

# **Bangchak Sriracha Public Company Limited**

## **Task Force on Climate-Related Financial Disclosures (2025)**



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Bangchak Sriracha Public Company Limited (BSRC) applied the TCFD framework in the management of climate-related risks and opportunities. We have integrated the TCFD in the process following TCFD recommendations in 2017 and in line with the TCFD’s 2021 “Annex: Implementing the Recommendations of the Task Force on Climate-related Financial Disclosure”

[https://assets.bbhub.io/company/sites/60/2021/07/2021-TCFD-Implementing\\_Guidance.pdf](https://assets.bbhub.io/company/sites/60/2021/07/2021-TCFD-Implementing_Guidance.pdf).

This report includes some additional guidance from IFRS S2 Climate-related disclosure newly announced by the International Sustainability Standards Board (ISSB).

**The metric and targets in this report are the data of calendar year 2024.**

| TCFD                  |
|-----------------------|
| 1. Introduction       |
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1

# Introduction

# Introduction

## BSRC and Sustainability

The Company adheres to principles in its business operations by balancing the three energy challenges: Energy Security, Energy Affordability and Environmental Sustainability. The key strategies associated with our business model, in line with Bangchak Group strategies, aiming to achieve both short term and long term organizational goals.

Driven by the vision “Shaping Sustainable Future with Premier Energy through Innovative Solutions” the Company is committed to creating energy balance and delivering energy security with affordable energy prices, and supplying high-quality products while supporting Thailand’s transition to a low-carbon society. To achieve this vision, the Company operates under the “Sustainability Policy” which integrates the principles of sufficiency economy, global standards such as the United Nations Global Compact (UNGC), the UN Sustainable Development Goals (SDGs), International Organization for Standardization (ISO), and the expectations of stakeholders. The policy aligns with the Company’s vision, mission, and strategy, serving as a framework for sustainability operations at the organizational level. The Company tracks and reports performance according to the guidelines of the Global Reporting Initiative (GRI) to demonstrate its commitment to sustainable business development across the entire value chain. This approach comprehensively considers both current and future sustainability issues, factoring in the operations of the Company, new businesses, emerging risks, and global sustainability trends. **The metric and targets in this report are the data of calendar year 2024.**



It covers a total of  
**8** dimensions as follows:

1



Good Corporate Governance

2



Fair Business Conduct

3



Responsible Production and Services  
and Promoting Sustainable Society

4



Sustainability Due-Diligence Assessment  
for New Businesses

5



New Innovative Business Investment  
for Sustainability

6



Worthwhile Resources  
and Environmental Management

7



Human Rights Support for Sustainable  
Economic Prosperity

8



Sustainable Social Development

# Introduction

## Climate Change Management

The Company recognizes the risks and impacts of climate change and greenhouse gas emissions on its business operations, the environment, and surrounding communities. Therefore, it has set targets in line with the Paris Agreement and the United Nations Sustainable Development Goal 13 (SDG13), aiming to **achieve net-zero greenhouse gas emissions (GHG Net Zero) from its operations by 2050**.

### Strategies and Management Approaches

A greenhouse gas reduction plan is incorporated into the medium-term business plan, which is updated annually. The development plan will be based on the Bangchak Group's strategy or the BCP316Net strategy. The Company applied the TCFD framework **in the management of climate-related risks and opportunities**. Moreover, to effectively communicate the Company's climate change management in a robust, comparable, and verifiable manner, IFRS S2 (Climate-related Disclosures standard) could support those essential properties. It provides comprehensive disclosures on identifying, assessing, and managing climate-related risks, as it integrates all TCFD recommendations and adds additional requirements, enhancing transparency and strategic decision-making for companies.





**2**

# **Governance**

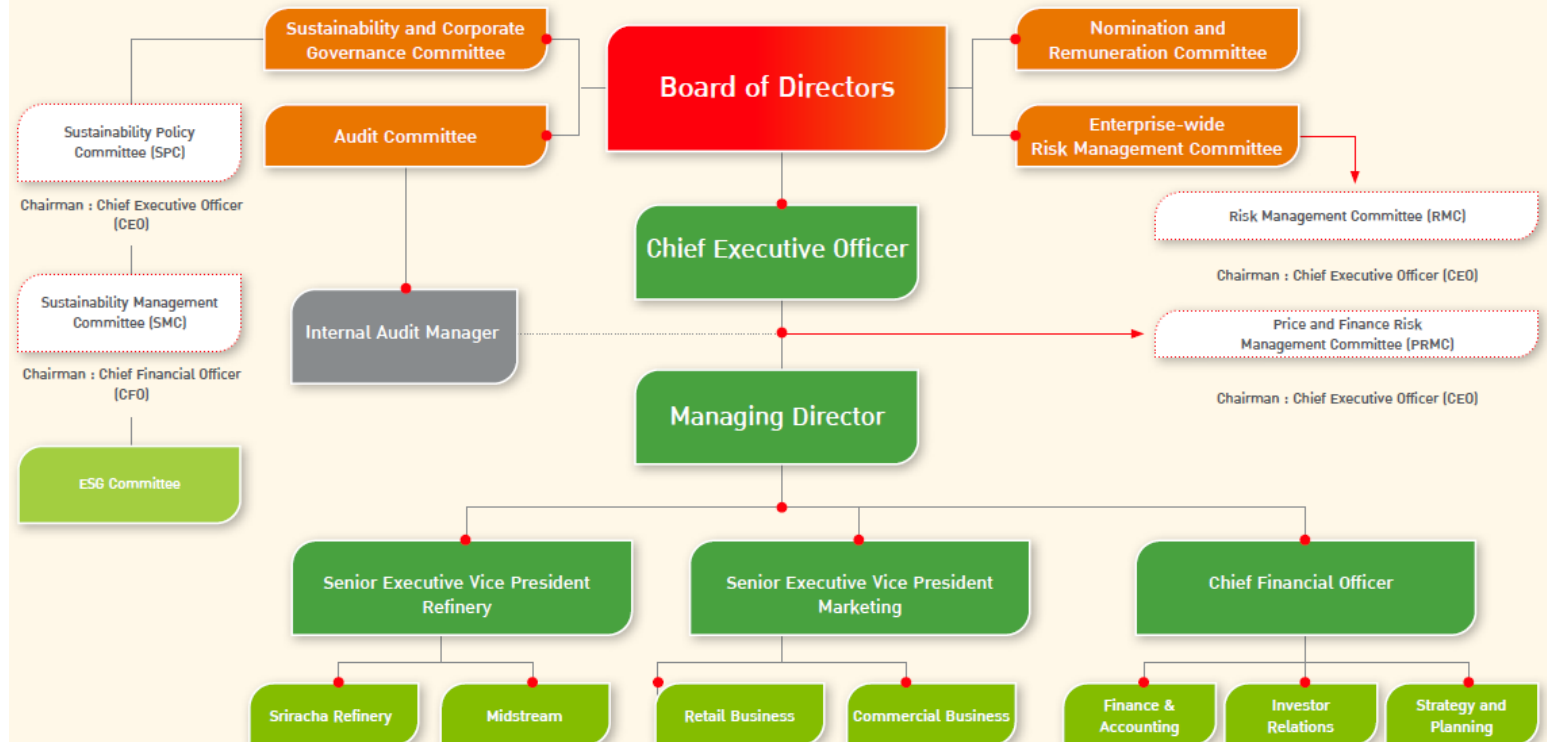
# Governance - Describe the board's oversight of climate-related risks and opportunities

## Board Oversight of Climate-Related Risks and Opportunities

The Board of Directors of Bangchak Sriracha Public Company Limited (BSRC) recognizes the significance of climate-related risks and opportunities and their potential impact on the Company's long-term performance and resilience. The Board has committed to providing effective oversight of these risks and opportunities, ensuring they are integrated into BSRC's overall strategic decision-making process, while assigned Sustainability & Corporate Governance Committee (SCGC) on monitoring progress against Company goals and targets.

The Board normally holds monthly meeting, while the SCGC holds quarterly meeting. Additional meetings may be scheduled as required.

## Organizational Sustainability Management Structure



# Governance - Describe management's role in assessing and managing climate-related risks and opportunities



## Management's Role in Assessing and Managing Climate-Related Risks and Opportunities

BSRC's management is responsible for assessing and managing climate-related risks and opportunities. A **Sustainability Policy Committee (SPC)** and a **Sustainability Management Committee (SMC)** have been established to lead these efforts. These two Committees conduct climate change policies and strategies, assess climate-related risks and opportunities, and manage GHG emission reductions to pursue the Company's Net Zero GHG emission targets.

The GHG emission has been included in both CEO and Management KPI for performance assessment.



**At the policy level:** Sustainability Policy Committee (SPC) set the direction, policy and strategies associated with climate change and climate-related risks and opportunities for sustainable business development for BSRC in response to SDGs, guidelines of corporate sustainability assessment as well as needs and expectations of the shareholders.

**At the management level:** Sustainability Policy Committee (SMC) conducts climate change policies and strategies, climate-related risks and opportunity assessment, and GHG emission reductions in order to pursue the Company target of Net Zero GHG emission.

**At the working team level:** ESG Committee translates SCGC/SPC/SMC directives into actionable plans, coordinate cross-functional efforts (e.g. environment, HR, procurement, safety). Net Zero taskforce under this committee aims to focus and drives the Net Zero initiatives and planning.

| Governing Body                                           | Roles and Responsibilities                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Meeting Frequency     |
|----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| Board of Directors                                       | <p>The Board of Directors holds a critical responsibility in overseeing climate-related risks. This includes ensuring that climate risks—both physical and transitional—are effectively integrated into the company's strategic planning, risk management frameworks, and financial oversight. Directors must also ensure transparent and accurate climate disclosures in line with global standards while actively engaging stakeholders on sustainability issues.</p> <p>The Chairman of the Board of Directors oversees the Sustainability &amp; Corporate Governance Committee (SCGC) and the Enterprise-wide Risk Management Committee (ERMC) and governs the decision-making on climate-related issues.</p> | Monthly               |
| Sustainability and Corporate Governance Committee (SCGC) | The Sustainability and Corporate Governance Committee (SCGC) has been appointed by the Board of Directors to guide sustainability policies, programs and practices on sustainability including safety, security, health, and environment at the board-level committee.                                                                                                                                                                                                                                                                                                                                                                                                                                            | At least twice a year |
| Sustainability Policy Committee (SPC)                    | At the top-level executives, the Sustainability Policy Committee (SPC) appointed by the SCGC, chaired by the Chief Executive Officer, includes senior executives from all business units to set goals, directions, policies, and strategy in the Company's business operations, and develop the Company's sustainability by considering the Sustainable Development Goals (SDGs), key issues from the organizational sustainability assessment, and the needs and expectations of stakeholders, by setting at least 4 times of meeting a year.                                                                                                                                                                    | Quarterly             |
| Sustainability Management Committee (SMC)                | Sustainability Policy Committee (SMC) appointed by SCGC, conducts climate change policies and strategies, climate-related risks and opportunity assessment, and GHG emission reductions in order to pursue the Company target of Net Zero GHG emission.                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Quarterly             |

| Governing Body                                   | Roles and Responsibilities                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Meeting Frequency     |
|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| Enterprise-wide Risk Management Committee (ERMC) | The Enterprise-wide Risk Management Committee (ERMC) appointing by the Board of Directors reviews operational performance and risk assessment results at least twice a year to ensure that the processes align with the established risk control and management measures. Additionally, the ERMC meets with the Audit Committee at least twice a year to review internal and external risk factors and evaluate the Company's risk management system to ensure it is sufficiently effective in addressing risks arising from changing business conditions. Furthermore, the ERMC enhances its knowledges in risk management and business continuity management through trainings/workshops on the Risk Management Program for Corporate Leaders (RCL) and How to Develop a Risk Assessment Plan (HRP) organized by the Thai Institute of Directors (Thai IOD) and the ESG Risk Management Workshop organized by the Stock Exchange of Thailand. | At least twice a year |
| Risk Management Committee (RMC)                  | Developed a risk management system by establishing policies and objectives aimed at minimizing business volatility to reduce its impact on overall performance. It prepares, reviews, and approves annual operational risk management plans for each business unit, covering five strategic areas: Financial & Market, Leadership & Governance, Workforce, Customer, and Product & Process, while continuously monitoring progress against these plans. The committee also reviews changing internal and external environments that may affect its short- and long-term business objectives, in order to develop strategic risk management plans to address these impacts. Performance results are systematically reported to the Enterprise-wide Risk Management Committee.                                                                                                                                                                    | Quarterly             |

# Governance - Describe management's role in assessing and managing climate-related risks and opportunities



BSRC undertakes systematic and periodic evaluations of the Board of Directors' skills and competencies to ensure the organization is equipped to address climate-related risks and opportunities effectively. These assessments focus on identifying directors with expertise in areas closely aligned with climate governance, including sustainability, enterprise risk management, and sector-specific knowledge in the energy and materials industries. Through this ongoing process, BSRC determines which board members possess the requisite capabilities and which may benefit from targeted development initiatives. This structured approach reinforces the organization's commitment to cultivating a resilient, informed, and forward-looking Board of Directors capable of providing strategic oversight in response to evolving climate challenges.

| Name/ Specific Expertise            | Knowledge about Company Business | International Business | Accounting and Finance | Management | Law | Organizational Development and Innovation | Information and Digital Technology | Social, Environment and safety | Risk and Crisis Management | Director's type    |                      |                        |
|-------------------------------------|----------------------------------|------------------------|------------------------|------------|-----|-------------------------------------------|------------------------------------|--------------------------------|----------------------------|--------------------|----------------------|------------------------|
|                                     |                                  |                        |                        |            |     |                                           |                                    |                                |                            | Executive Director | Independent Director | Non-Executive Director |
| 1. Mr. Suthep Wongvorazathe         | X                                | X                      | X                      | X          |     | X                                         |                                    |                                | X                          |                    | X                    | X                      |
| 2. Mr. Somchai Kuvijitsuwan         | X                                |                        |                        | X          | X   |                                           |                                    | X                              |                            |                    | X                    | X                      |
| 3. Mr. Veerasak Kositpaisal         | X                                | X                      |                        | X          |     | X                                         |                                    | X                              | X                          |                    | X                    | X                      |
| 4. Miss Khaisri Utaiwan             | X                                | X                      | X                      | X          | X   |                                           |                                    | X                              |                            |                    | X                    | X                      |
| 5. Miss Prachit Hawat               | X                                |                        | X                      | X          |     |                                           | X                                  |                                |                            |                    | X                    | X                      |
| 6. Mr. Phantong Loykulnanta         | X                                | X                      | X                      | X          | X   | X                                         | X                                  | X                              | X                          |                    |                      | X                      |
| 7. Pol.Lt.Gen. Chaiwat Chotima      | X                                | X                      | X                      | X          |     | X                                         |                                    | X                              |                            |                    | X                    | X                      |
| 8. General Warakiat Rattananont     | X                                |                        |                        | X          |     |                                           |                                    |                                |                            |                    | X                    | X                      |
| 9. Mr. Somchai Tejavanija           | X                                | X                      |                        | X          |     | X                                         | X                                  |                                | X                          |                    |                      | X                      |
| 10. Mr. Anuwat Rungruangrattanaagul | X                                |                        |                        | X          |     | X                                         |                                    | X                              | X                          | X                  |                      |                        |
| 11. Miss Phatpuree Chinkulkitnivat  | X                                | X                      | X                      | X          |     | X                                         | X                                  |                                |                            |                    |                      | X                      |
| 12. Mr. Surachai Kositsareewong     | X                                | X                      | X                      | X          |     | X                                         |                                    |                                |                            |                    |                      | X                      |
| Total                               | 12                               | 9                      | 7                      | 12         | 3   | 8                                         | 4                                  | 6                              | 4                          | 1                  | 7                    | 11                     |

Remark: Knowledge about the Company's business, such as oil business, retail business, energy business, petroleum exploration and production etc. (as of 1 January 2025)

\*Source: <https://www.bsrg.co.th/en/about-us/board-skills-matrix>

A person in a dark suit is pointing their right index finger at a table. On the table are various items: a smartphone, a pen, and some papers. A glowing, interconnected network of white lines and orange dots is superimposed over the scene, with one dot near the person's hand and others scattered across the table and background. The background is a blurred cityscape with warm, golden light.

**3**

**Strategy**

“*Shaping sustainable future with premier energy through innovative solutions*” is the Company’s Vision. Our high-quality products are essential to the wellness of the people of Thailand. Our Company exists to strive to find solutions that optimize energy challenges (affordability, security, and sustainability), and to create a sustainable and resilient energy system for the future. To achieve such goal, we commit to operating our businesses in a responsible and sustainable manner, supporting society, and supplying our high-quality products to meet evolving demand while working towards low-carbon solutions.

## Our Sustainability Strategy



**E**nvironmental Care: Care for the Environment and Community

**E**fficient Operations: Operate with Highest Efficiency

**E**mpathetic : Do Business with Ethics, Empathy, and Human Rights

**E**volving by Innovation: Innovate and Explore New Technology

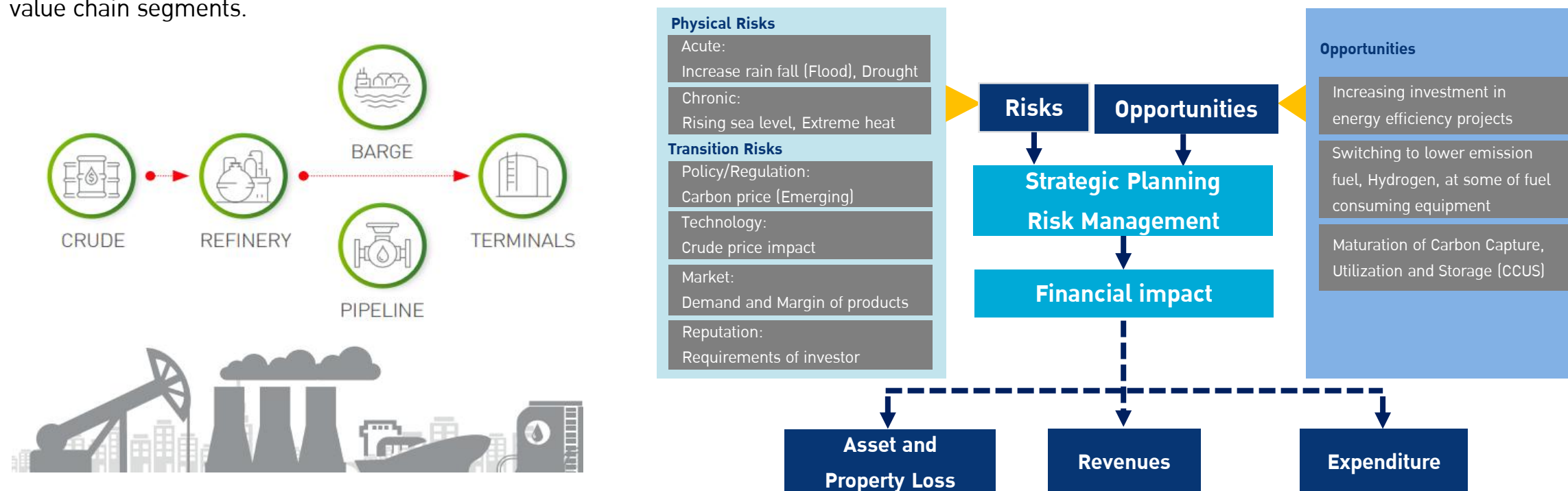
|                               |                                                                                        |                                                                |                                                                         |                                                                      |
|-------------------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------|-------------------------------------------------------------------------|----------------------------------------------------------------------|
| Company Vision                | Shaping sustainable future with premier energy through innovative solutions            |                                                                |                                                                         |                                                                      |
| Sustainability Strategy       | <b>Environmental Care</b><br>Care for the Environment and Community                    | <b>Efficient Operations</b><br>Operate with Highest Efficiency | <b>Empathetic</b><br>Do Business with Ethics, Empathy, and Human Rights | <b>Evolving by Innovation</b><br>Innovate and Explore New Technology |
| Sustainability Strategic Goal | Net Zero, Low Emission Fuels (LEF), Partner of choice for the community, Clean Society | Operational Eco-Efficiency, Circular Economy                   | Good Governance, Role Model Universal Human Rights                      | Low Carbon Solutions, Climate Technology and Greenovate Procurement  |

## Climate-Related Risks and Opportunities

BSRC identified key climate change risks and integrates climate drivers into environmental scanning, to identify factors that could potentially impact the Company. BSRC evaluated climate-related risks across short-term (0-2 years), medium-term (2-10 years), and long-term (>10 years) horizons, and incorporated them into this report.

The Company applied both qualitative and quantitative climate-related scenario analyses, considering physical scenarios like SSP1-2.6 (below 2°C) and SSP5-8.5 (above 2°C) and transition scenarios based on the IEA World Energy Outlook 2023. These scenarios help BSRC understand the potential impacts of climate change on its business, strategy, and financial planning.

The analyses cover our own operations, upstream (i.e. natural gas and specific crude oil suppliers, etc.), and downstream (i.e. fuel distribution, etc.) value chain segments.



## Physical Risks

## Physical Risk Assessment Process

BSRC has identified the physical risk hazard using qualitative assessment methodology.

### Geospatial Information

#### 1 Define Baseline Natural Hazards

Open Source Datasets

Applied ThinkHazard! developed by World Bank Group to provide a general view of the hazards for a given location that should be considered in climate resilience. The hazard levels provided are based on published hazard data, provided by a range of private, academic and public organizations.

For more information on ThinkHazard!, please access [ThinkHazard!](#)

Key Natural Hazards

An initial baseline hazard evaluation was conducted for BSRC using Thailand as representative database of Sriracha (Si Racha) district area including upstream, and downstream value chain segments to analyze key natural hazards.

#### 2 Climate Change Projections

Climate Data CMIP-6 for  
SSP1-2.6 and SSP5-8.5  
(2030 and 2050)

Extract the hazard risk data from Climate Change Knowledge Portal

- Time period: Historical period (1950-2014), 2030, 2040 and 2050
- Scenario: SSP1-2.6 and SSP5-8.5 in 2030 and 2050

*Climate projection data is modeled data from the global climate model compilations of the Coupled Model Inter-comparison Projects (CMIPs), overseen by the World Climate Research Program. Data presented is [CMIP6](#), derived from the Sixth phase of the CMIPs. The CMIPs form the data foundation of the IPCC Assessment Reports. CMIP6 supports the [IPCC's Sixth Assessment Report](#).*

Data for Key Climate  
Indices

Data extracted from Climate Change Knowledge Portal. Example of data extraction include:

- Time period: Historical period (1950-2014), 2030, 2040 and 2050

Qualitative Risk Rating

The Climate Change Knowledge Portal (CCKP) provides global data on historical and future climate, vulnerabilities, and impacts. For more information of Climate Change Projection methodology, please access:

<https://climateknowledgeportal.worldbank.org/country/thailand/climate-data-projections>

## ThinkHazard!

Identify natural hazards in your project area and understand how to reduce their impact

## Physical Risks

Define Baseline natural hazard by ThinkHazard! (Data map as of 5 September 2025)

Physical risk qualitative assessment covered 9 climate hazards that related with climate change impact i.e. Extreme Heat, Water Scarcity, Urban Flood, River Flood, Coastal Flood, Cyclone, Wildfire, Earthquake, Landslide, and Tsunami. The assessment was analyzed under BSRC's own operations including upstream activities and downstream activities.

Regarding cyclone hazard, BSRC has taken the potentially-damaging wind speeds from ThinkHazard! into the project design, construction methods and operation controls. Hence there is no further analysis on financial impact. For wildfire, BSRC has analyzed the risks thoroughly and summarized that there is no indication that wildfire hazard leads to a financial risk, based on historical data.

| Value Chain                                                 | Climate Hazards (Max of all time horizon) |                |             |             |               |         |          |            |           |         | ThinkHazard! |
|-------------------------------------------------------------|-------------------------------------------|----------------|-------------|-------------|---------------|---------|----------|------------|-----------|---------|--------------|
|                                                             | Extreme Heat                              | Water Scarcity | Urban Flood | River Flood | Coastal Flood | Cyclone | Wildfire | Earthquake | Landslide | Tsunami |              |
| Upstream<br>Crude Supplier, Eastern Saudi Arabia            | H                                         | H              | L           | M           | H             | L       | VL       | M          | VL        | L       |              |
| Upstream<br>Natural Gas Plant, Muang, Rayong                | M                                         | L              | H           | L           | H             | H       | H        | L          | L         | L       |              |
| Own Operations<br>Refinery and Terminal, Sriracha, Chonburi | M                                         | L              | L           | L           | M             | H       | H        | L          | L         | L       |              |
| Downstream<br>Terminal, Phra Khanong, Bangkok               | No Data                                   | M              | L           | VL          | No Data       | H       | H        | L          | VL        | No Data |              |
| Downstream<br>Terminal, Muang, Samut Sakhon (PSP)           | H                                         | M              | L           | L           | H             | H       | H        | L          | VL        | L       |              |
| Downstream<br>Terminal, Singha Nakhon, Songkhla             | M                                         | VL             | L           | VL          | H             | H       | M        | L          | VL        | L       |              |
| Downstream<br>Terminal, Muang, Surat Thani                  | M                                         | VL             | H           | H           | No Data       | H       | M        | L          | L         | L       |              |
| Downstream<br>Pipeline Terminal, Sao Hai, Saraburi          | H                                         | M              | H           | H           | No Data       | L       | H        | L          | No Data   | No Data |              |
| Terminal<br>Pipeline Terminal, Ban Phai, Khon Kaen (TPN)    | M                                         | VL             | M           | M           | No Data       | VL      | H        | L          | VL        | No Data |              |

**Legend**

|                                                                                                    |               |
|----------------------------------------------------------------------------------------------------|---------------|
| <span style="background-color: red; width: 15px; height: 15px; display: inline-block;"></span>     | High (H)      |
| <span style="background-color: #f08080; width: 15px; height: 15px; display: inline-block;"></span> | Medium (M)    |
| <span style="background-color: #ffcc99; width: 15px; height: 15px; display: inline-block;"></span> | Low (L)       |
| <span style="background-color: #fff2cc; width: 15px; height: 15px; display: inline-block;"></span> | Very Low (VL) |

## Physical Risks

Define Baseline natural hazard by ThinkHazard! (Data map as of 5 September 2025)

### Summary of Key Findings:

1. **Extreme heat** is significant climate hazard that pose substantial risks to **BSRC's own operations** and the **value chain's upstream and downstream activities** impacting production and safety.
2. **The Sriracha Refinery and Terminal in Chonburi**, the value chain's upstream and downstream assets including **the Natural Gas provider in Rayong, Crude Supplier from Eastern Saudi Arabia, and the Terminals in Samut Sakhon and Songkhla areas** are expected to face a significant risk from **Coastal flood** due to mean sea level rise.
3. **Water scarcity** is classified as high risk for value chain's upstream activities in **Eastern Saudi Arabia** and medium risk for **value chain's downstream activities at Phra Khanong Terminal in Bangkok, PSP Terminal in Samut Sakhon and Pipeline Terminal in Saraburi**.
4. **Urban and River flood** hazards are expected to impact to the value chain's upstream and downstream assets including **the Natural Gas provider in Rayong, Terminal in Surat Thani, Pipeline Terminals in Saraburi and Khon Kaen areas** which may disrupt infrastructure and impact on safety and ability for workers to come to work.

In response, BSRC has undertaken a comprehensive assessment to quantify the potential financial impacts of these risks under various scenarios, ensuring preparedness and resilience across the BSRC's business.

#### Own Operations



**Extreme heat**



**Coastal flooding**

#### Upstream / Downstream



**Water scarcity**



**Urban/river flooding**

# Strategy

Describe the climate-related risks and opportunities the company has identified over the short, medium, and long term



## Physical Risks

Define Baseline natural hazard by ThinkHazard! (Data map as of 5 September 2025)



ThinkHazard!

Hazard level

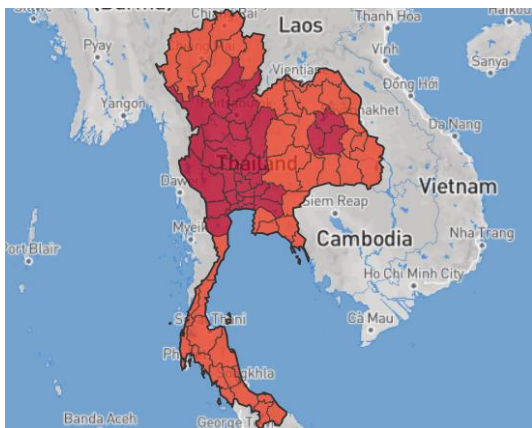
High

Medium

Low

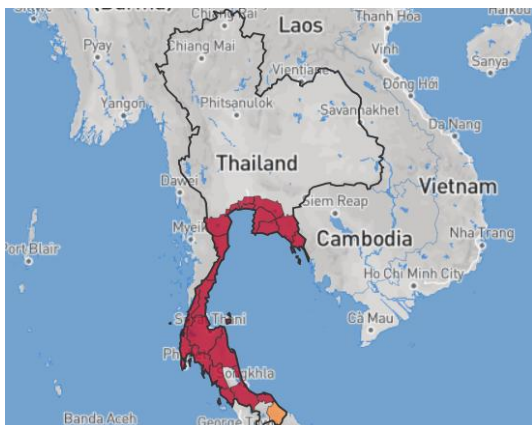
Very low

### Extreme Heat



In Sriracha where is the BSRC's own operations, **extreme heat** hazard is classified as **medium** based on modeled heat information currently available to this tool. This means that there is more than a 25% chance that at least one period of prolonged exposure to extreme heat, resulting in heat stress, will occur in the next five years.

### Coastal Flood



In Sriracha where is the BSRC's own operations, **coastal flood** hazard is classified as **medium** according to the information that is currently available. This means that there is more than a 20% chance of potentially-damaging coastal flood waves occurring in the next 10 years.

# Strategy

Describe the climate-related risks and opportunities the company has identified over the short, medium, and long term



## Physical Risks

Define Baseline natural hazard by ThinkHazard! (Data map as of 5 September 2025)



ThinkHazard!

Hazard level

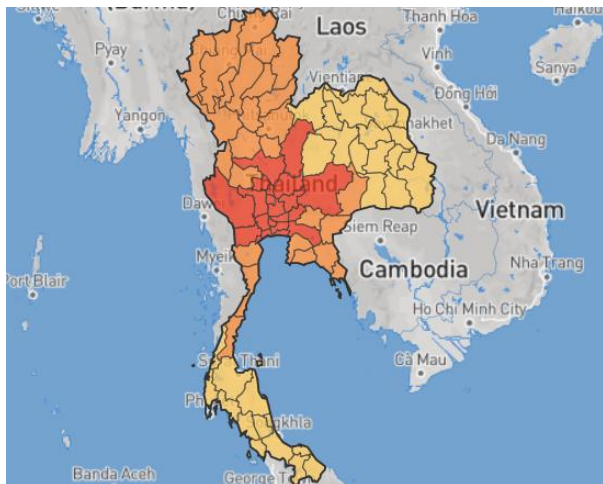
High

Medium

Low

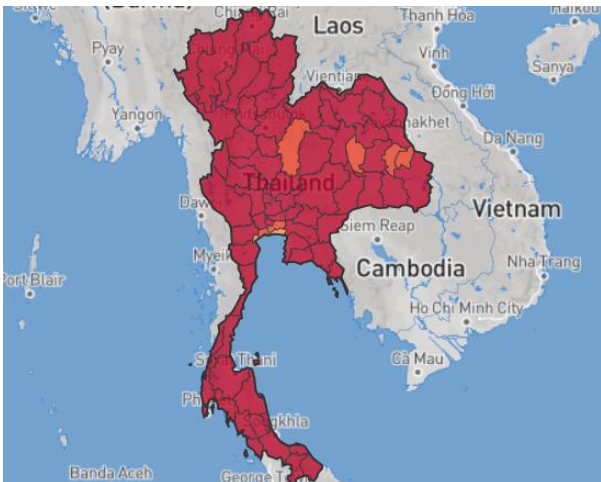
Very low

### Water Scarcity



**Water scarcity** is classified as **medium** in Thailand according to the information that is currently available to this tool. This means that there is up to a 20% chance droughts will occur in the coming 10 years. Droughts conditions can disrupt operations that rely on water as a critical input. These conditions may affect manufacturing processes, and other water-dependent activities, potentially leading to supply chain disruptions.

### Urban and River Flood



**Urban and River flood** hazards are classified as **high** in Thailand based on modeled flood information currently available to this tool. This means that potentially damaging and life-threatening urban and river floods are expected to occur at least once in the next 10 years. Floods could damage power lines, and transportation infrastructure. Our upstream and downstream logistics could be delayed.

Physical Risks



|                                   | ThinkHazard! |        | Climate Projection Data |                   |                   | WORLD BANK GROUP  |                   |                   | Climate Change Knowledge Portal                 |  |  |
|-----------------------------------|--------------|--------|-------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------------------------------------|--|--|
|                                   |              |        | SSP5-8.5                |                   |                   | SSP1-2.6          |                   |                   | For Development Practitioners and Policy Makers |  |  |
|                                   |              |        | 2030                    | 2040              | 2050              | 2030              | 2040              | 2050              |                                                 |  |  |
| Extreme Heat                      |              | Medium | Moderate Increase       | Moderate Increase | Moderate Increase | Moderate Increase | Moderate Increase | Moderate Increase |                                                 |  |  |
| Coastal Flood<br>Rising sea level |              | Medium | Slight Increase         | Slight Increase   | Slight Increase   | Slight Increase   | Slight Increase   | Slight Increase   |                                                 |  |  |
| Water Scarcity<br>Drought         |              | Medium | Slight Increase         | Slight Increase   | Slight Increase   | Slight Increase   | Slight Increase   | Slight Increase   |                                                 |  |  |
| Urban/River Flood                 |              | High   | Slight Increase         | Moderate Increase | Moderate Increase | Slight Increase   | Moderate Increase | Moderate Increase |                                                 |  |  |

Legend and Hazard Score for SSP1-2.6 and SSP5-8.5 scenarios

| Category                | Drought (Change in annual drought probability) | Riverine & Urban Floods (change in 1 day and 5 day maximum rainfall) | Coastal floods and sea level rise | Extreme Heat (Change in annual average maximum temperature) |
|-------------------------|------------------------------------------------|----------------------------------------------------------------------|-----------------------------------|-------------------------------------------------------------|
| 3 Significant Increase  | <-1                                            | >10%                                                                 | >50cm                             | >2°C                                                        |
| 2 Moderate Increase     | <-0.5                                          | >5%                                                                  | >25cm                             | >1°C                                                        |
| 1 Slight Increase       | <0                                             | >0%                                                                  | >0cm                              | >0°C                                                        |
| 0 No Change             | 0                                              | 0%                                                                   | 0cm                               | 0°C                                                         |
| -1 Slight Decrease      | >0                                             | <0%                                                                  | <0cm                              | <0°C                                                        |
| -2 Moderate Decrease    | >0.5                                           | <-5%                                                                 | <-10cm                            | <-1°C                                                       |
| -3 Significant Decrease | >1                                             | <-10%                                                                | <-20cm                            | <-2°C                                                       |

Categorization criteria considers all climate indicator values across scenarios and time horizons. The climate indicator went through a normalization process which involves comparing the minimum and maximum value across all time horizons and scenarios. Process depends on the indicator, some may be normalized by climate zone whereas some are done globally

Note: SSP5-8.5 scenario: A pathway delivers a temperature increase of about 4.4°C by 2100, relative to pre-industrial temperatures.

Note: SSP1-2.6 scenario: Sustainable development scenario. A pathway which is representative of a scenario that aims to keep global warming stays below 2.0°C and above pre-industrial temperatures by 2100.

Risk Driver Find Out

-  **Extreme Heat:** For both SSP5-8.5 and SSP1-2.6 scenario of BSRC’s own operation, there have moderate increase in extreme heat at 2030 and 2050 timeframes which could impact to labor productivity and safety, and equipment efficiency.
-  **Coastal Flood:** The sea level projection indicates a slight increase for both SSP5-8.5 and SSP1-2.6 scenario of BSRC’s own operation.

-  **Urban and River Flood:** Baseline level identified as high risk. Projection data indicates a slight increase in 2030 and moderate increase in 2040 and 2050 for both SSP5-8.5 and SSP1-2.6 scenario affecting Thailand as a whole.
-  **Drought:** The SPEI Drought Index projection shows a slight increase trend in all scenarios for Thailand. However, seawater has been utilized for our refining process, hence minimum impact from drought at our own operations.

# Strategy

Describe the climate-related risks and opportunities the company has identified over the short, medium, and long term

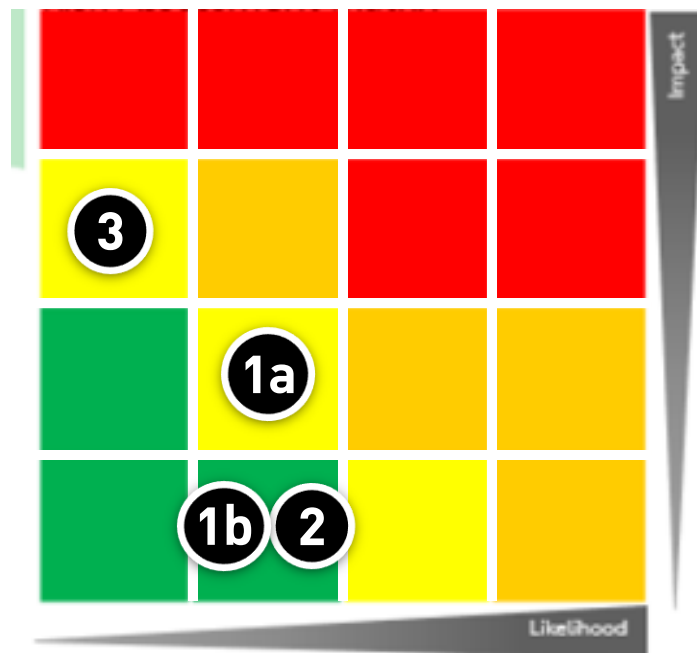


Physical Risks

Physical Risk Prioritization Matrix – Matrix shows **Short Term Risk**

Our risks are prioritized using our Enterprise Risk Management definitions for impact and likelihood.

This prioritization had helped us understand what parts of our strategy we should pursue first. These risks are described below.



## Risk Level

- High
- Low
- Medium
- Very low

### 1. Extreme Heat

- a. Impact to labor productivity and safety
- b. Impact to equipment efficiency

### 2. Coastal Flood and sea water level increase

### 3. Urban and River Flood

## Physical Risk Impacts

### Risk Rating Level



High



Medium



Low



Very low

| Physical Risk /<br>Risk Driver                     | Risk Rating Level*                                                                |                                                                                   |                                                                                   |                                                                                   | Impact Areas                       | Business Implications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Financial<br>Implication                                                                             | Management measure and adaptation plan<br><div>(Less than 5 years of implementation timeline)</div> <div>(Existing and New Operations: 100% coverage)</div>                                                                                                                                             | Cost to response           |
|----------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
|                                                    | Time Horizon                                                                      |                                                                                   |                                                                                   |                                                                                   |                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                      |                                                                                                                                                                                                                                                                                                         |                            |
|                                                    | 2030                                                                              |                                                                                   | 2050                                                                              |                                                                                   |                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                      |                                                                                                                                                                                                                                                                                                         |                            |
|                                                    | SSP1-2.6                                                                          | SSP5-8.5                                                                          | SSP1-2.6                                                                          | SSP5-8.5                                                                          |                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                      |                                                                                                                                                                                                                                                                                                         |                            |
| <b>Extreme Heat</b><br><div>(Own Operations)</div> |  |  |  |  | Base Operation, Sriracha, Chonburi | <ul style="list-style-type: none"><li>The temperature projection from Climate Change Knowledge Portal shows potential increase of 1.9°C in worst case scenario. There is a potential of worker prolonged exposure to extreme heat, resulting in heat stress which required the medical treatment from licensed health care professional. The work productivity could be reduced by 10%. Reduction of productivity could resulting in 10-25% higher in overall maintenance activity including labor and equipment cost. In critical maintenance work e.g. turnaround it may cause of delay start up.</li></ul> | Potential delay of start up after plant turnaround affecting revenue loss approx. of 165 Million THB | <ul style="list-style-type: none"><li>Follow site practice to prevent workers from heat exposure e.g. increase mechanical ventilation, monitor air temperature, provide regular break, change work schedule from daytime to nighttime, provide worker rest shed and additional manpower, etc.</li></ul> | 22.5 Million THB (approx.) |

**Remark:** \* Risks are prioritized using our Enterprise Risk Management definitions for impact and likelihood.

## Physical Risk Impacts

### Risk Rating Level



High



Medium



Low



Very low

| Physical Risk /<br>Risk Driver       | Risk Rating Level*                                                                |                                                                                   |                                                                                   |                                                                                   | Impact Areas                       | Business Implications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Financial<br>Implication        | Management measure and adaptation plan<br>(Less than 5 years of implementation timeline)<br>(Existing and New Operations: 100% coverage)                                                                                                                                                         | Cost to response               |
|--------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
|                                      | Time Horizon                                                                      |                                                                                   |                                                                                   |                                                                                   |                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                 |                                                                                                                                                                                                                                                                                                  |                                |
|                                      | 2030                                                                              |                                                                                   | 2050                                                                              |                                                                                   |                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                 |                                                                                                                                                                                                                                                                                                  |                                |
|                                      | SSP1-2.6                                                                          | SSP5-8.5                                                                          | SSP1-2.6                                                                          | SSP5-8.5                                                                          |                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                 |                                                                                                                                                                                                                                                                                                  |                                |
| Extreme Heat<br><br>(Own Operations) |  |  |  |  | Base Operation, Sriracha, Chonburi | Impact to Heat Exchangers <ul style="list-style-type: none"><li>Potentially increasing in maximum temperature could lead to higher seawater temperature. BSRC Sriracha refinery has used seawater in heat exchangers, so increase in inlet temperature could result in lower efficiency of heat exchange.</li><li>Increasing in air temperature, would impact to Fin Fan Exchanger at unit. Decline in efficiency could result in increase tower pressure, hence more energy is required in order to maintain distillation pattern. When efficiency is declined at certain level, it could limit crude feed rate and naphtha production.</li></ul> Cooling Towers <ul style="list-style-type: none"><li>In addition, increasing of air temperature could result in poor heat exchange between hot seawater and air, potential of higher evaporation lost, hence equipment modification may be required to maintain operation run rate.</li></ul> | Approx. 48 Million THB per year | <ul style="list-style-type: none"><li>Keep monitor performance of cooling towers and heat exchangers and maintenance program per current site practices.</li><li>Assess additional cleaning required.</li><li>Consider new technology when available and heat exchanger rearrangement.</li></ul> | Approx. 5 Million THB per year |

**Remark:** \* Risks are prioritized using our Enterprise Risk Management definitions for impact and likelihood.

## Physical Risk Impacts

### Risk Rating Level



High



Medium



Low



Very low

| Physical Risks                                                            | Risk Rating Level*                                                                |                                                                                   |                                                                                   |                                                                                   | Impact Areas                       | Business Implications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Financial Implication           | Management measure and adaptation plan<br>(Less than 5 years of implementation timeline)<br>(Existing and New Operations: 100% coverage)                                            | Cost to response    |
|---------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
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|                                                                           | 2030                                                                              |                                                                                   | 2050                                                                              |                                                                                   |                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                 |                                                                                                                                                                                     |                     |
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| <b>Coastal Flood and sea water level increase</b><br><br>(Own Operations) |  |  |  |  | Base Operation, Sriracha, Chonburi | <ul style="list-style-type: none"><li>• Rising sea level forecasting from 2014 up to 2050 at Koh Si Chang is less than 0.25 m. BSRC Sriracha refinery is located about 3.85 m above mean sea level, hence we have not foreseen significant impact to refining operation from coastal flood.</li><li>• In addition, our operation at Berth islands (BI) is limited at maximum 26 knots wind speed. Therefore, no significant impact to cargo discharge or loading has been foreseen.</li><li>• Increasing in sea level could enable deeper draft for vessel operation at BI and Multi-Buoy Mooring (MBM), however the opportunity in this deeper vessel draft is insignificant.</li></ul> | No significant financial impact | <ul style="list-style-type: none"><li>• No action is required based on predicted 0.25 m sea level increasing VS 3.85 m of current refinery elevation from mean sea level.</li></ul> | No cost to response |

**Remark:** \* Risks are prioritized using our Enterprise Risk Management definitions for impact and likelihood.

## Physical Risk Impacts

### Risk Rating Level



High



Medium



Low



Very low

| Physical Risks                                         | Risk Rating Level*                                                                |                                                                                   |                                                                                   |                                                                                   | Impact Areas          | Business Implications                                                                                                                                                                                                                                                        | Financial Implication         | Management measure and adaptation plan<br>(Less than 5 years of implementation timeline)<br>(Existing and New Operations: 100% coverage)                                                                                                                                                                                                    | Cost to response                                                |
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|                                                        | Time Horizon                                                                      |                                                                                   |                                                                                   |                                                                                   |                       |                                                                                                                                                                                                                                                                              |                               |                                                                                                                                                                                                                                                                                                                                             |                                                                 |
|                                                        | 2030                                                                              |                                                                                   | 2050                                                                              |                                                                                   |                       |                                                                                                                                                                                                                                                                              |                               |                                                                                                                                                                                                                                                                                                                                             |                                                                 |
|                                                        | SSP1-2.6                                                                          | SSP5-8.5                                                                          | SSP1-2.6                                                                          | SSP5-8.5                                                                          |                       |                                                                                                                                                                                                                                                                              |                               |                                                                                                                                                                                                                                                                                                                                             |                                                                 |
| Urban and River Flood<br><br>(Upstream and Downstream) |  |  |  |  | Upstream Activities   | <ul style="list-style-type: none"><li>Flooding may impact BSRC’s natural gas supplier in Rayong which could take days to weeks to resume operation, leading to insufficient natural gas for BSRC. It may cause BSRC refinery to run at minimum turndown operation.</li></ul> | Approx. 9 Million THB per day | <ul style="list-style-type: none"><li>Prepare backup energy sources from PEA/EGAT to maintain capability during emergencies.</li><li>Follow BSRC refinery philosophy for utility system to response refining operation.</li><li>Reroute plant LPG for back up.</li></ul>                                                                    | Approx. OPEX 3 Million THB per day to maintain minimum turndown |
|                                                        |                                                                                   |                                                                                   |                                                                                   |                                                                                   | Downstream Activities | <ul style="list-style-type: none"><li>Supply chain interruption if access to affected assets is cut off by floods, or if products or materials are damaged by floods and could not be delivered to assigned locations.</li></ul>                                             | Approx. 2 Million THB per day | <ul style="list-style-type: none"><li>Secure alternative sources from other suppliers for the critical materials/ chemicals.</li><li>Follow Business Continuity Management (BCM) which include emergency response (monitoring and warning system) and alternative logistic for products/materials delivery during flood incident.</li></ul> | Approx. 0.2 Million THB per day                                 |

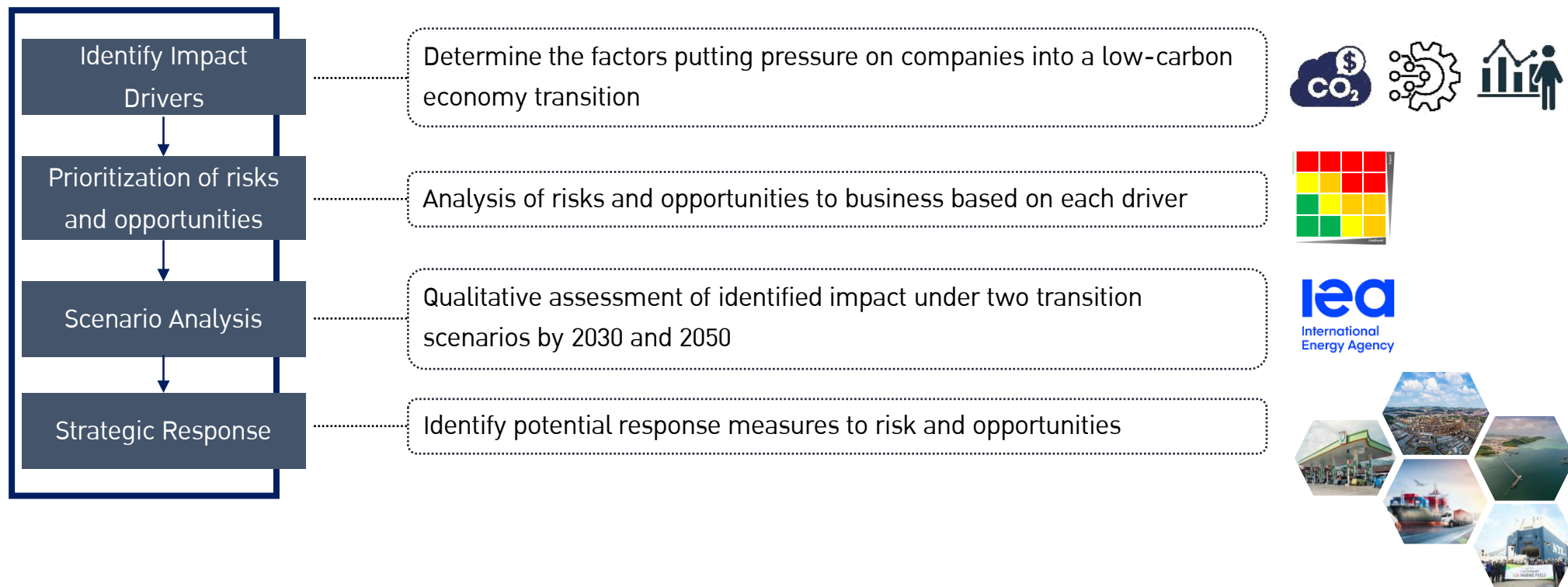
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# Strategy

Describe the **climate-related risks and opportunities** the company has identified **over the short, medium, and long term**

## Transition Risks

## Transition Risk Assessment Process

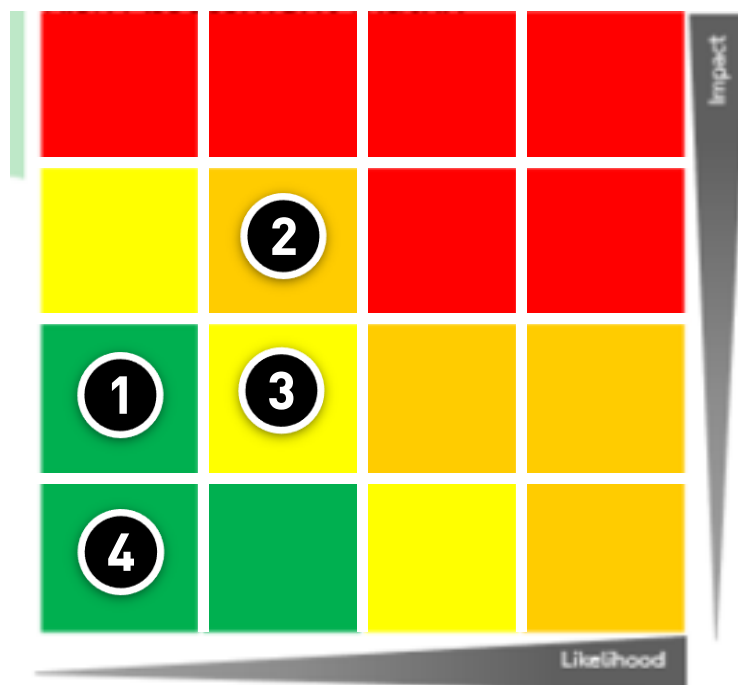


# Strategy

Describe the **impact** of climate-related risks and opportunities on the Company's businesses, strategy, and financial planning

Transition Risks

Transition Risk Prioritization Matrix – Matrix shows **Short Term Risk**



## Risk Level

- High
- Low
- Medium
- Very low

| Climate Risk Hazards | Risks Consideration                                                                                                                                                                                                                                                                                                                                         |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Policy & Legal       | <b>1. Carbon Price</b><br>As BSRC business is energy-intensive, the future implementation of a carbon pricing mechanism will have impact on BSRC operating costs and consequently revenue.                                                                                                                                                                  |
| Technology           | <b>2. Crude oil price</b><br>New technology may drive to alternative energy sources which resulted in less demand on crude hence drive to lower crude price which will affect to inventory gain/loss.                                                                                                                                                       |
| Market               | <b>3. Demand and Margin of Product</b><br>The demand on Bio-fuel as well as other alternative energy sources are expected to increase as consumers are seeking to decarbonize and meet GHG reduction target. Sale volume might decrease according to the lower demand according to the sustainability trend, or lower margin according to lower fuel price. |
| Reputation           | <b>4. Reputation</b> <ul style="list-style-type: none"> <li>Shifts in consumer preferences</li> <li>Stigmatization of sector</li> <li>Increasing stakeholder concern or negative stakeholder feedback</li> </ul>                                                                                                                                            |

## Transition Risk Impacts

**Risk Level**  High  Medium  Low  Very low

| Identified Risk                    | Time horizon                                                                      |                                                                                   |                                                                                   | Possible Risk Implication                                                                                                                                                                                                                                                          | Financial Impacts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Strategic Response |       |     |            |                           |  |  |  |                               |     |       |    |                         |  |  |  |                               |       |       |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------|-----|------------|---------------------------|--|--|--|-------------------------------|-----|-------|----|-------------------------|--|--|--|-------------------------------|-------|-------|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                    | Short-term<br>(0-2 years)                                                         | Medium-term<br>(2-10 years)                                                       | Long-term<br>(>10 years)                                                          |                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                    |       |     |            |                           |  |  |  |                               |     |       |    |                         |  |  |  |                               |       |       |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Policy and Legal<br>(Carbon Price) |  |  |  | <ul style="list-style-type: none"><li>• Increase capital investment in upgrading facilities or transition.</li><li>• Increase operating costs due to policy changes, such as compliance costs or insurance premiums.</li><li>• Reduce profitability due to higher costs.</li></ul> | <p>As BSRC business is energy-intensive, the future implementation of a carbon pricing mechanism will have impact on BSRC operating costs and consequently revenue.</p> <p>The additional costs arising from the implementation of carbon pricing regulations may be significant given BSRC’s operations are energy intensive. We have quantified the potential financial implications that may affect BSRC as follows:</p> <table><tr><th></th><th>STEPS</th><th>NZE</th><th>Difference</th></tr><tr><td colspan="4"><b>2036 (medium-term)</b></td></tr><tr><td>Carbon Tax Cost (Million THB)</td><td>920</td><td>1,012</td><td>92</td></tr><tr><td colspan="4"><b>2050 (long-term)</b></td></tr><tr><td>Carbon Tax Cost (Million THB)</td><td>1,031</td><td>2,024</td><td>993</td></tr></table> <p>As there are currently no carbon pricing regulations or carbon tax mechanisms in Thailand, there are no immediate impacts. We expect the implementation of a carbon tax mechanism will be implemented before 2036.</p> |                    | STEPS | NZE | Difference | <b>2036 (medium-term)</b> |  |  |  | Carbon Tax Cost (Million THB) | 920 | 1,012 | 92 | <b>2050 (long-term)</b> |  |  |  | Carbon Tax Cost (Million THB) | 1,031 | 2,024 | 993 | <ul style="list-style-type: none"><li>• BSRC has <b>been improving the efficiency of operation processes, using low-emission fuels, and implementation of energy efficiency projects</b> to achieve company target on Net-Zero GHG emission target by 2050.</li><li>• We have also <b>participated the Carbon Markets Club to promote carbon credit trading</b> accelerating the transition into low carbon society including our supply chain.</li></ul> |
|                                    | STEPS                                                                             | NZE                                                                               | Difference                                                                        |                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                    |       |     |            |                           |  |  |  |                               |     |       |    |                         |  |  |  |                               |       |       |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>2036 (medium-term)</b>          |                                                                                   |                                                                                   |                                                                                   |                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                    |       |     |            |                           |  |  |  |                               |     |       |    |                         |  |  |  |                               |       |       |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Carbon Tax Cost (Million THB)      | 920                                                                               | 1,012                                                                             | 92                                                                                |                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                    |       |     |            |                           |  |  |  |                               |     |       |    |                         |  |  |  |                               |       |       |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>2050 (long-term)</b>            |                                                                                   |                                                                                   |                                                                                   |                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                    |       |     |            |                           |  |  |  |                               |     |       |    |                         |  |  |  |                               |       |       |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Carbon Tax Cost (Million THB)      | 1,031                                                                             | 2,024                                                                             | 993                                                                               |                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                    |       |     |            |                           |  |  |  |                               |     |       |    |                         |  |  |  |                               |       |       |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

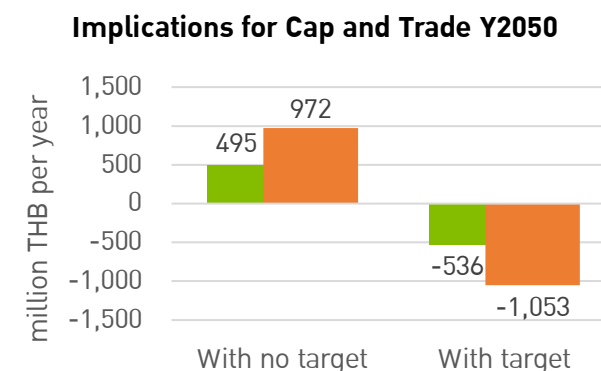
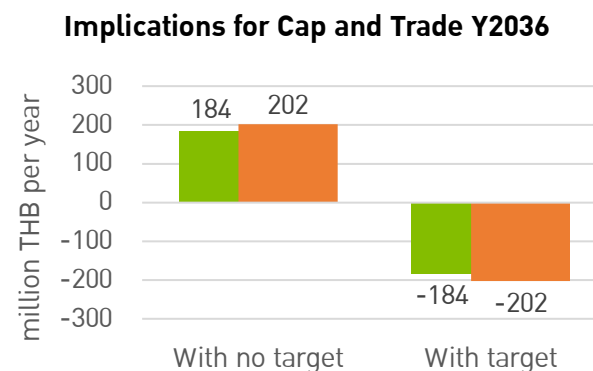
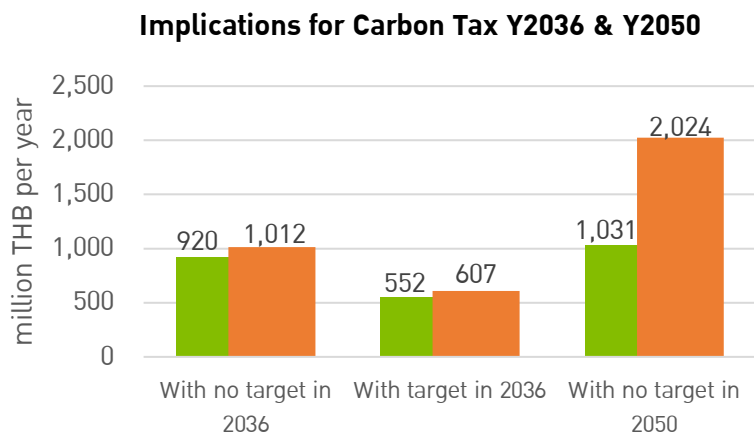
# Strategy

Describe the **impact** of climate-related risks and opportunities on the Company's businesses, strategy, and financial planning



## Transition Risks

BSRC had **compared the impacts for carbon price in different scenario** that reflect current real-world conditions and starting points of the International Energy Agency (IEA): World Energy Outlook (WEO) 2024. First, **The Stated Policies Scenario (STEPS)** which is an outlook based on the latest policy settings and **the Net Zero Emissions by 2050 Scenario (NZE)** which is additional progress is still required to meet the objectives which limits global warming to 1.5°C. **BSRC assume that 40% GHG reduction (30% from efficiency and process improvement and 10% from reforestation) will be achieved by 2036 and 60% carbon sequestration technology will be achieved by 2050** in line with BSRC Strategy "Pathway to Net Zero 2050". With these targets, BSRC will have **additional revenue from trading allowances (Cap and Trade) and lower impact comparing with no target set in Carbon Tax mechanism.**



\* Negative means additional revenue from trading allowances

### Assumptions:

- Carbon tax in Thailand will be implemented before 2036.
- For Cap and Trade scheme, the cap reduction will increase 2% per year in line with EU-ETS from Y2026 both GHG emission scope 1 and 2.
- BSRC's business will grow according to current plans.
- IEA numbers are in 2023 USD, converted to THB using exchange rate on August 5, 2025.
- Conservative assumption of carbon tax on both Scope 1 and 2, typically governments only put carbon price on Scope 1, however in some jurisdictions such as Japan a carbon price is placed both on Scope 1 and 2.

# Strategy

Describe the **impact** of climate-related risks and opportunities on the Company's businesses, strategy, and financial planning



## Transition Risk Impacts

**Risk Level** High Medium Low Very low

| Identified Risk                               | Time horizon              |                             |                          | Possible Risk Implication                                                                                                                                                         | Financial Impacts                                                     | Strategic Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------------------------------------------|---------------------------|-----------------------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                               | Short-term<br>(0-2 years) | Medium-term<br>(2-10 years) | Long-term<br>(>10 years) |                                                                                                                                                                                   |                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Technology</b><br><b>(Crude Oil Price)</b> |                           |                             |                          | New technology may drive to alternative energy sources which resulted in less demand on crude hence drive to fluctuation in crude price which will affect to inventory gain/loss. | Fluctuation of crude oil price cause gross refining margin decreased. | <p>Price of fossil fuel might be decreased due to the lower demand which will affect to inventory gain/loss. There are three main strategies to cope with volatility.</p> <p><b>(1) Enhance flexibility of crude sourcing</b> via the service provider (BCPT).</p> <p><b>(2) Refinery optimization</b> via the establishment of Refining Optimization and Synergy Enterprise (ROSE) which utilize various optimization programs to maximize BSRC benefit.</p> <p><b>(3) Product diversification</b> to uplift product value. We have modified the refinery to produce more diverse products to the market. There are Solvent product for Chemical business, Propylene for Petrochemical, Special grade Asphalt.</p> |

# Strategy

Describe the **impact** of climate-related risks and opportunities on the Company's businesses, strategy, and financial planning



## Transition Risk Impacts

**Risk Level** High Medium Low Very low

| Identified Risk                                        | Time horizon              |                             |                          | Possible Risk Implication                                                                                                                                                                                                                                                                                         | Financial Impacts                                            | Strategic Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------------------------------------|---------------------------|-----------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                        | Short-term<br>(0-2 years) | Medium-term<br>(2-10 years) | Long-term<br>(>10 years) |                                                                                                                                                                                                                                                                                                                   |                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Market</b><br><b>(Demand and margin of product)</b> |                           |                             |                          | The demand on Bio-fuel as well as other alternative energy sources are expected to increase as consumers are seeking to decarbonize and meet GHG reduction target. Sale volume might decrease according to the lower demand according to the sustainability trend, or lower margin according to lower fuel price. | Decreasing of demand cause sale volume and margin decreased. | <p>Sale volume might decrease according to the lower demand according to the sustainability trend, or lower margin according to lower fuel price.</p> <ul style="list-style-type: none"> <li>• BSRC, as subsidiary of Bangchak Corporation, is using Bangchak Brand for retail business.</li> <li>• Bangchak Corporation has <b>developed service station model</b> to enhance return, not only to maintain high quality fuel but also new value proposition to our value customer as a "Greenovative Destination", a lifestyle destination for intergeneration, to fulfilled customers' needs and meet their changing behavior. The model has included on-site offering of variety food and beverage services from well-known brands, Grab &amp; Go delivery services, unique design service station.</li> </ul> |

# Strategy

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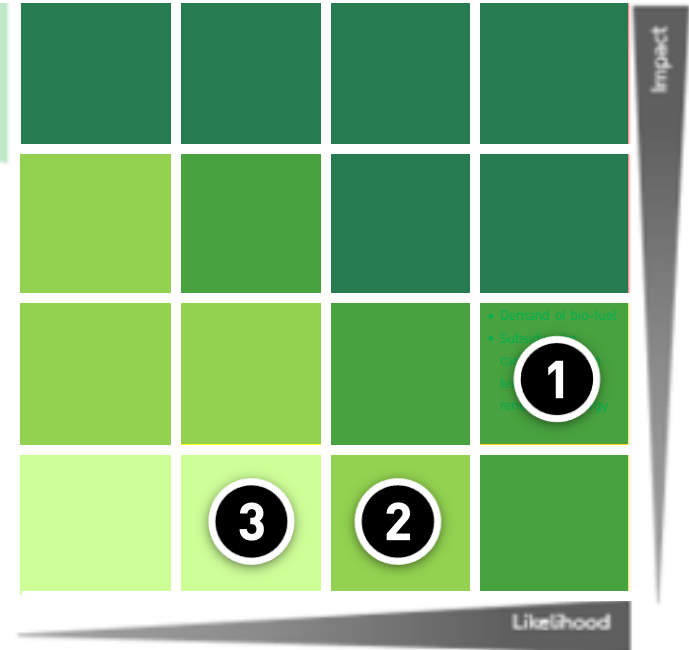
## Transition Risk Impacts

**Risk Level**  High  Medium  Low  Very low

| Identified Risk                                                                  | Time horizon                                                                      |                                                                                   |                                                                                   | Possible Risk Implication                                                                                                                                                                     | Financial Impacts                                                                                                                                                                                                                                                                                                                                 | Strategic Response                                                                                                                                                                                                                                                                                                            |
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|                                                                                  | Short-term<br>(0-2 years)                                                         | Medium-term<br>(2-10 years)                                                       | Long-term<br>(>10 years)                                                          |                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                               |
| <b>Reputation</b><br>(Poor public perception of an industry, program, or policy) |  |  |  | <ul style="list-style-type: none"><li>• Shifts in consumer preferences</li><li>• Stigmatization of sector</li><li>• Increasing stakeholder concern or negative stakeholder feedback</li></ul> | <ul style="list-style-type: none"><li>• Reducing revenue from decreased demand for goods, decreased production capacity (e.g., delayed planning approvals, supply chain interruptions and etc.).</li><li>• Reducing revenue from negative impacts on workforce management and planning (e.g., employee attraction, retention and etc.).</li></ul> | <ul style="list-style-type: none"><li>• BSRC has processes for stakeholder engagement to increase stakeholder trust and get their needs/expectations.</li><li>• BSRC Retail business as part of Bangchak brand has clear strategy to maintain sale volume.</li><li>• BSRC has deployed employee engagement program.</li></ul> |

# Strategy

Describe the **impact** of climate-related risks and opportunities on the Company’s businesses, strategy, and financial planning



### Opportunity Level

- High
- Low
- Medium
- Very low

| Climate-Related Opportunity | Opportunity Description                                                                                                                                                                                                                                                                                                                                       |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Resource Efficiency         | 1. Reduce Operating Cost by improving energy efficiency, align with strategy BCP316Net. Potential NPV@9.5% at 8 MUS\$.                                                                                                                                                                                                                                        |
| Energy Source               | 2. Opportunity to switch to lower emission fuel, Hydrogen, to reduce the OPEX related to Climate Change Regulations such as Carbon Tax.                                                                                                                                                                                                                       |
| Technology                  | 3. Cut down on operational costs as the cost (USD/tCO <sub>2</sub> ) of CCUS technologies drops below the price of carbon (USD/tCO <sub>2</sub> e). This technology will help reduce the amount of money paid to the government regarding emissions by cutting down on emissions (without a carbon price, CCUS will not be feasible from a cost perspective). |

# Strategy

Describe the **impact** of climate-related risks and opportunities on the Company's businesses, strategy, and financial planning

*Opportunity*

Bangchak Sriracha Opportunity Assessment in Time Horizon timeframes.

## Opportunity Level

-  High
-  Low
-  Medium
-  Very low



| Opportunity Driver         |                                                                                                                                     | Impact in time horizon                                                              |                                                                                       |                                                                                       | Impacts                                                                                                                | Strategic Response                                                                                                                 |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
|                            |                                                                                                                                     | Short term<br>(0-2 years)                                                           | Medium term<br>(2-10 years)                                                           | Long term<br>(>10 years)                                                              |                                                                                                                        |                                                                                                                                    |
| <b>Resource Efficiency</b> | Increasing investment in energy efficiency projects                                                                                 |    |    |    | <ul style="list-style-type: none"> <li>Potential NPV@9.5% at 8 MUS\$</li> </ul>                                        | <ul style="list-style-type: none"> <li>Discipline Capital investment consideration the overall business objectives</li> </ul>      |
| <b>Energy Source</b>       | Opportunity to switch to lower emission fuel, Hydrogen, to reduce the OPEX related to Climate Change Regulations such as Carbon Tax |    |    |    | <ul style="list-style-type: none"> <li>Reducing Operating Cost (OPEX) related to Climate Change Regulations</li> </ul> | <ul style="list-style-type: none"> <li>Discipline Capital investment consideration the overall business objectives</li> </ul>      |
| <b>Technology</b>          | Maturation of Carbon Capture, Utilization and Storage (CCUS)                                                                        |  |  |  | <ul style="list-style-type: none"> <li>Reducing CAPEX for CCUS</li> <li>Reducing carbon cost</li> </ul>                | <ul style="list-style-type: none"> <li>Seek collaboration with strategic partners to pilot and assess CCUS applications</li> </ul> |

## Summary of Climate-related Scenarios Analysis that were Applied

The scenario analysis is a crucial tool for companies to develop effective climate resilience plans in response to identified risks and opportunities. At BSRC, we have employed internationally-recognized information and tools to craft climate-related scenarios that are both reliable and meaningful. These scenarios consider key assumptions, such as the impact of climate-related policies, macroeconomic trends, local weather patterns, demographics, land use, infrastructure, energy usage, and availability of natural resources. We draw upon publicly available sources to inform these assessments. The scenario analysis was carried out in 2025.

| Risks/Opportunities                | Extreme Heat / Coastal Flood                                                                                                      | Urban and River Flood                                                                                          | Carbon Price                           |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|----------------------------------------|
| Climate Types                      | Physical Risk                                                                                                                     | Physical Risk                                                                                                  | Transition Risk                        |
| Scenario                           | SSP1-2.6, SSP5-8.5*                                                                                                               | SSP1-2.6, SSP5-8.5*                                                                                            | STEPS, NZE 2050*                       |
| Timeframe                          | 2030-2050                                                                                                                         | 2030-2050                                                                                                      | 2030-2050                              |
| Impacted areas from the assessment | Sriracha, Chonburi<br>(Own Operations)                                                                                            | <ul style="list-style-type: none"><li>• Rayong (Upstream)</li><li>• Thailand as a whole (Downstream)</li></ul> | Sriracha, Chonburi<br>(Own Operations) |
| Sources (Tools)                    | <ul style="list-style-type: none"><li>• ThinkHazard!</li><li>• Sea Level Projection Tool – NASA Sea Level Change Portal</li></ul> | ThinkHazard!                                                                                                   | IEA scenario                           |

According to above, BSRC’s assessment holds significant implications for its strategy and business model, particularly as it pertains to responding to climate-related risks and opportunities. With the environmental is shifting towards low-carbon environment, BSRC has strategically aligned its operations and investments with this transition. This proactive approach ensures the company remains resilient and well-positioned in a rapidly evolving climate-conscious market

**Remark:** \* From IEA World Energy Outlook 2024

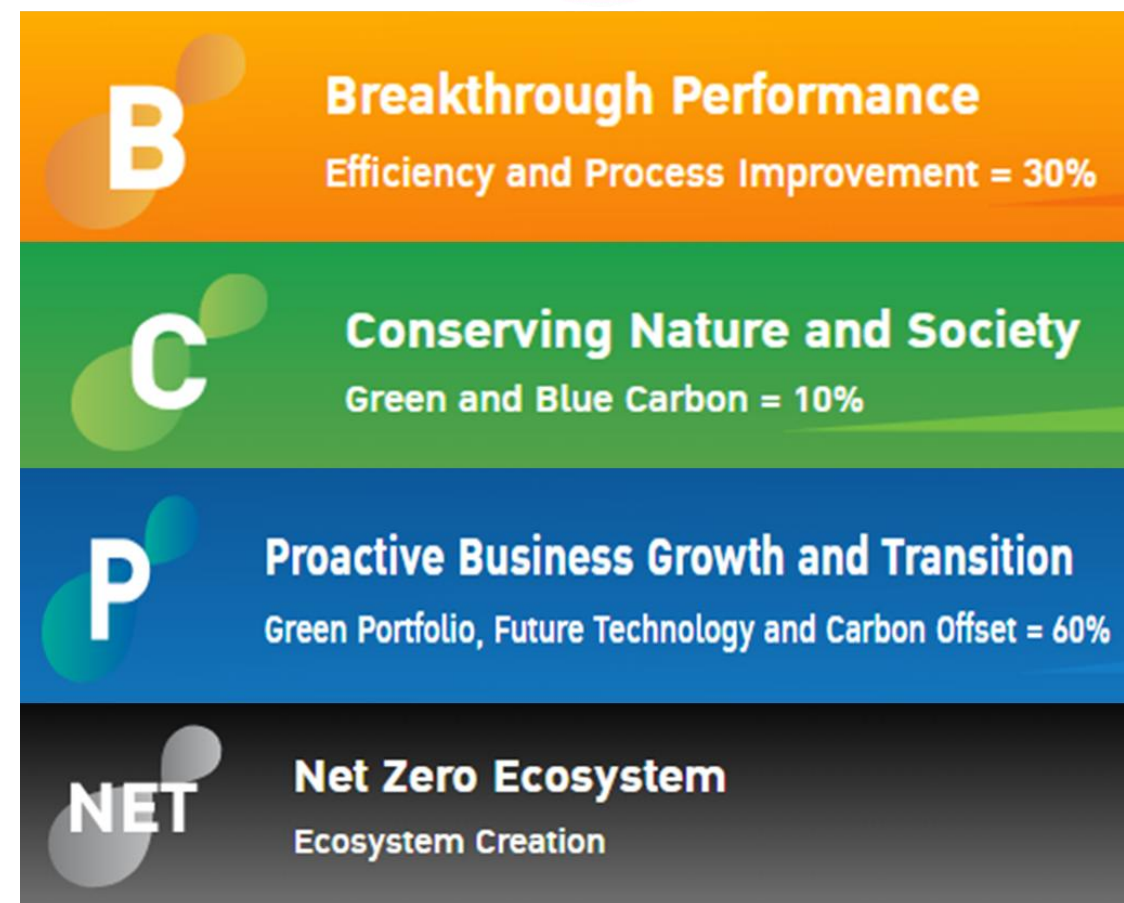
# Strategy

Describe the **resilience of the Company's strategy**, taking into consideration different climate-related scenarios, including a 2°C or lower scenario



**BSRC acknowledges the potential risks** posed by climate change and is taking proactive measures to ensure the resilience and sustainability of its operations. The Company recognizes the importance of aligning its strategies with global climate goals, such as **limiting global warming to 2°C or lower**.

The Company set target to achieve **Net-Zero operated Scope 1 and 2 greenhouse gas emissions by 2050**. Actions needed are incorporated into its medium-term business plans, which are updated annually. The future planned development activities will follow Bangchak Corporation strategy, **BCP316 Net**.



## Climate Change Strategy and Action Plan

To achieve the goal of reducing greenhouse gas emissions from operations (Scope 1 and 2) to net zero (Net Zero GHG Emissions) by 2050, the Company has an operational plan according to the BCP316Net strategy as follows:



### B: Breakthrough Performance

This strategy focuses on improving the Company's operational efficiency, reducing energy consumption, and reducing carbon dioxide emissions, including various measures to reduce greenhouse gas emissions by 30%. In 2023, various projects were implemented, such as the reuse of waste heat, the maintenance of steam traps, and the improvement of the steam distribution system. In addition to reducing energy consumption, which reduces carbon dioxide emissions, the organization has also adjusted equipment operating conditions to reduce the amount of heavy hydrocarbons in fuel gas to further reduce carbon dioxide emissions.



### C: Conserving Nature and Society

This strategy focuses on offsetting the Company's carbon dioxide emissions by supporting natural carbon sequestration projects, including tree planting, forest restoration, and peatland conservation, to absorb greenhouse gas emissions by 10%.

The Company continues to support the operations of the Bangchak Group by focusing on carbon offsetting guidelines, including carbon credit standards and certification regulations, to align with the group's policies and prepare for future changes with stability and sustainability.



### P: Proactive Business Growth and Transition

This strategy focuses on transitioning the Company's business towards clean energy sources to reduce greenhouse gas emissions. This includes investing in renewable energy projects, developing new biofuels, expanding the electric vehicle charging station network, and utilizing other advanced technologies.

The Company is studying the feasibility of increasing the proportion of hydrogen energy used in fuel furnaces, including equipment that generates electricity from waste heat, to reduce greenhouse gas emissions. It is also preparing for carbon capture technologies and exploring the feasibility of businesses that utilize greenhouse gases to manufacture products in the future.



### NET: Net Zero Ecosystem

This strategy focuses on creating a sustainable ecosystem within society to prepare for the NET ZERO by 2050. BSRC has coordinated its strengths with those of the Bangchak Group through business synergy in various dimensions to enhance efficiency and maximize the utilization of existing potential, both in terms of technology and expertise. This approach emphasizes increasing energy efficiency in production processes, using resources efficiently and sustainably, along with engaging and creating value for the community. This reflects the commitment to creating a positive impact on the environment, economy, and society.

The Company not only focuses on supporting the growth of its subsidiaries but also plays a vital role in driving the country towards a sustainable low-carbon economy in the long term. Furthermore, the Company has demonstrated its clear commitment by becoming a member of the Carbon Markets Club and the Thailand Carbon Neutral Network (TCNN), reinforcing its intention to be a part of the solution to climate change sustainably.

# Strategy

Describe the **resilience of the Company's strategy**, taking into consideration different climate-related scenarios, including a 2°C or lower scenario



BSRC utilizes an **internal carbon price**, a hypothetical cost assigned to each ton of CO<sub>2</sub> emissions, to identify potential risks and opportunities across its operations and supply chain. This, along with internal fees, quantifies the capital investment needed to achieve climate-related targets. We implement these programs company-wide, **leveraging external resources** like price projections from the International Energy Agency (IEA) and internal consultations to establish pricing.

This core element is continuously integrated into our strategy and has become the standard practice in business planning. It **serves to test strategic and investment assumptions**, with the internal carbon price acting as a planning tool to identify revenue opportunities, assess risks, and incentivize energy efficiency to reduce costs and guide capital investment decisions.





4

# Risk Management

# Risk Management

Describe the Company's **processes for identifying and assessing climate related risks**



Our assessment focus on own operations activities. Time horizons climate risk assessment covered short-term (0-2 years), medium-term (2-10 years) and long term (> 10 years).

## Risk management policy:

- **Mandates managers and employees** in various departments **take responsibility for risk management**. They must play a role and participate in developing the organization's risk management and understand their related responsibilities in risk management.
- **Efficient risk management processes** are established **at every stage of operations** following the principles of good corporate governance. There is **integration of risk management with the organization's strategic planning** and information technology management to facilitate effective risk management, **reducing the chances of negative impacts and increasing the opportunities** for success.
- Take an action to **implement and support** successful organization-wide risk management, utilizing limited resources effectively for risk identification, assessment, and appropriate management.
- **Promote and encourage** the culture of organizational risk management, ensuring that everyone understands the importance of risk management.
- **Participate in standardized risk management systems** including managers and employees at all levels within the organization and joint venture partners to achieve common business goals, align with sustainable business development policies, align with environmental and social factors, and adhere to Environmental, Social, and Governance (ESG) principles.

# Risk Management

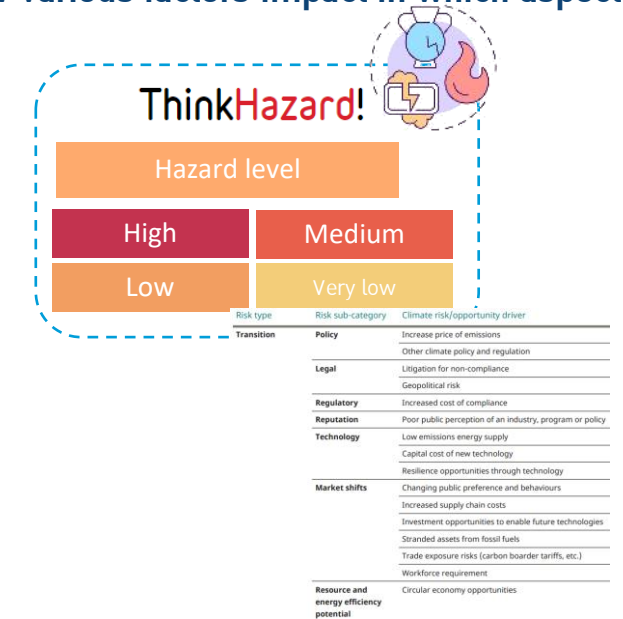
Describe the Company's processes for identifying and assessing climate related risks



## 1. Evaluate factors that may impact the goal



## 2. Assess how various factors impact in which aspect



Identify the Risks and Opportunity

Assess the Risk

Priorities the Risk

Plan and Take Action

Monitor, Evaluate and Communicate

## 5. Define Key Risk Indicators (KRIs)

Key Risk Indicator (KRI) : Operational Risk

**EXAMPLE**

| Operation Risk     | KRI                      | Current Status             | Risk Appetite / Risk Tolerance |                            |                            |
|--------------------|--------------------------|----------------------------|--------------------------------|----------------------------|----------------------------|
|                    |                          |                            | ไม่ยอมรับความเสี่ยง            | ยอมรับความเสี่ยง           | ยอมรับความเสี่ยง           |
| การดำเนินงานตามแผน | ระดับความเสี่ยง          | ระดับความเสี่ยง 0.1 mm     | ระดับความเสี่ยง 0.1 mm         | ระดับความเสี่ยง 0.1 mm     | ระดับความเสี่ยง 0.1 mm     |
| การดำเนินงานตามแผน | % Operation Availability | Operation Availability 90% | Operation Availability 90%     | Operation Availability 90% | Operation Availability 90% |

## 4. Develop a risk management plan to reduce the impact or likelihood of risk occurrence

87 Risk Mitigation Plan : ฐานการประเมินความเสี่ยงภายในปีงบประมาณ 91

**Risk Event :** ฐานการประเมินความเสี่ยงภายในปีงบประมาณ 91  
**Root Cause Analysis :** นโยบายการคลัง  
**Risk Impact :** EBITDA ลดลง X จำนวน 10% ของปีงบประมาณ  
**Risk Owner :** RFBG  
**Target :** ลดลงจาก (4,3) เป็น (3,2)  
**Degree of Acceptance :** Mitigating

**EXAMPLE**

**Existing Risk Response**

1. เข้าร่วมกับธนาคารในการระดมทุน
2. สืบค้นข้อมูลจากธนาคารเพื่อลดความเสี่ยงจากการขาดสภาพคล่อง

**Required Risk Response**

|                      | Code (MB)/MHI | Due Date  | Owner | Progress                |
|----------------------|---------------|-----------|-------|-------------------------|
| 1. ฟื้นฟูสภาพการเงิน |               | ต่อเนื่อง | XX    | อยู่ระหว่างการดำเนินการ |

## 3. Evaluate the impact and likelihood of risk occurrence

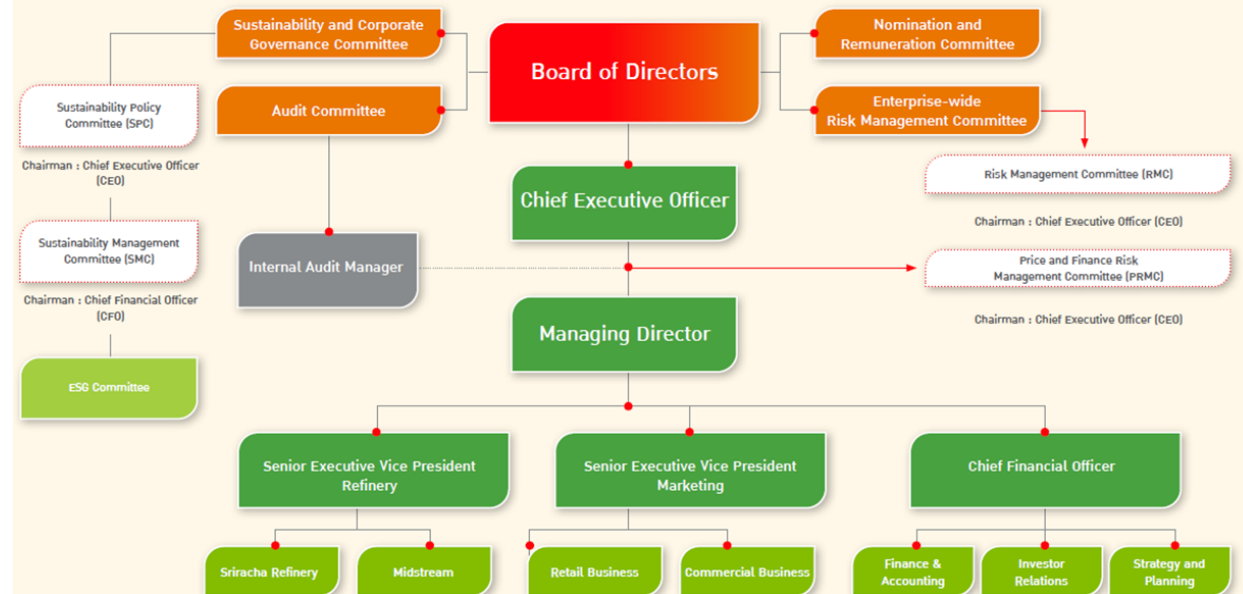


# Risk Management

Describe the Company's processes for managing climate related risks

Bangchak Sriracha Enterprise Risk Management system based on **Committee of Sponsoring Organizations of the Treadway Commission Enterprise Risk Management (COSO ERM)** is intended to help the Company identify, evaluate, and manage risks to lessen potential impact and assist the accomplishment of our long-term goals and business plan.

## Organizational Sustainability Management Structure



Multiple internal and external risk factors that may affect Bangchak Sriracha's business operation have been analyzed both in short term, medium term and long-term period. The system incorporates risks in strategy and finance. It is managed with specific key risk indicators (KRIs) to monitor and track the likelihoods and severity of all identified risks and provides treatment plans to mitigate and minimize the risks and drive operations to succeed as planned. In addition, we have conducted scenario analysis of our own internal carbon price. Carbon tax (aligned with well below 2 degrees Celsius and 1.5 degrees Celsius scenarios) as well as Thailand's cap-and-trade scheme, were considered to identify the financial impact and plan the response strategy in different scenarios. Bangchak Sriracha has been implementing internal carbon shadow prices for new investment decision-making and energy efficiency projects. Examples of actions to mitigate transition risks include reducing GHG emissions through energy efficiency improvement projects to lower emission used in production. Bangchak Sriracha has been enhanced green procurement for products and services through supply chain management.

# Risk Management

Describe **how processes** for identifying, assessing, and managing climate related risks are **integrated into the Company's overall risk management**

**BSRC has a Climate Risk Management process and Integrated into multi-disciplinary company-wide risk management processes of the Company's centralized enterprise risk management program** covering physical risk (acute and chronic) and transitional risk (current regulation, emerging regulation, technology, legal, market and reputation) including opportunity. The Framework and the principles for risk management that Bangchak Corporation has been utilized to systematize the management of risks linked with climate change throughout the Company. The purpose of this is to incorporate climate-related risk management into BSRC internal management to ensure that the Company can preserve and generate long-term value.



5

# Metrics and Targets

# Metrics and Targets (2024)

Disclose the **metrics used** by the Company to assess climate-related risks and opportunities in line with its strategy and risk management process



## Metrics Used to Assess Climate-Related Risks and Opportunities

BSRC utilizes a range of metrics to assess climate-related risks and opportunities, aligning with its strategy and risk management process. Examples of the key metrics are such as: **% Energy Performance (EP), Greenhouse Gas (GHG) Emissions, Water Consumption, Waste Management, etc.**



resulting in the refinery's % Energy  
Performance (EP) of **82.6**



In 2024,  
the Company allocated more than  
**174 million THB**  
in expenses related to environmental  
management

### Targets and Performances

#### 2024 Targets



Greenhouse gas emission  
intensity in Scope 1 & 2  
**< 21** tons/kbbl

#### 2024 Performances



Greenhouse gas emission  
intensity in Scope 1 & 2  
is **21** tons/kbbl

#### Long-term targets



Net Zero Emission by 2050

### Targets and Performances

#### 2024 Targets

To be in the top quartile  
(1<sup>st</sup> QUARTILE)  
of the industry group in the Asia Pacific  
region.

#### 2024 Performances

The refinery's % Energy Performance (EP)  
**82.6**

#### 2050 Long-term targets

To be in the top quartile  
(1<sup>st</sup> QUARTILE)  
of the industry group in the Asia Pacific  
region.



# Metrics and Targets (2024)

Disclose the **metrics used** by the Company to assess climate-related risks and opportunities in line with its strategy and risk management process



## Metrics Used to Assess Climate-Related Risks and Opportunities

BSRC utilizes a range of metrics to assess climate-related risks and opportunities, aligning with its strategy and risk management process. Examples of the key metrics are such as: % **Energy Performance (EP)**, **Greenhouse Gas (GHG) Emissions**, **Water Consumption**, **Waste Management**, etc.

### Targets and Performances in 2024

#### 2024 Targets



- Raw water (Surface Water) consumption per production capacity decreased from the total water demand compared to the base year 2018 by

**30%**



- Wastewater quality meets the standards prescribed by law.

#### 2024 Performances

- Raw water (Surface Water) consumption per production capacity decreased from the total water demand compared to the base year 2018 by

**49.6%**

- Wastewater quality meets the standards prescribed by law **100%**

#### 2025 Goals

- Raw water (Surface Water) consumption per production capacity decreased from the total water demand compared to the base year 2018 by

**30%**

- Wastewater quality meets the standards prescribed by law

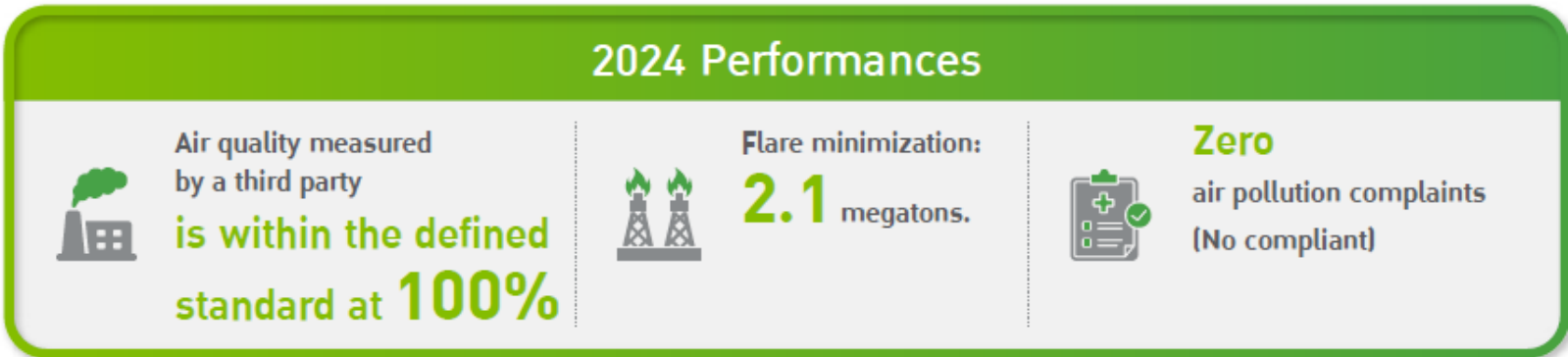
# Metrics and Targets (2024)

Disclose the **metrics used** by the Company to assess climate-related risks and opportunities in line with its strategy and risk management process



## Metrics Used to Assess Climate-Related Risks and Opportunities

BSRC utilizes a range of metrics to assess climate-related risks and opportunities, aligning with its strategy and risk management process. Examples of the key metrics are such as: % **Energy Performance (EP)**, **Greenhouse Gas (GHG) Emissions**, **Water Consumption**, **Waste Management**, etc.



# Metrics and Targets

Disclose **Scope 1, Scope 2**, and, if appropriate, **Scope 3 greenhouse gas (GHG) emissions**, and the related risks



| GHG emissions scope 1, scope 2 and scope 3 |                                                                            |                                          |           |         |            |
|--------------------------------------------|----------------------------------------------------------------------------|------------------------------------------|-----------|---------|------------|
| Indicator                                  | Material Aspect                                                            | Unit                                     | 2022      | 2023    | 2024       |
| GRI 305-1                                  | Total direct GHG emission from production processes (Scope 1) <sup>1</sup> |                                          |           |         |            |
|                                            | Total direct GHG emission from production processes (Scope 1)              | tCO <sub>2</sub> e                       | 1,060,608 | 964,190 | 1,131,250  |
|                                            | • CO <sub>2</sub>                                                          | tCO <sub>2</sub> e                       | 1,058,423 | 961,268 | 1,127,742  |
|                                            | • CH <sub>4</sub> and fugitive CH <sub>4</sub>                             | tCO <sub>2</sub> e                       | 739       | 1,159   | 1,362      |
|                                            | • N <sub>2</sub> O                                                         | tCO <sub>2</sub> e                       | 25        | 39      | 45         |
| GRI 305-2                                  | Total Indirect GHG emission (Scope 2) <sup>2</sup>                         |                                          |           |         |            |
|                                            | Total Indirect GHG emission (Scope 2)                                      | tCO <sub>2</sub> e                       | 5,892     | 5,311   | 5,251      |
|                                            | • Total Indirect GHG emission (Scope 2) [Location-based]                   | tCO <sub>2</sub> e                       | 5,892     | 5,311   | 5,251      |
| GRI 305-1 and GRI 305-2                    | Total GHG emission (Scope 1 and 2)                                         | tCO <sub>2</sub> e                       | 1,066,500 | 969,500 | 1,136,501  |
| GRI 305-4                                  | GHGs intensity (Scope 1 and 2) <sup>7</sup>                                |                                          |           |         |            |
|                                            | Total GHG emission (Scope 1 and 2) per weight of raw materials             | tCO <sub>2</sub> e/kbbl of raw materials | 22.27     | 22.44   | 21.07      |
| GRI 305-3                                  | Other relevant indirect GHG emission (Scope 3) <sup>3,4</sup>              |                                          |           |         |            |
|                                            | Other relevant indirect GHG emission (Scope 3)                             | tCO <sub>2</sub> e                       | -         | -       | 25,001,809 |
|                                            | Use of sold products                                                       | tCO <sub>2</sub> e                       | -         | -       | 25,001,809 |
| GRI 305-5                                  | Reduction of GHG emissions                                                 |                                          |           |         |            |
|                                            | Reduction of GHG emissions                                                 | tCO <sub>2</sub> e                       | 13,431    | 10,597  | 7,211      |

**Remarks:**

1. The emission factors derived from the hydrocarbon composition analysis of gas fuels, IPCC 2006 Guidelines, the API Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Natural Gas Industry (2021), and USEPA AP-42 are used in Scope 1 emissions calculation.
2. The emission factors derived from the Thai National LCI Database, TIIS-MTEC NSTDA, and AR5 with TGO electricity data (2016–2018), compiled by the Thailand Greenhouse Gas Management Organization (TGO) for organizational carbon footprint assessment, are used in Scope 2 emissions calculation.
3. The emission factors derived from the API Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Natural Gas Industry (2021), as well as stationary and mobile combustion data compiled by the Thailand Greenhouse Gas Management Organization (TGO) for organizational carbon footprint assessment, are used in Scope 3 emissions calculation.
4. Bangchak Sriracha Public Company Limited disclosed Scope 3 greenhouse gas emissions for the first time in 2024.
5. Conversion of fuel to energy by applying heating value provided by the Department of Alternative Energy Development and Efficiency.
6. Global Warming Potential (GWP) values are based on the IPCC Fifth Assessment Report (AR5).
7. Greenhouse gas emissions intensity is calculated from scope 1 and 2 emissions.

Statement Registration No.: CFO ECEE 25-057

ECEE

Carbon Footprint for Organization  
Verification Statement

The Verification Body of ECEE CO., LTD. Thailand  
attests that GHG inventory reported by

Bangchak Sriracha Public Company Limited

Site address verified:

3195/21-29 Rama IV Road, Klong Ton, Klong Toey District,  
Bangkok 10110

has been verified in accordance with ISO 14064-3 as meeting the requirements of

TGO Guidance of Carbon Footprint for Organization, 2022

The agreed level of assurance is LIMITED at materiality of 5%

Direct GHG emissions (SCOPE 1) : 1,131,250 tonnes CO<sub>2</sub>e

Energy Indirect GHG emissions (SCOPE 2) : 5,251 tonnes CO<sub>2</sub>e

Other Indirect GHG emissions (SCOPE 3) : 25,001,809 tonnes CO<sub>2</sub>e

Total GHG emission (SCOPE 1&2) : 1,136,501 tonnes CO<sub>2</sub>e (GWP AR5)

Verification Period : 2024-01-01 to 2024-12-31

Mr. Monchai Jittipanyakul  
Managing Director  
ECEE Company Limited  
March 24, 2025



### **Corporate Separateness Notice**

Nothing in this material is intended to override the corporate separateness of entities. Working relationships discussed in this material do not necessarily represent a reporting connection, but may reflect a functional guidance, stewardship, or service relationship. Where shareholder consideration of an entity matter is contemplated by this material, responsibility for action remains with the entity.

In this report, all references to:

Company, BSRC, Bangchak Sriracha, we, us, or our refers to Bangchak Sriracha Public Company Limited

Bangchak, Bangchak Corporation, BCP or BCPT refers to any one or more of BANGCHAK CORPORATION PUBLIC COMPANY LIMITED and/or any of its subsidiaries or affiliates, as the context may require.

