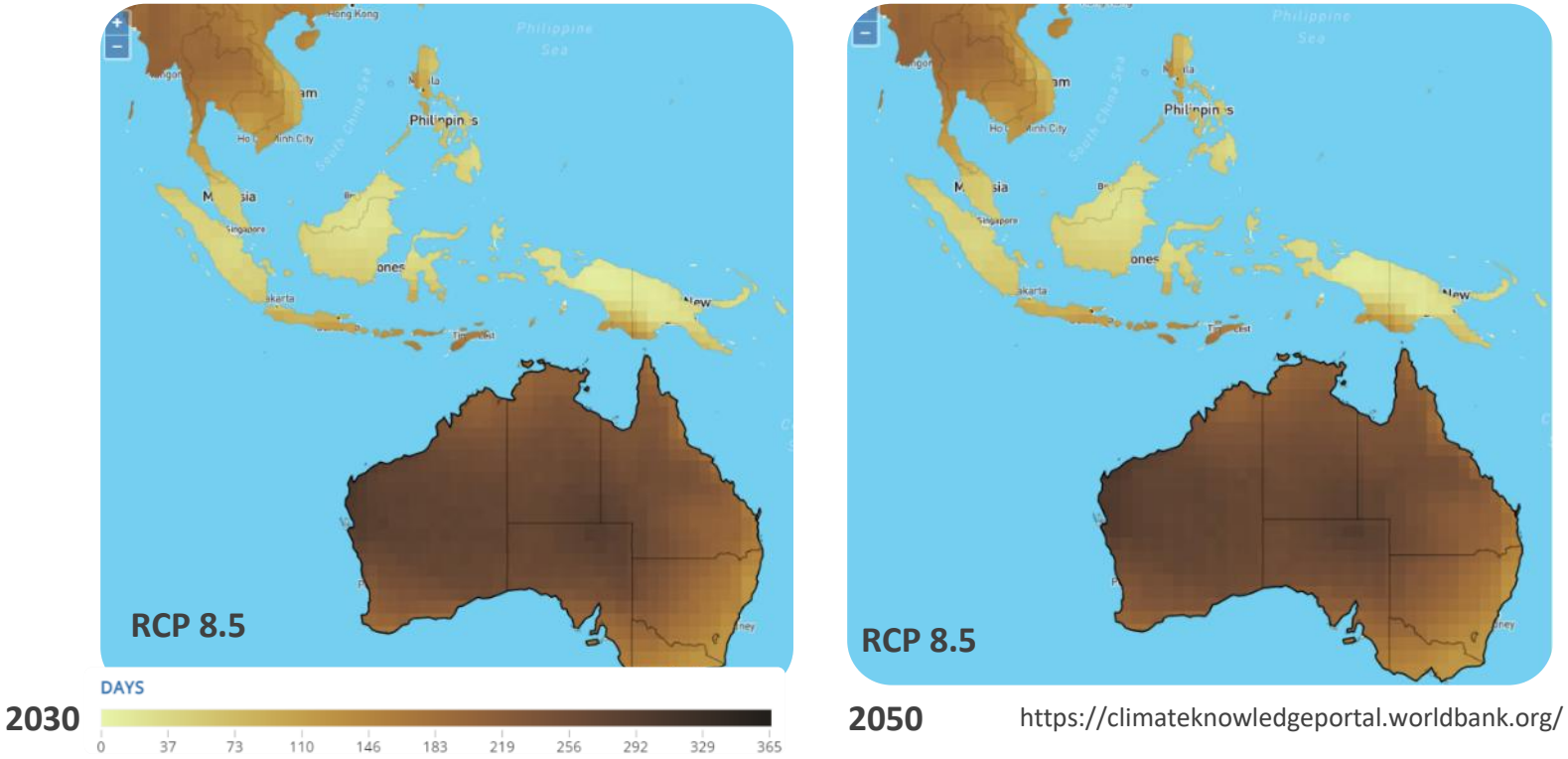
Scope of assessment: RATCH equity-owned power projects

Time horizon: Short term (0 - 2 years) Medium term (3 - 5 years) Long term (6-10 years)

Risks	Risk Type	Time Horizon	Tool for Assessment	Risk Description & Financial Implications	Management Measures
Water Stress	Physical Risk	Short to Medium-term	AQUEDUCT THE CLIMATE EXPLORER	• Existing water shortages and constraints on water supply • Insufficient water supply, worsening on both severe harm and economic impact	• Increase an operation cost for water sourcing
Flood	Physical Risk	Short to Medium-term	AQUEDUCT THE CLIMATE EXPLORER	• Damage on corporate assets e.g. company inventory, vehicles, fixtures, and fittings, and valuable machinery. These instruments can be damaged that the loss is beyond repair cost. • Severe flooding possibly damage the transmission as a value part of supply chain.	• Connect to water network to monitor water situation • Construct rain harvesting and water storage system for its suppliers in order to handle water scarcity issues.
Extreme Weather (Wind Speed and Tropical Cyclone)	Physical Risk	Long-term	THE CLIMATE EXPLORER ScienceDirect ResearchGate	• Damage on corporate assets e.g. company inventory, vehicles, fixtures, and fittings, and valuable machinery. These instruments can be damaged that the loss is beyond repair cost.	• There is no impact to RATCH.

Physical Risk Scenario & Analysis: Water Stress

Projection of Consecutive Dry Days



2030 2050

https://climateknowledgeportal.worldbank.org/

The number of consecutive dry days is likely to decreases in long-term

Impacts on business	Examples of risks
• Existing water shortages and constraints on water supply • Insufficient water supply, worsening on both severe harm and economic impact	• The Water Stress in 2005 and 2020 in Thailand were affected large swathes in the East, where three provinces are Chachoengsao, Chon Buri and Rayong. Water Stress were likely to limit production, only 7% of water at Rayong reservoir. However, the situation was recovered on time.

Baseline

No.	Asset location	Water Stress
1	Thailand	
2	Australia	
3	Vietnam	
4	Indonesia	

RCP 2.6

No.	Asset location	Water Stress	
		2030	2050
1	Thailand		
2	Australia		
3	Vietnam		
4	Indonesia		

RCP 8.5

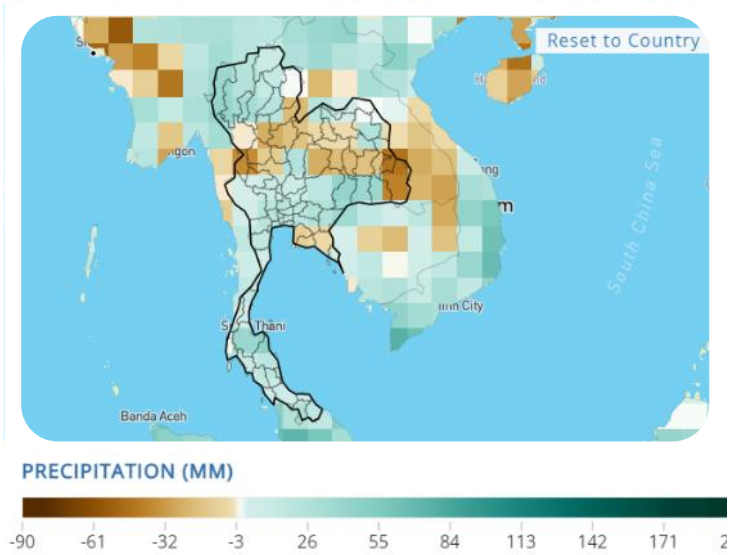
No.	Asset location	Water Stress	
		2030	2050
1	Thailand		
2	Australia		
3	Vietnam		
4	Indonesia		

- No Hazard | - Low Hazard | - Medium Hazard | - High Hazard

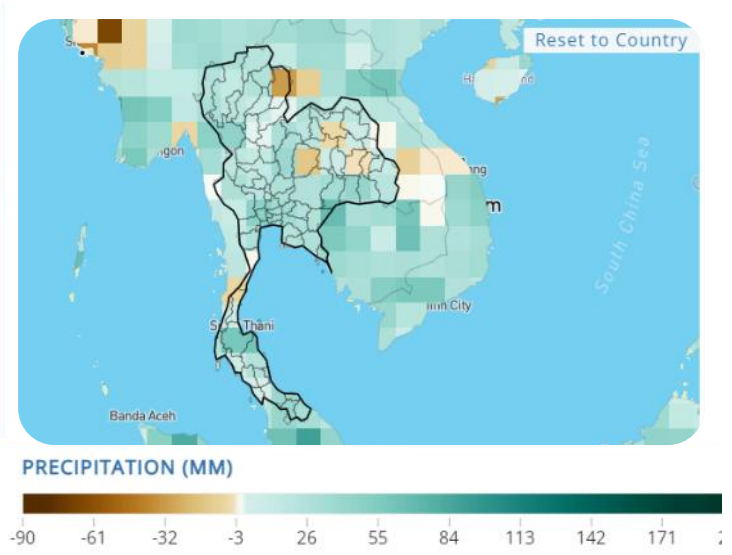
Physical Risk Scenario & Analysis: Flood

Projection of Days with heavy rain

Projected Average Largest 5-day Cumulative Rainfall Anomaly for 2020-2039 (Annual)
Chonburi, Thailand; (Ref. Period: 1986-2005), RCP 2.6, Multi-Model Ensemble



Projected Average Largest 5-day Cumulative Rainfall Anomaly for 2040-2059 (Annual)
Chonburi, Thailand; (Ref. Period: 1986-2005), RCP 2.6, Multi-Model Ensemble



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The heavy rain may increase and decrease in some areas in 2030 but increase in most areas towards 2050

Impacts on business	Examples of risks
• Damage on corporate assets e.g. company inventory, vehicles, fixtures, and fittings, and valuable machinery. These instruments can be damaged that the loss is beyond repair cost. • Severe flooding possibly damage the transmission as a value part of supply chain.	• The 2011 floods in Thailand is a powerful example. It caused $ 45 billion US dollars in damages and Thailand GDP shrunk by 10%. The supply chain disruption of the floods was felt around the world: more than 800 companies affected.

Baseline

No.	Asset location	Riverine Flood
1	Thailand	
2	Australia	
3	Vietnam	
4	Indonesia	

RCP 2.6

No.	Asset location	Riverine Flood	
		2030	2050
1	Thailand		
2	Australia		
3	Vietnam		
4	Indonesia		

RCP 8.5

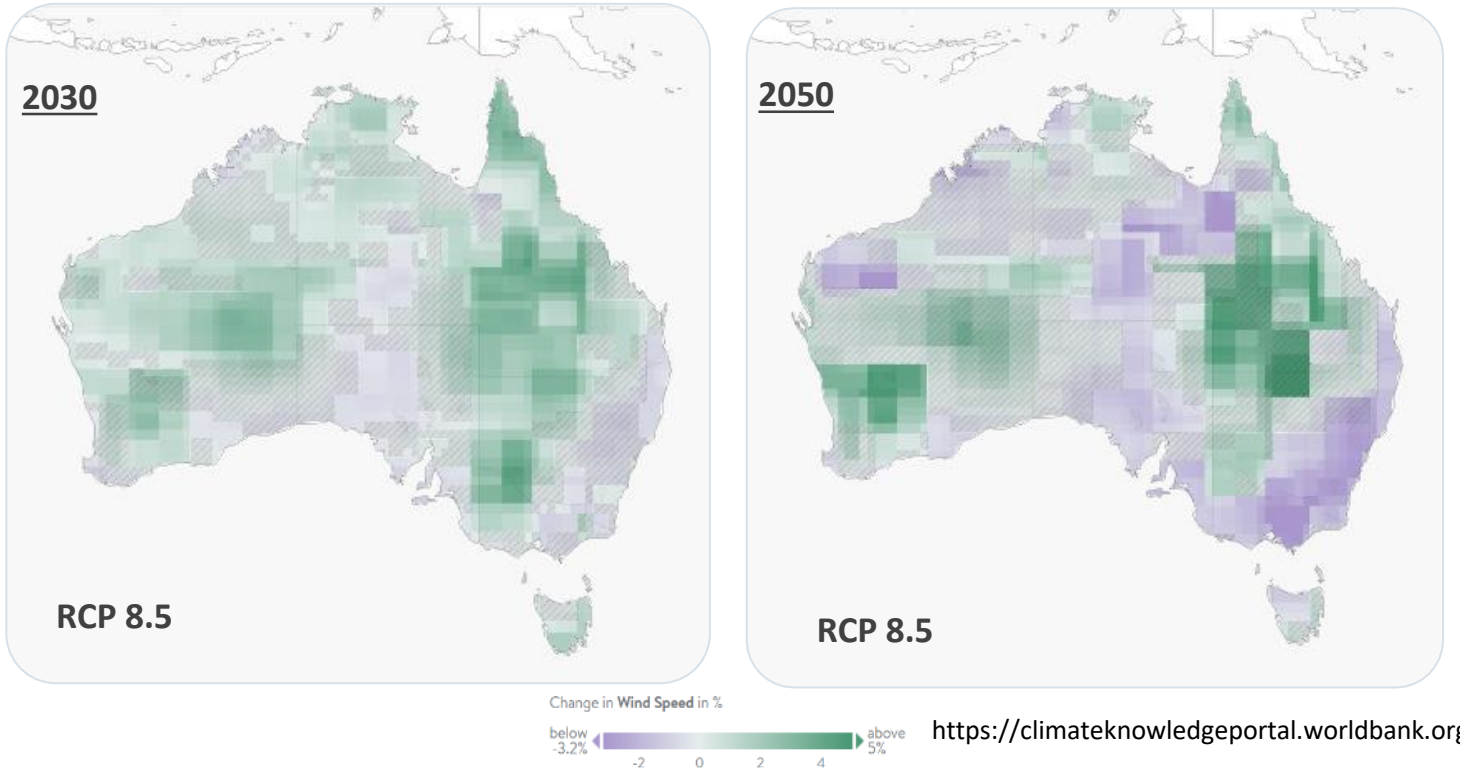
No.	Asset location	Riverine Flood	
		2030	2050
1	Thailand		
2	Australia		
3	Vietnam		
4	Indonesia		

- No Hazard | - Low Hazard | - Medium Hazard | - High Hazard

https://climateanalytics.org/tools/

Physical Risk Scenario & Analysis: Extreme Weather

Australia Projection of wind speed



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The wind speed may increase and decrease in some areas in 2030 but significantly decrease in most areas towards 2050

Impacts on business	Examples of risks
• Cause damage to infrastructure, machinery and equipment • Cause injury to workers due to airborne objects • Lighting strike damage electricity distribution line • Hail storm cause minor damage to the infrastructure	• The 2022 South East Queensland cyclone and flooding event report estimates more than 500,000 people were affected by the floods in some way with an estimated human and social cost of $4.5 billion.

Baseline

No.	Asset location	Extreme Weather
1	Thailand	
2	Australia	
3	Vietnam	
4	Indonesia	

RCP 2.6

No.	Asset location	Extreme Weather	
		2030	2050
1	Thailand		
2	Australia		
3	Vietnam		
4	Indonesia		

RCP 8.5

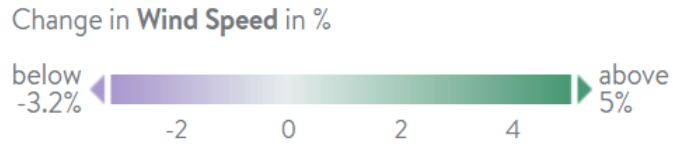
No.	Asset location	Extreme Weather	
		2030	2050
1	Thailand		
2	Australia		
3	Vietnam		
4	Indonesia		

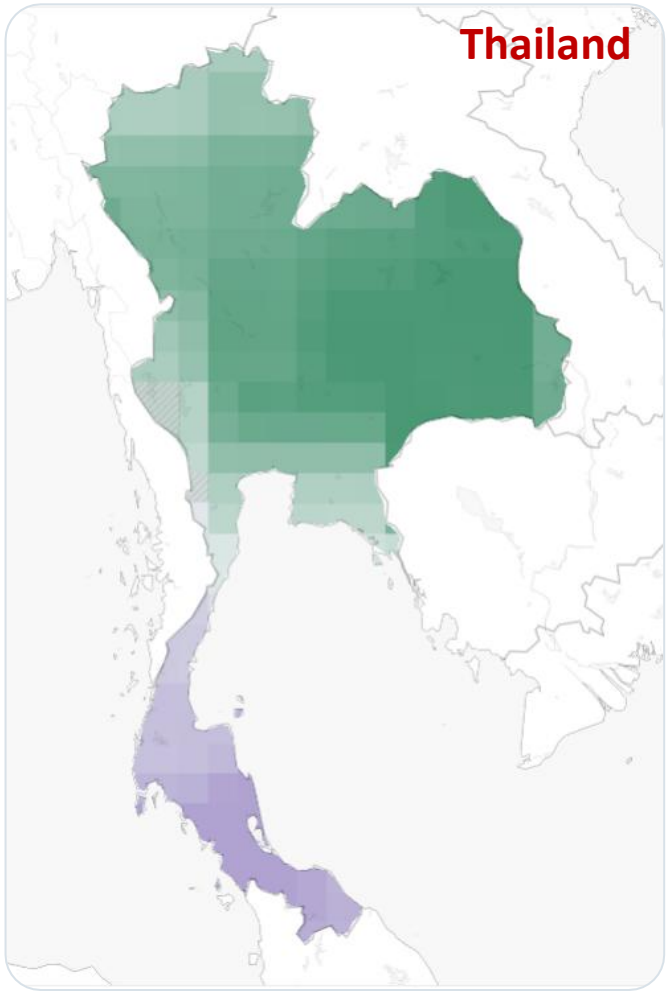
- No Hazard
- Low Hazard
- Medium Hazard
- High Hazard

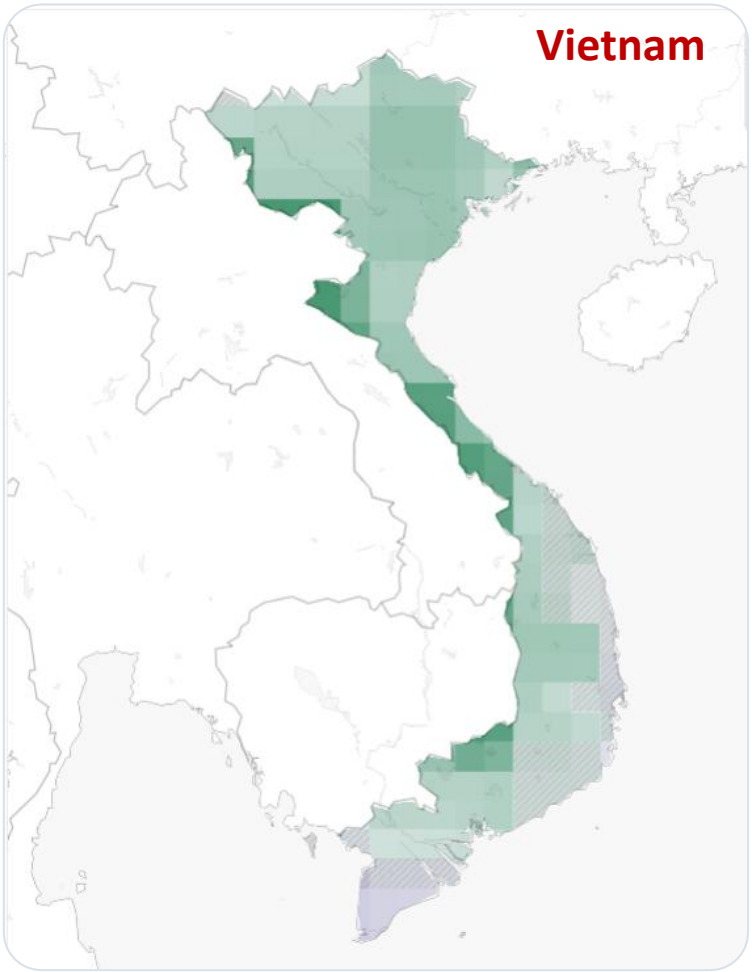
https://climateanalytics.org/tools/

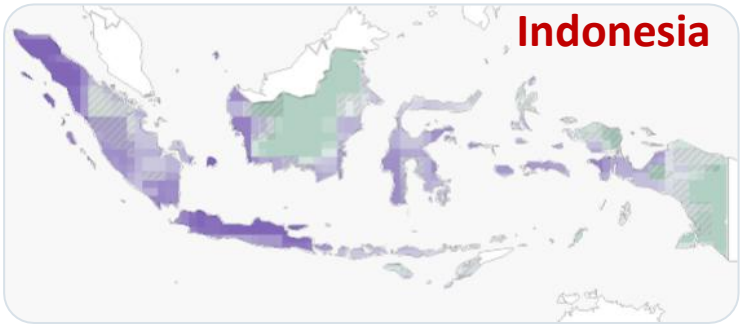
Physical Risk Scenario: Extreme Weather

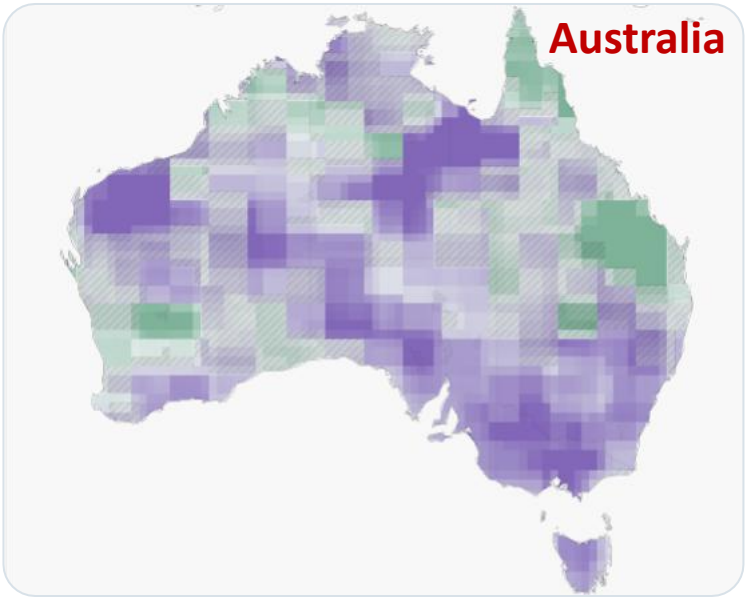
Wind Speed in 2030 versus 2050 under a RCP8.5 scenario











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Summary: Physical Risks and Impacts Analysis

01

Water Stress

Impact

Existing water shortages and constraints on water supply
Insufficient water supply, worsening on both severe harm and economic impact

Result

The max number of consecutive dry days in Australia is likely to increase the most under RCP 2.6 (8%) both in 2030 and 2050, as well as under RCP 8.5

Financial Implication

Nava Nakorn Electricity Generating Case

- Create RATCH owned reservoir 0.6 MTHB
- Water treatment cost 12 MTHB

Change in Max Number of Consecutive Dry Days (from 1995-2014 baseline)

	Baseline	RCP2.6		RCP8.5	
	1995-2014	2030	2050	2030	2050
Thailand					
Australia					
Vietnam					
Indonesia					

Source: CCKP. *World Bank Group, Climate Change Knowledge Portal.*

02

Flood

Impact

Damage on corporate assets e.g. company inventory, vehicles, fixtures, and fittings, and valuable machinery. These instruments can be damaged that the loss is beyond repair cost. Severe flooding possibly damage the transmission as a value part of supply chain.

Result

The max Days with Heavy Rain in Thailand, Vietnam and Indonesia are likely to increase the most under RCP 8.5 2050.

Financial Implication

Nava Nakorn Electricity Generating Case

- Constructed floor to prevent flood 50 MTHB

Change in Max Number of Days with Heavy Rain (from 1995-2014 baseline)

	Baseline	RCP2.6		RCP8.5	
	1995-2014	2030	2050	2030	2050
Thailand					
Australia					
Vietnam					
Indonesia					

Source: CCKP. *World Bank Group, Climate Change Knowledge Portal.*

03

Extreme Weather

Impact

Cause damage to infrastructure, machinery and equipment Cause injury to workers due to airborne objects Lighting strike damage electricity distribution line Hail storm cause minor damage to the infrastructure. However, result of assessment showed that this risk has no significant impact to RATCH

Result

The change in Extreme Weather, especially wind speed in Thailand, Vietnam and Indonesia are likely to increase the most under RCP 8.5 2050.

Financial Implication

No significant impact

Change in Wind speed (from 1995-2014 baseline)

	Baseline	RCP2.6		RCP8.5	
	1995-2014	2030	2050	2030	2050
Thailand					
Australia					
Vietnam					
Indonesia					

Source: CCKP. *World Bank Group, Climate Change Knowledge Portal.*

- No Hazard | - Low Hazard | - Medium Hazard | - High Hazard

Transition Risks Analysis

Scenario applied for transition risk analysis

Scenarios	Description	Net Zero Emission Target Year	Temperature Change by 2100
State Policy Scenarios (STEP)	• The policies assessed in the Stated Policies Scenario cover a broad spectrum. These include Nationally Determined Contributions (NCD) under the Paris Agreement. • Equal to the announced policies by Thai governments	• **Short term:** Reduction 20% in 2030 from based year 2020 [0.8% / year] • **Long term: Net zero emission in 2065**	More than 2.0 C
Sustainable development Scenarios (SDS)	• All current net zero pledges are achieved in full and there are extensive efforts to realize near-term emissions reductions; advanced economies reach net zero emissions by 2050, China around 2060, and all other countries by 2070 at the latest. • Equal to the announced policies by Thai governments in 2021 after COP26	• **Short term:** Reduction 36.9% in 2030 from based year 2020 • **Long term:** Net zero emission in 2065 • Refer to the SBTI reduction pathway by interpolation between 2 C and 1.5 C	1.5 – 1.7C
Net Zero Emission Scenarios (NZE)	• The Net Zero Emissions by 2050 Scenario (NZE). This scenario also meets key energy-related United Nations Sustainable Development Goals (SDGs), in particular by achieving universal energy access by 2030 and major improvements in air quality. • Equal to the RATCH commitment to achieve Net Zero Emission by 2050	• **Short term:** Reduction 42% in 2030 from based year 2020 • **Long term:** Net zero emission in 2050 • Refer to the SBTI reduction pathway well below 1.5 C	Maintain at 1.5 C

Reference: IEA, World Energy Model

Scenario analysis of transition risk

Criteria for identifying risks with substantive impact:
The topics that can potentially cause significant impact on RATCH's strategy in terms of
(1) financial,
(2) health, safety and environment,
(3) business partner/customer,
(4) regulation,
(5) brand/reputation/social, and
(6) goal/achievement

Scope of assessment: RATCH equity-owned power projects

Time horizon:
- Short term (0 - 2 years)
- Medium term (3 - 5 years)
- Long term (6-10 years)

Risks	Risk Type	Time Horizon	Risk Description & Financial Implications	Management Measures
Carbon Tax Implementation	Transition Risk	Short-term (0-2 years)	• Policies and regulations are progressing towards more strict control of GHG emission, resulting in the implementation of carbon tax scheme. • Increasing of the operational expense proportional to the amount of GHG emission.	• Determine internal carbon pricing as a shadow price ranging 5.6-15 USD/ton for investment decision making • Improving energy efficiency of the power plants to reduce emission • Acquiring new renewable energy resource, green or low carbon business, fossil fuel with carbon capture technology project , green hydrogen project • Retiring coal assets from portfolio.

Opportunity Analysis

Climate Opportunities

Criteria for identifying opportunities with substantive impact:
The topics that can potentially cause significant impact on RATCH's strategy in terms of (1) financial, (2) health, safety and environment, (3) business partner/customer, (4) regulation, (5) brand/reputation/social, and (6) goal/achievement

Scope of assessment: RATCH equity-owned power projects

Time horizon:
- Short term (0 - 2 years)
- Medium term (3 - 5 years)
- Long term (6-10 years)

Opportunities	Opportunity Type	Time Horizon	Opportunity Description & Financial Implications	Management Measures
Expand future energy and new business	Market	Medium-term	• The company a plan for green hydrogen development in Thailand, Lao PDR and Australia	• Invest on green hydrogen production plants including the utility provider and infrastructure • Invest in research and development in battery energy storage system
Current opportunity				
Shift toward renewable energy	Energy source	Medium-term	• The company has planned to expand investment in renewable power generation in order to responding to global and national promotion and emission reduction target. It targets to achieve renewable capacity to 30% and >35% of total capacity in 2025, and 2030 respectively.	• The company puts focus on solar power generation in all forms (solar panel, solar rooftop, solar floating), solar-related businesses including installation, operation and maintenance service, wind power generation, renewable with BESS, and expand cross-border green assets.

Implementation of TCFD Recommendations

Metrics & Targets

Climate-related matrices, methodologies and standards

Methodologies and standards

1. IPCC Guidelines for National Greenhouse Gas Inventories, 2006
2. ISO 14064-1
3. Thailand Greenhouse Gas Management Organization: The National Guideline Carbon Footprint for organization
4. The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
5. Corporate KPIs are linked to climate-related issues such as GHG emission reduction. RATCH provides incentives for CEO, Corporate executive team, all employees for achieving corporate KPI, emissions reduction target.

Key Matrices

- Direct GHG Emissions (Scope 1 - $MtCO_2$ equivalent)
- Market-based energy indirect (Scope 2) GHG emissions ($MtCO_2$ equivalent)
- Location based energy indirect (Scope 2) GHG emissions ($MtCO_2$ equivalent)
- Other relevant indirect GHG emission (Scope 3: Upstream transportation and distribution) ($MtCO_2$ equivalent)

GHG Emissions in 2023-2025

Boundary: RATCH and its financial controlled entities

Indicators	Unit	2023	2024	2025
Direct GHG emissions (Scope 1)	tCO_2e	4,204,223	4,529,774	4,764,493
Indirect GHG emissions from electricity (Scope 2) –Location Based	tCO_2e	28,141	39,251	27,766
Indirect GHG emissions from electricity (Scope 2) –Market Based	tCO_2e	28,141	39,251	27,766
Total Scope 3 GHG emissions*	tCO_2e	1,402,447	1,606,099	14,654,806
GHG intensity (Scope 1+2)	tCO_2e/MWh	0.3464	0.2911	0.2999
Targets	**2030: Increase Renewable mix > 35% from 2025 & manage decline conventional facilities** **2040: Increase Renewable mix > 50% & low carbon businesses in portfolio** **2050: Increase Renewable mix > 80% & low carbon businesses in portfolio**			
	To achieve Net Zero Emission by 2050			

*Disclosure boundary of other indirect GHG emission (Scope 3)	2023	2024	2025
RATCH Group Public Company Limited	Category: 1,3 and 5	Category: 1, 2, 3, 4, 5, 6 and 7	Category: 1, 3, 5, 6, 7, 13 and 15
Ratchaburi Power Plant (RGCO)	Category: 3, 4, 5, 6, 7 and 15	Category: 1, 3, 4, 5, 6, 7 and 15	Category: 1, 2, 3, 5, 7 and 15
RATCH-Cogeneration Power Plant (RCO)	Category: 1, 2, 3, 4, 5 and 7	Category: 1, 2, 3, 4, 5, 6 and 7	Category: 1, 2, 3, 5 and 7
RATCH Energy Rayong Power Plant (RER)	Category: 1, 3, 4, 5 and 7	Category: 1, 2, 3, 4, 5 and 7	Category: 1, 2, 3, 4, 5, 6 and 7
Ratch Pathana Energy Group (RPE)	Category: 3	Category: 3	Category: 3
Hin Kong Power Plant (HKP)	-	Category: 1, 3 and 5	Category: 1, 3 and 5
RATCH-Australia Power Plant (RAC)	-	Category: 3	Category: 3

Source: Sustainability Report 2025, page. 118

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