2025 IFRS S2 Climate-related Disclosures

IRPC Public Company Limited

REPORTING PERIOD

1 Jan – 31 Dec 2025

REPORTING ENTITY

IRPC Public Company Limited

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The International Sustainability Standards Board (ISSB) issued IFRS Sustainability Disclosure Standards—IFRS S1 General Requirements for Disclosure of Sustainability related Financial Information and IFRS S2 Climate-related Disclosures—in June 2023, establish a high-quality global baseline for sustainability- and climate-related disclosures in response to growing demand from investors, regulators, and other stakeholders for comparable and decision-useful information on those risks and opportunities. In Thailand, the Securities and Exchange Commission ("SEC") has aligned with this global direction by enhancing sustainability disclosure requirements for issuers and listed companies through revisions to Form 56-1 One Report-S and other relevant disclosure requirements. As part of these requirements, mandatory disclosure will be implemented on a phased-in approach. Listed companies in SET50 will be required to disclose information starting from the 2027 fiscal year. IRPC Public Company Limited and its subsidiaries (collectively "IRPC" or "The Company"), as part of the SET100, will be required to disclose information for the 2028 fiscal year, to be reported in 2029. However, to facilitate practical implementation within the Thai capital market context and avoid undue burden or excessive costs for companies, the SEC has provided transition reliefs during the implementation period.

As a leading player in Thailand's petrochemical and energy sector, IRPC recognizes its responsibility to support national and global efforts to combat climate change and remains committed to addressing this global challenge of climate change by embedding sustainability and resilience into its corporate strategy. To support this commitment, IRPC has voluntarily disclosed sustainability-related information for 2024 fiscal year in alignment with the IFRS Sustainability Disclosure Standards, initially focusing on climate-related disclosures and applying transition reliefs, including climate-first reporting and exemptions for presenting comparative information. In the current year, IRPC continues to demonstrate its strong commitment by enhancing the quality and scope of its climate-related disclosures. During the initial stage of implementation, the Company continues to apply applicable transition reliefs.

IRPC has disclosed information on climate-related risks and opportunities in alignment with IFRS S2 to illustrate how these risks and opportunities could be expected to affect its cash flow, access to finance and cost of capital over the short, medium, and long term. The disclosures are structured in four core content pillars, as follows:

Governance

IRPC has established a systematic governance and management structure for climate change in support of its Net Zero 2050 target, The structure spans the Board, management, and operational levels, providing effective oversight, accountability, and governance of climate-related risks and opportunities throughout the organization.

At the Board level, the Board of Directors defines the vision, targets, and policies related to climate change. The Corporate Governance and Sustainability Committee ("CGSC"), together with the Risk Management Committee ("RMC"), is responsible for overseeing, monitoring, and evaluating the effectiveness of climate-related risk and opportunity management to ensure alignment with corporate policy, business direction, and evolving external contexts.

At the management level, the Management Committee ("MC") is responsible for defining, reviewing, and driving climate-related policies, approaches, and targets in alignment with the Board's directives. The Sustainability Development Committee ("SDC") integrates climate-related actions into operations, monitors progress and regularly reports performance to the CGSC.

Strategy

IRPC has identified three material climate-related risks that could reasonably be expected to affect its business and value chain. These risks are categorized into two types: (1) transition risks, comprising carbon costs and changing market preferences; and (2) physical risk, namely water scarcity. Moreover, the IRPC recognized that climate change also presents opportunities for the Company to expand new revenue streams, particularly through the circular economy for petrochemical products.

To assess resilience, IRPC conducts climate-related scenario analysis to assess physical and transition risks, as well as associated opportunities. These assessments cover the full value chain—upstream suppliers, operations, and downstream clients over short, medium, and long term horizons.

Transition risks and opportunities are assessed using PTT Group-aligned scenarios, including Gradual Green and Delayed Transition scenarios, which incorporate carbon pricing, regulatory changes, technology evolution, and market dynamics. These scenarios are also applied to assess climate-related opportunities, including circular economy initiatives.

Physical risks are assessed under SSP1-2.6 (RCP2.6), SSP2-4.5 (RCP4.5) and SSP5-8.5 (RCP8.5) scenarios, reflecting “sustainability”, “middle of the road” and “fossil-fueled development” pathways, respectively.

The summary of the climate-related risks and opportunities assessment is presented in the table below.

Table 1-1: Summary of climate-related risks and opportunities assessment

RISKS & OPPORTUNITIES	RISK LEVEL	SCENARIOS	RISK LEVEL		
	Baseline (2025)		Short (2026)	Medium (2035)	Long (2050)
TRANSITION RISKS					
Carbon Cost	No material impact	Gradual Green	Low	High	High
		Delayed Transition	Low	High	High
Changing Market Preferences	No material impact	Gradual Green	Low	Low	High
		Delayed Transition	Low	Low	Medium
PHYSICAL RISK					
Water Scarcity	No material impact	SSP1-2.6 (RCP 2.6)	High	High	High
		SSP2-4.5 (RCP 4.5)	High	High	High
		SSP5-8.5 (RCP 8.5)	High	High	High
OPPORTUNITY					
Circular Economy for Petrochemical Products	No material impact	Gradual Green	Low	Medium	Medium
		Delayed Transition	Low	Medium	Medium

Low Medium High

In addition, IRPC has assessed the financial impact of climate-related risks and opportunities, along with their anticipated effects over short, medium and long term. To address these risks and opportunities, IRPC has implemented its ERA strategy, comprising Eco-operation & Technology, Reshape Portfolios and Absorption and Offset. The table below presents a summary of current and anticipated financial effects under each scenario.

Table 1-2: Summary of financial effects of climate-related risks and opportunities [1]

RISKS & OPPORTUNITIES	CURRENT (2025)	SCENARIOS	ANTICIPATED FINANCIAL EFFECTS		
			Short (2026)	Medium (2035)	Long (2050)
TRANSITION RISKS					
Carbon Costs	No material impact	Gradual Green	No material impact	Operating Expense ↑	
		Delayed Transition			
Changing Market Preferences	No material impact	Gradual Green	No material impact		Revenue ↓
		Delayed Transition			
PHYSICAL RISK					
Water Scarcity	No material impact	SSP1-2.6 (RCP 2.6)		Revenue ↓	
		SSP2-4.5 (RCP 4.5)		Operating Expense ↑	
		SSP5-8.5 (RCP 8.5)			
OPPORTUNITY					
Circular Economy for Petrochemical Products	No material impact	Gradual Green	No material impact	Revenue ↑	
		Delayed Transition			

Risk Management

IRPC has established processes for identifying, assessing, prioritizing and monitoring climate-related risks and opportunities which are integrated into the Enterprise Risk Management (“ERM”) framework to ensure consistency with overall risk governance and strategic decision-making. These risks and opportunities are identified through internal assessments and external public data from reputable sources, including regulatory changes, market trends, technological advancements, and physical climate impacts. They are evaluated based on their likelihood and potential impact and are prioritized accordingly. Identified risks are continuously monitored, with mitigation measures and response plans developed and implemented by relevant business units. Progress and effectiveness are regularly reviewed to ensure timely adaptation to changing risk conditions.

[1] The summary of financial effects presents the current and anticipated financial impacts of climate-related risks before considering adaptation and mitigation actions. IRPC has identified these climate-related risks and opportunities as material and is implementing, or plans to implement, various mitigation measures to address them. As a result, the Company may incur additional operating expenditures (OPEX) and capital expenditures (CAPEX) associated with these mitigation efforts.

Metrics and Targets

In the current year, IRPC has upgraded its target to achieve Net Zero GHG emissions from 2060 to 2050 and has enhanced its climate strategy by shifting its primary focus from Carbon Neutrality to Net Zero. This aligns with the direction of the PTT Group, Thailand's NDC 3.0, and international climate commitments. The following table presents GHG emission performance against with targets for achieving Net Zero GHG emission.

Table 1-3: Summary of GHG emissions performance and targets

GHG EMISSIONS ($MtCO_2e$)	PERFORMANCE		TARGET		REDUCTION TARGET FROM BASE YEAR [2]		
	2024	2025	2024	2025	Short (2026)	Medium (2030)	Long (2050)
Scope 1	3.29	3.20	–	–	–	–	–
Scope 2 Market Based	0.48	0.51	–	–	–	–	–
Total Scope 1 & 2 Market Based	3.77	3.71	4.00	3.87	7%	20%	100% to achieve Net Zero Emission
Scope 3	11.37	13.34	–	–	–	–	–
Total Scope 1 – 3	15.14	17.05	–	–	–	–	–

In addition, IRPC discloses both cross-industry and industry-based metrics in accordance with IFRS S2 requirements for the Oil & Gas—Refining & Marketing and Chemicals sectors, based on the IFRS S2 Industry-based Guidance ("IFRS S2 IBG"), to demonstrate the effectiveness of its climate management.

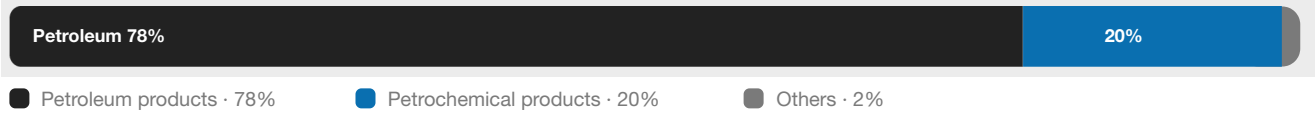
This IFRS S2 Climate-related Disclosures Report marks a key milestone in IRPC's sustainability journey, enhancing stakeholder confidence and advancing alignment with IFRS Sustainability Disclosure Standards. IRPC remains committed to continuously improving its disclosures, systems, and capabilities to achieve full compliance with the sustainability disclosure standards issued by ISSB and deliver transparent, credible sustainability reporting. These efforts represent another important step toward achieving IRPC's Net Zero ambition and advancing its long-term sustainability journey.

[2] Base year is 2019 with total GHG emissions of 4.12 MtCo2e

IRPC's Business Operations and Value Chain

2.1 Business Operations and Revenue Structures

IRPC is a producer of integrated petrochemical products, with a comprehensive industrial complex comprising upstream units, an oil refinery and downstream petrochemical production facilities. The Company generates revenues from the distribution and sales of products, consisting of petroleum products, petrochemical products and others, which account for 78%, 20% and 2% of total net sales revenue, respectively. IRPC's business activities are structured into the following key segments:

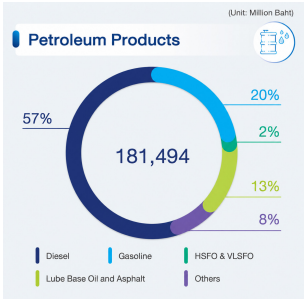


Petroleum Business

IRPC operates an oil refinery business with a total production capacity of 215,000 barrels per day, ranking third in the country in terms of refining capacity. The refinery produces a wide range of petroleum products, including liquefied petroleum gas (LPG), naphtha, gasoline, diesel, and commercial jet fuel (Jet A-1).

In addition, IRPC operates a base oil plant (Lube Base Oil Group I) with a production capacity of 320,000 tons per year, as well as an asphalt plant with a capacity of 600,000 tons per year, the highest capacity in the country. The Company also produces raw materials for tire and synthetic rubber manufacturing(Rubber Process Oil), which meet internationally quality standards.

Figure 2-1: Revenue breakdown by petroleum product



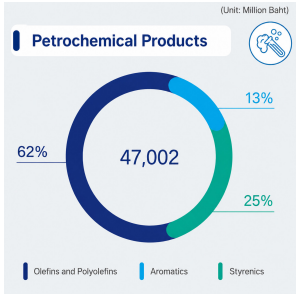


Figure 2-2: Revenue breakdown by petrochemical product

Petrochemical Business

IRPC is a producer of basic petrochemical products, including olefins and aromatics, most of which are used internally as raw materials for downstream petrochemical production, such as polyolefin plastic pellets (HDPE, PP) and styrenic plastic pellets (ABS/SAN, PS, EPS). The products are distributed to manufacturers and plastic processors across various industries to meet both domestic and international market demands under the brand"POLIMAXX".

Other Business

Power and Utilities

The power and utilities business provides electricity, steam, and essential utilities, including wastewater treatment and other related services, focusing on reliable services to support uninterrupted operations for customers in the IRPC Industrial Estate.

Port Business

IRPC provides berthing services for the loading and unloading of goods for both domestic and international transportation. The port facilities are available to third parties, supporting logistic and distribution across various regions. The Company's Deep-Sea Port is located in the Eastern Region, specifically in Rayong Province.

Storage Tank Business

IRPC provides storage tank services for petroleum and liquid petrochemical products, supporting its distribution operation and third parties through facilities located in various regions, including major depots in Rayong, Phra Pradaeng, Ayutthaya, and Chumphon.

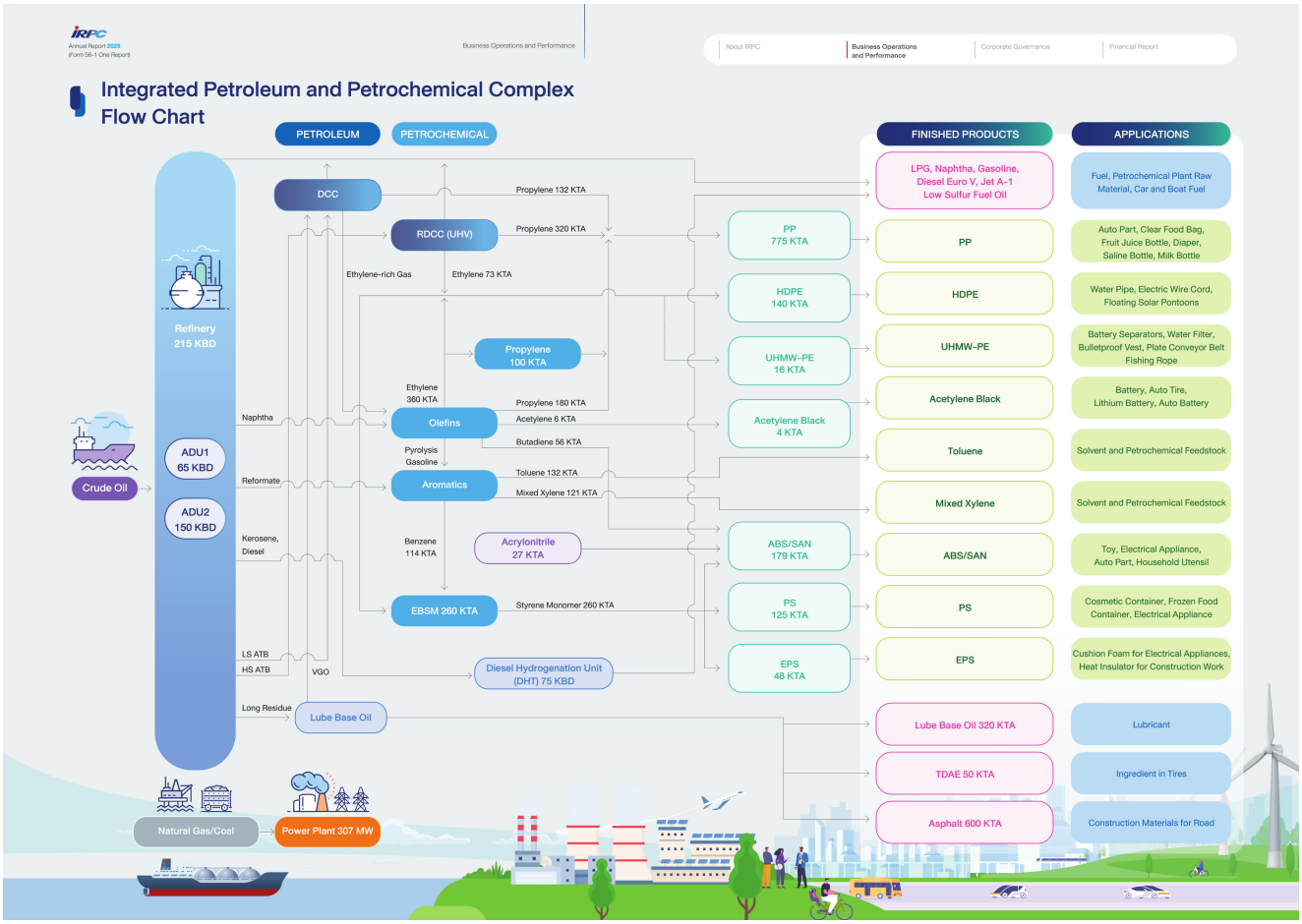
Asset Management Business

This encompasses transactions such as leasing and granting usage rights of land, buildings, structures, and related assets for business purposes or other commercial activities align with the Company's operational direction. The primary strategic location is the IRPC Industrial Estate in Rayong Province.

2.2 Business Value Chain

Our operations span the entire value chain—from oil refining to upstream, midstream, and downstream petrochemical production—supported by robust infrastructure including a deep-sea port, oil storage terminals, and an on-site power plant. The structure of IRPC's value chain is illustrated below:

Figure 2-3: IRPC's value chain



Basis of Preparation

3.1 IFRS Sustainability Disclosure Standards

This report presents the climate-related disclosures of IRPC Public Company Limited and its subsidiaries (collectively, “IRPC” or “the Company”) for the year ended 31 December 2025, which has been prepared aligned with the IFRS Sustainability Disclosure Standards as issued by the International Sustainability Standards Board (“ISSB”).

3.2 Financial Statements Connection

The climate-related financial information in this report covers the 12-month period from 1 January to 31 December 2025. This report has been prepared to accompany the consolidated financial statements for the year ended 31 December 2025. The presentation currency of the sustainability-related financial disclosures in this report is Thai Baht, consistent with that of the consolidated financial statements. Amounts disclosed are rounded to the nearest million, except where indicated otherwise.

3.3 Standard Adoptions and Transition Reliefs

The SEC is in the process of developing an ISSB-aligned roadmap to incorporate IFRS Sustainability Disclosure Standards into its mandatory reporting forms, particularly 56-1 One Report. Under this initiative, SET100-listed companies, including IRPC, will be required to prepare disclosures in accordance with these standards by 2029, based on 2028 reporting data.[3]
Recognizing investors’ increasing focus on sustainability-related risks and opportunities that could affect to the Company’s operations and financial position, IRPC has voluntarily disclosed sustainability-related financial information aligned with the IFRS Sustainability Disclosure Standards for its reporting period ended 31 December 2024. This disclosure initially focused on climate-related financial information.

For the 2025 IFRS S2 Climate-related Disclosures, IRPC continues to enhance the quality of its climate-related disclosures. During the initial phase of implementation, the Company has applied applicable transition reliefs as follows:

- Relief from the requirement to disclose comparative information for the year ended 31 December 2024 (the prior period).
- Relief for climate-first reporting, limiting disclosures to climate-related risks and opportunities and applying requirement only to the extent relevant to concepts foundations and general requirements of IFRS S1.
- Relief from the requirement to issue the IFRS S2 Climate-related Disclosures report concurrently with the consolidated financial statements.

However, IRPC may additionally disclose comparative information where such information has already been presented in the 2024 report to enhance the usefulness of this report for users.

[3] Announcement of the Revision of Principles Related to Sustainability Disclosure in Accordance with ISSB

3.4 Reporting Boundary

The reporting entities included in this report comprise the Company and its subsidiaries, consistent with those used in the preparation of the consolidated financial statements for the year ended 31 December 2025. (Please refer to “Notes to financial statements No. 2.2 Basis of consolidation” in the financial statements). The reporting boundary includes the following entities:

Figure 3-1: Location of IRPC’s operations

Own operations

- Head Office — Rayong
- Head Office Branch 14 — Bangkok
- Oil Depot — Chumphon
- Oil Depot — Samut Prakan
- Oil Depot — Ayutthaya
- Refinery, petrochemical plant, power plant, oil depot & port — Rayong

Subsidiaries

Table 3-1: List of IRPC’s subsidiary companies

SUBSIDIARY’S NAME	SHAREHOLDING	BUSINESS	LOCATION
IRPC Oil Company Limited	99.99%	Petroleum	Bangkok
Rakpasak Co., Ltd.	99.99%	Petroleum	Bangkok
Innopolymed Co., Ltd. [4]	60.00%	Petrochemical	Bangkok
IRPC A&L Company Limited	57.48%	Petrochemical	Bangkok
iPolymer Company Limited	55.00%	Petrochemical	Bangkok
IRPC Technology Co., Ltd.	99.99%	Others	Rayong

Moreover, the reporting entity applied in preparing climate-related disclosures in this report extends beyond IRPC’s own operation and subsidiaries. The Company has comprehensively assessed its joint ventures, associates and other investments as part of its value chain.

[4] On 21 May 2025, the Company’s Board of Directors approved the dissolution of Innopolymed Co., Ltd. The registration of dissolution was completed in 2025.

3.5 Judgments, Uncertainties and Proportionality

The preparation of climate-related disclosures requires the application of management judgments, including the use of assumptions subject to uncertainty in the assessment of various areas, as described in the following:

Table 3-2: Key areas using significant judgments and measurement uncertainties

TOPIC	DESCRIPTION	REFERENCE
Identification of climate-related risks and opportunities	Significant judgement was applied throughout the process of identifying climate-related risks and opportunities, including the selection of relevant data sources and the determination of material risk and opportunity matters that could be expected to affect the Company.	5.3 Climate-related Risks and Opportunities
Anticipated financial effects	The assessment of anticipated financial effects involves the use of forward-looking estimates and assumptions and is subject to uncertainty arising from changes in future conditions and circumstances, as well as limitations in the availability of data. Accordingly, certain risks and opportunities cannot be quantitatively estimated due to the high level of measurement uncertainty associated with such assessments.	5.3 Climate-related Risks and Opportunities
Climate-related scenario analysis	Climate-related scenario analysis requires the application of significant management judgment across several key areas, including the selection of appropriate scenario pathways, the determination of key assumptions, the selection of data sources and models, and the assessment of potential impacts on IRPC's business operations. The analysis is also subject to inherent uncertainties arising from future conditions and factors, including changes in government policies, and limitations in data availability.	5.4 Climate Resilience
Measurement approach for Scope 3 GHG emissions	IRPC applies significant judgment in measuring its Scope 3 GHG emissions, including the classification of emissions categories and the selection of appropriate methodologies. Such measurements involve the use of estimates due to inherent limitations and uncertainties in activity data, emission factors, and data availability across value chain.	7.3 GHG Emissions Measurement Approaches

IRPC has applied the proportionality mechanisms within the IFRS Sustainability Disclosure Standards, which allow the use of reasonably available and supportable information without incurring undue cost or effort, while aligning the Company's approach with its skills, capabilities and resources.

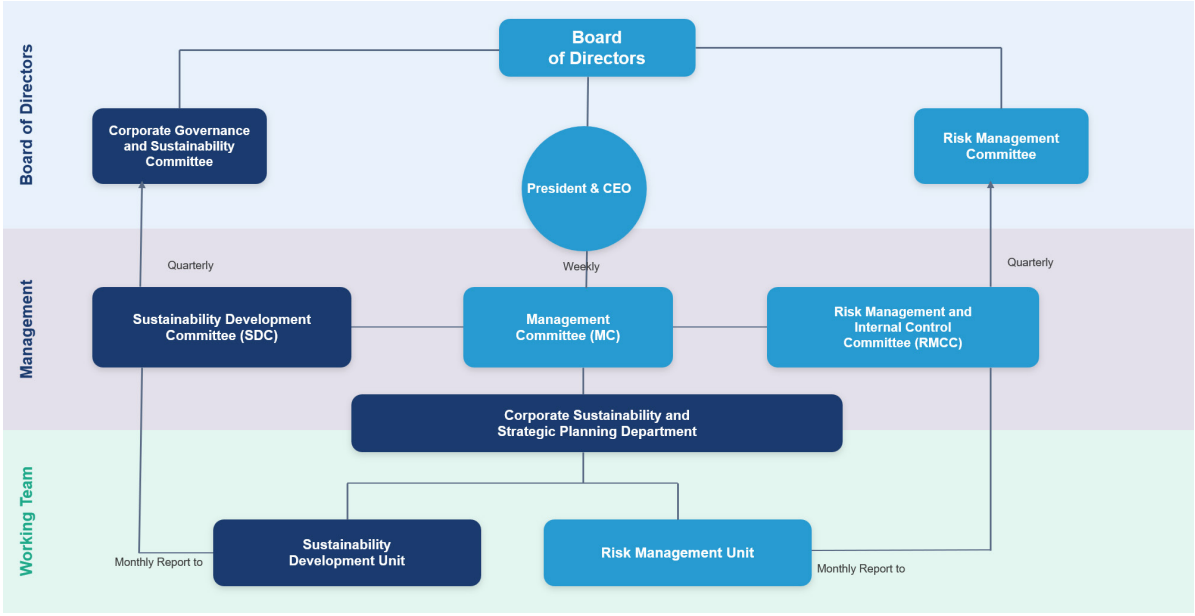
Governance

4.1 Organizational Structure of Climate Governance

IRPC has established a robust governance framework to effectively manage climate-related risks and opportunities, ensuring strategic alignment across all organizational levels, from the Board of Directors and the Corporate Governance and Sustainability Committee ("CGSC") to management and operational team through the Sustainability Development Committee ("SDC") and the Sustainability Development Unit. This structure is designed to integrate climate-related consideration into corporate decision-making by embedding into strategy development, risk management, reporting mechanisms and investment decision-making.

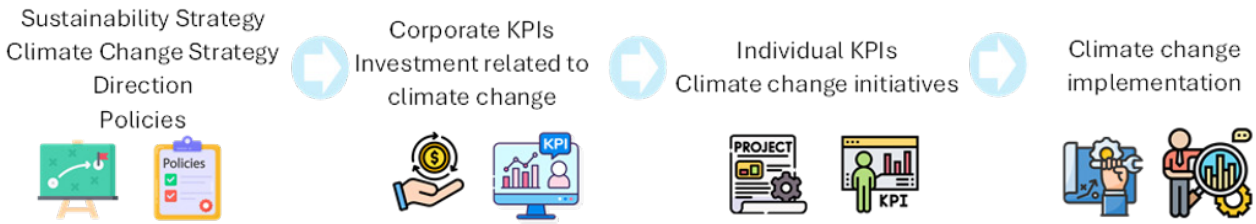
This governance framework, with clearly defined oversight and accountability, enhances transparency, strengthens risk mitigation, and supports continuous improvement in climate-related performance. The structured approach enables IRPC to proactively address climate challenges while aligning with evolving regulatory and investor expectations.

Figure 4-1: Sustainability management governance structure



The figure below presents a structured process for translating IRPC's Climate Change Strategy into concrete actions, starting from the Company's sustainability direction and climate policies, which are cascaded into corporate KPIs and climate-related investment priorities, and subsequently translated into individual KPIs and project-level responsibilities. This approach ensures clear alignment from strategy to execution, strengthens accountability across the organization, and enables effective implementation of climate change initiatives with measurable outcomes.

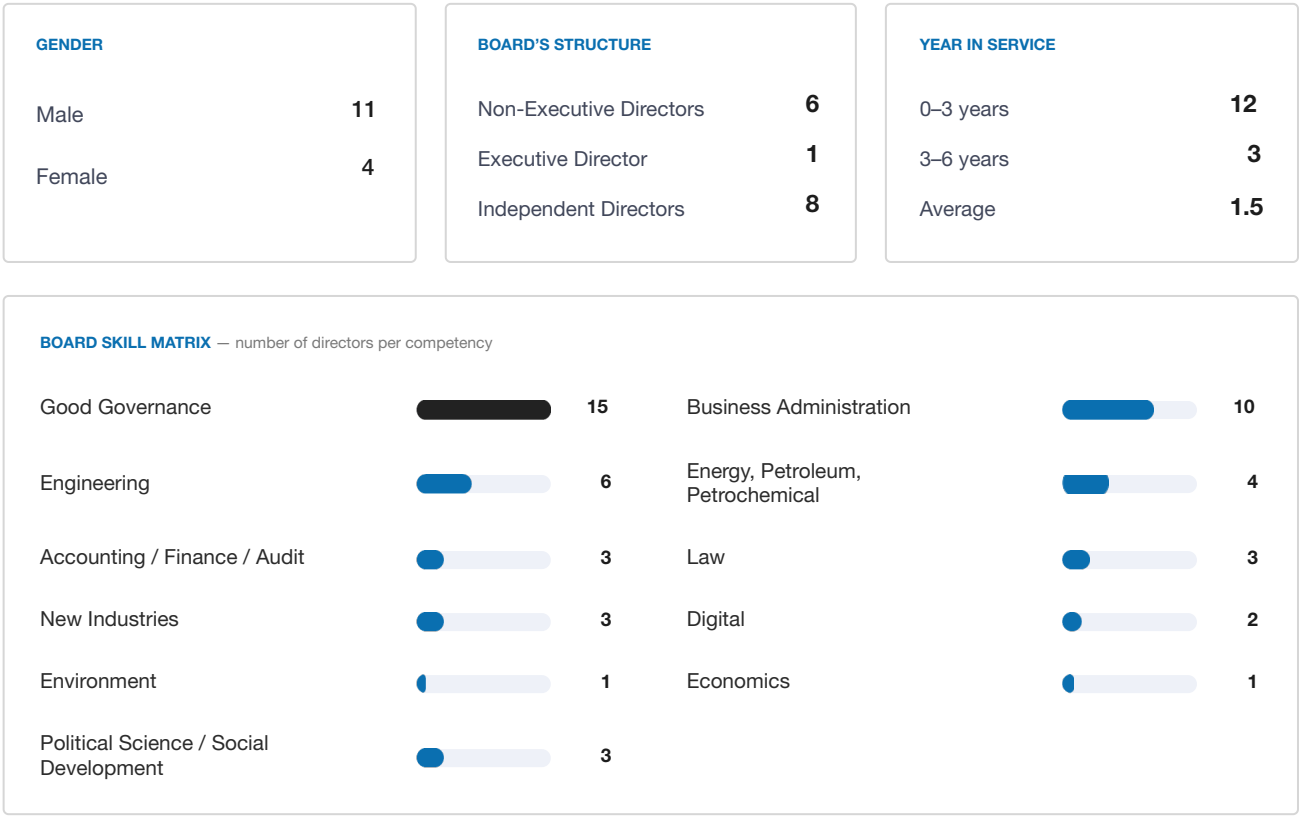
Figure 4-2: Process for Translating the Climate Change Strategy into Actions



4.2 Climate-Related Skills and Training for Board Level

The Board of Directors consists of 15 members, including key committees related to governance and sustainability, comprising four members of the Corporate Governance and Sustainability Committee (“CGSC”) and four members of the Risk Management Committee (“RMC”). The Board is composed of experts in corporate governance, risk management, environmental matters, and the energy industry. These competencies are essential for overseeing strategies, policies, and action plans to effectively address climate-related challenges. The Board skills matrix is presented below.

Figure 4-3: Composition of the Board of Directors



IRPC encourages directors and executives to attend courses and seminars beneficial for their duties in business management, industry, and their roles and responsibilities as directors and executives. During this year, the Company organized a lecture for the CGSC, delivered by experts from the Department of Climate Change and Environment, to enhance understanding of key issues and strategic directions for achieving the Company’s Net Zero goal in a sustainable manner. Moreover, IRPC regularly evaluates directors’ capabilities and development needs to ensure a forward-looking Board that can lead proactive climate strategies.

4.3 Governance Roles and Responsibilities

IRPC has established a clear governance structure with defined roles and responsibilities for relevant governance bodies and management to effectively oversee climate-related risks and opportunities. Details of the roles and responsibilities of each governance body are disclosed below.

Table 4-1: Roles and Responsibilities of governance bodies and management

RESPONSIBLE BODY	ROLES AND RESPONSIBILITIES	MEETING FREQUENCY
BOARD-LEVEL OVERSIGHT[5]		
Board of Directors	The Board of Directors defines the vision, targets, policies related to climate change, as well as approves financial and investment direction for climate-related mitigations and initiatives. The CGSC and the RMC play central roles in sustainability and climate-related matters. They work together to oversee, monitor, and evaluate the effectiveness of managing climate-related risks and opportunities, ensuring alignment with corporate policy, business direction, and evolving external conditions.	Quarterly
Corporate Governance and Sustainability Committee ("CGSC")	The CGSC is responsible for monitoring and evaluating the implementation and progress of climate-related strategies and policies. The roles and responsibilities of the CGSC in relation to climate governance are as follows: • Provide recommendations on the Company's sustainability policy framework, strategies, and development approaches to align with international standards and support sustainable growth • Advice on sustainability development plans and ESG goal setting to ensure alignment with policies, laws, and best practices • Oversee and monitor sustainability performance, ensuring transparent disclosure in line with relevant standards and practices • Review and update sustainability policies and operational practices to remain current and appropriate • Review and approve the Sustainability Report prior to publication	Quarterly
Risk Management Committee ("RMC")	The RMC plays a key role in reviewing and recommending management measures for strategic risks, as well as providing directions on corporate risk management. This includes monitoring and overseeing climate-related risks and opportunities by integrating climate considerations into enterprise risk management processes, in according with established policy and strategic directions, as well as evaluating potential impacts on business operations and investment arising from climate-related risks and other corporate risks.	Quarterly

[5] Details of the members of each sub-committees are disclosed in the "Information on Sub-Committees" section of the Annual report 2025 (page 247).

RESPONSIBLE BODY	ROLES AND RESPONSIBILITIES	MEETING FREQUENCY
MANAGEMENT-LEVEL OVERSIGHT [6]		
Management Committee (“MC”)	The MC is responsible for defining, reviewing, and driving climate-related policies, approaches, and targets in alignment with the Board’s directives. In addition, the MC collaborates with the SDC to shape sustainability strategies and directions and to review performance against key metrics, such as GHG emissions reduction in tCO2e, which serves as an indicator of operational effectiveness.	Quarterly
Sustainable Development Committee (“SDC”)	The SDC is responsible for the following functions: • Formulating and reviewing policies, frameworks, targets, guidelines on sustainable development, and GHG emissions reduction (Decarbonization) in alignment with business direction, ESG principles and best practices • Driving the integrated implementation of sustainability plans, including climate-related plans, decarbonization initiative and business plans • Overseeing and providing approvals or recommendations on the Company’s investment projects where returns may be materially impacted by the applicable of the internal carbon price (ICP) mechanism • Supporting resource management and approving related budgets • Monitoring, reviewing and reporting performance on sustainability and GHG emissions reduction against established targets.	Monthly
Risk Management and Internal Control Committee (“RMCC”)	The RMCC are responsible for monitoring, analyzing, and assessing situations that may impact the Company’s operation from all perspectives, including climate-related physical risks, transition risks and opportunities.	Quarterly

[6] Detail of executives are disclosed in the “Information about Key Executives and Committees (Management Level)” section of the Annual report 2025 (page 255).

4.4 Climate-Related Management Incentives

To strengthen climate-related risk management, IRPC integrated climate-related metrics into its corporate KPIs framework. The Chief Executive Officer ("CEO") was directly accountable for driving the Company's climate agenda through performance evaluation criteria and KPIs setting focused on GHG emissions, net zero commitments, and energy intensity index.

This top-down approach was cascaded throughout the organization. Executives in relevant functions were assigned specific KPIs related to emission reduction and energy efficiency, ensuring accountability at all levels. These functional KPIs were aligned with the overall corporate objectives and supported the achievement of IRPC's climate-related goals.

By linking executive compensation and performance evaluation to climate-related metrics, IRPC aims to foster a culture of sustainability and drive measurable progress in mitigating climate-related risks.

Key elements of the incentive structure are presented in the table below:

Table 4-2: Performance evaluation criteria and KPIs setting

GOVERNING BODY	TYPE OF INCENTIVE [7]	PERFORMANCE EVALUATION CRITERIA AND KPIs SETTING
CEO-level	Monetary	• GHG emissions • Net zero commitments • Energy intensity index
Functional Executive-level	Monetary	• Emission reduction targets • Energy efficiency improvements

This comprehensive approach enables IRPC to effectively manage climate-related risks and opportunities, enhance its sustainability profile, and contribute to a low-carbon future.

[7] Types of incentives include monetary (financial rewards) and non-monetary (e.g., recognition, rewards that do not involve money).

Strategy

Climate change is intensifying globally, creating economic, environmental, and social impacts. For IRPC, as a petrochemical and energy company, these challenges may result in operational disruptions, supply chain constraints, financial impacts, GHG emissions, resource depletion, and ecosystem degradation.

This section outlines the climate-related risks and opportunities that could reasonably be expected to affect the Company's strategy, financial position, financial performance, and cash flows. It also describes IRPC's mitigation and adaptation efforts, together with the strategic actions undertaken to manage and respond to these risks and opportunities. Furthermore, climate resilience is presented to demonstrate the Company's capacity to adapt and adjust its strategy and business model under various scenarios.

5.1 Time Horizons

IRPC established standardized time horizons for assessing and responding to climate-related risks and opportunities. These identified time horizons are aligned with the Company's strategic planning and decision-making frameworks.

Figure 5-1: Time horizons

2026

Short-term
1–2 years

Align with the annual planning

2035

Medium-term
3–10 years

Align with PTT's Group's decarbonization strategy and interim targets

2050

Long-term
>10 years

Align with PTT Group, Thailand's NDC 3.0 and international commitments for achieving Net Zero Target

5.2 Transition Plan

IRPC is actively pursuing its goals of achieving Net Zero Emission by 2050 through the implementation of its "ERA strategy".

Figure 5-2: Three pillars to transition net zero portfolio (ERA Strategy)

E: Eco-Operation & Technology

Asset Efficiency Improvement

- Holistic Steam Management
- Reduce Excess Oxygen in the Heater Furnace
- Main Fractionator Heater Coating (VGOHT Unit)

Clean Energy Management

Hydrogen & Derivatives

R: Reshape Portfolio

Reshape the business portfolio toward circular economy and differentiated, sustainable petrochemical products, with an emphasis on research, development and innovation.

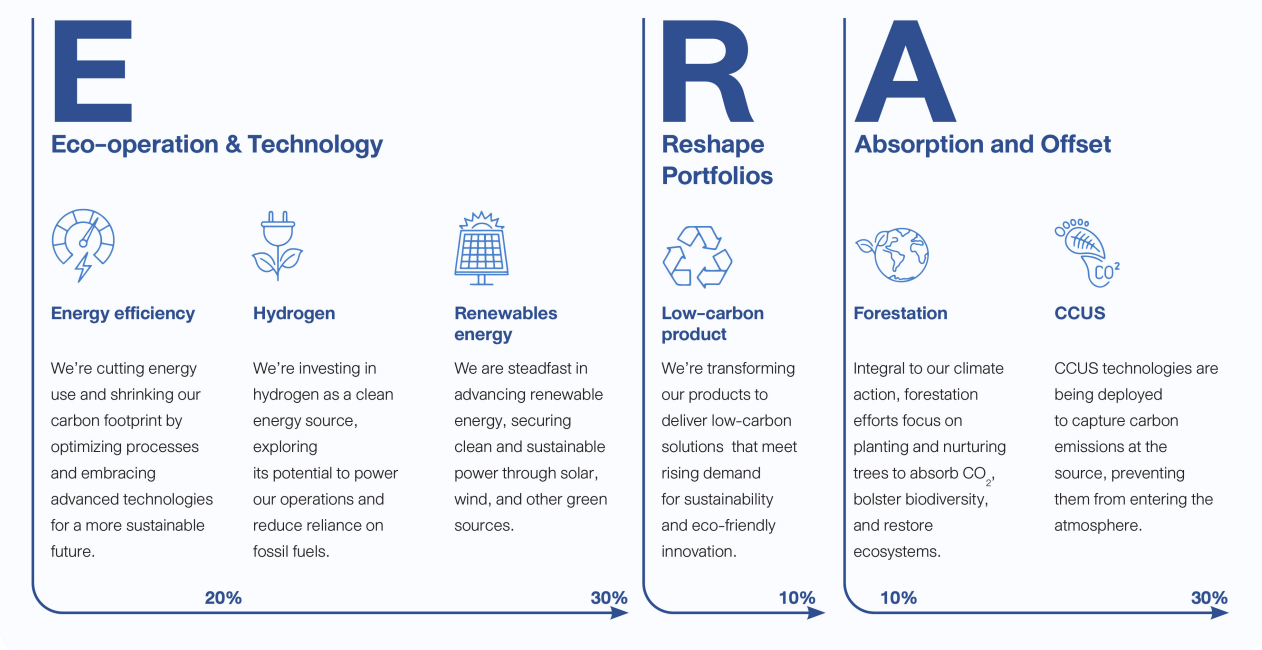
A: Absorption & Offset

Carbon Capture, Utilization, and Storage (CCUS)

Carbon Credits Management

In accordance with its target of achieving net zero Scope 1 and Scope 2 GHG emissions by 2050, the Company has allocated the proportion of its GHG emissions reduction potential from operations under the ERA strategy as follows:

Figure 5-3: Details of Three pillars to transition net zero portfolio (ERA Strategy)

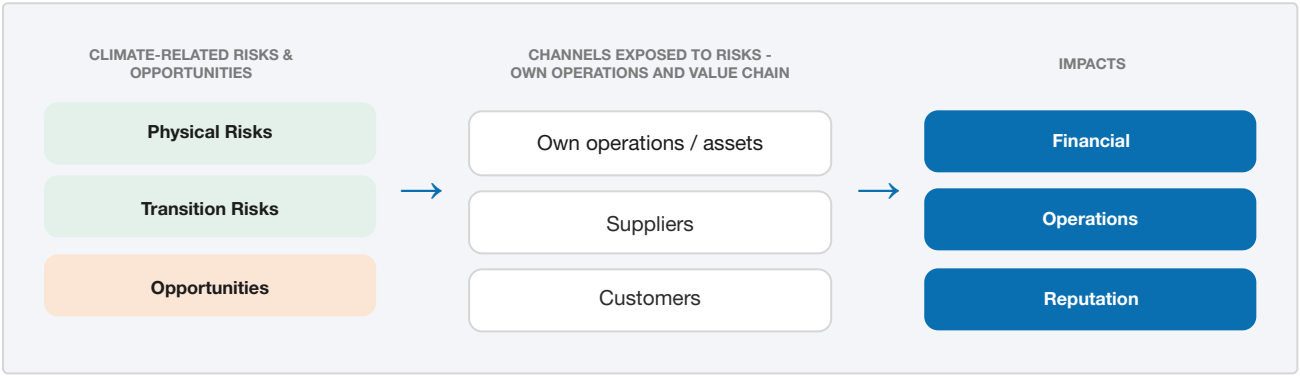


Further details of projects implemented under these three pillars of transition plan are disclosed in Sections "5.3.1 Transition Risk – Carbon Cost" and "5.3.4 Opportunity – Circular Economy for Petrochemical Products"

5.3 Climate-related Risks and Opportunities

Climate-related risks and opportunities are becoming increasingly important in shaping the environment in which companies operate and directly affect business operations. IRPC assessed physical risks, transition risks, and opportunities, prioritizing those with all direct and indirect impacts on its own business operations and value chain. The assessment covered potential effects on financial performance, business operations, and reputation.

Figure 5-4: Risks and opportunities impact assessment



Moreover, utilizing a structure methodology, the Company conducted climate-related scenario analysis annually to assess and quantify financial impacts of material climate-related risks and opportunities.

Climate-related Transition Risks

IRPC has identified and assessed transition risks associated with the shift to a low-carbon economy, including policy and legal, technology, market, and reputation factors. The Company identified carbon cost and changing market preferences as material transition risks that could be expected to affect its business operations, particularly as governments implement more stringent regulations and customers increasingly demand low-carbon products.

To assess the resilience of its strategy and business operations, the Company conducts two climate-related scenarios aligned with PTT Group framework, as follows:

Table 5-1: Transition risk scenario analysis

Scenario : Gradual Green	Scenario : Delayed Transition
A scenario that assumes climate policies are introduced early and become gradually more stringent over time, resulting in a steady and continuous increase in carbon prices.	A scenario where climate policy action is delayed or inconsistent across countries and sectors, resulting in a lower carbon price trend compared to an Gradual Green pathway, along with a more fragmented transition process.

For assessment of impact on the Company's business, value chain, and financial performance presented in this section, the Delayed Transition scenario was used as the business-as-usual assumption.

5.3.1 Transition Risk – Carbon Cost

5.3.1 · TRANSITION RISK

Carbon Cost

Medium-term · 2035 | Long-term · 2050

Table 5-2: Details of potential impacts on IRPC's business model and mitigation strategies for carbon cost risk (transition risk)

Topic	Description
Nature of the risk	IRPC's core business in petroleum refining and petrochemical production are highly carbon-intensive and, therefore, is exposed to the enforcement of emerging laws and mechanisms, including the Climate Change Act, emission trading system ("ETS") and a carbon tax. These carbon-related cost pressures have led to an increased in the Company's operating costs and necessitate further improvement in operation efficiency, fuel switching, and investments in low-carbon technologies, which may place additional pressure on the Company's financial planning and profitability. This transition risk is particularly significant for business activities associated with high carbon emissions. In 2025, nearly 100% of IRPC's revenue was derived from carbon-intensive activities, with petroleum and petrochemical revenues amounting to Baht 181,494 million and Baht 47,002 million, respectively.
Effects on business model and value chain	The Company expects that the significant impact of this risk on its business will primarily occur over the medium and long term, as carbon pricing mechanisms in Thailand remain under development in the short term. However, as these mechanisms become more formalized, the Company anticipates potential effects on its business model and value chain, as outlined below: • I**ncrease operational costs and decrease profit margins:** IRPC will be exposed to higher operational costs for carbon-intense petroleum and petrochemical processes. This could result in reduced profit margin, particularly where the ability to pass on increased costs is constrained by commodity pricing dynamics. • **Increased Capital Expenditure:** The introduction of carbon pricing mechanisms, including carbon taxes and ETS, may require additional capital expenditures to ensure compliance, manage carbon-related costs, and invest in emissions reduction initiatives in line with regulatory requirements.
Responses and adaptation plan	The Company has established a comprehensive approach to manage these transition risks in support of its Net Zero 2050 target. Mitigation measures are primarily driven by two key pillars under the ERA Strategy.

Topic	Description
Responses and adaptation plan	

Table 5-3: Response measures and adaptation plans under each ERA strategy

ERA STRATEGY	RESPONSE MEASURES AND ADAPTATION PLANS
Eco-Operation & Technology	Asset Efficiency Improvement • Holistic Steam Management • Reduce Excess Oxygen in the Heater Furnace • Main Fractionator Heater Coating (VGOHT Unit) Clean Energy Management Hydrogen & Derivatives
Absorption and Offset	Carbon Capture, Utilization, and Storage (CCUS) Carbon Credits Management

Collectively, these pillars are supported by targeted initiatives aimed at reducing GHG emissions and enhancing climate resilience. Such initiatives are designed to mitigate exposure to carbon pricing risk through reductions in emissions intensity, diversifying energy sources, and strengthening of carbon management capabilities across operations. The Company's current projects implemented under these pillars are presented below:

Asset Efficiency Improvement

Holistic Steam Management

The Company has implemented a holistic steam management approach to enhance energy efficiency, reduce operating costs, and improve system stability. Increasing the 25-bar steam supply from Steam Generation Unit 4 has improved boiler efficiency from 77% to 82%, resulting in reduced fuel consumption and lower GHG emissions of approximately 952 tCO_2e per year. The project, completed during this year, also enhances operational flexibility following the coal-fired power plant shutdown and supports the Company's energy efficiency and climate objectives.

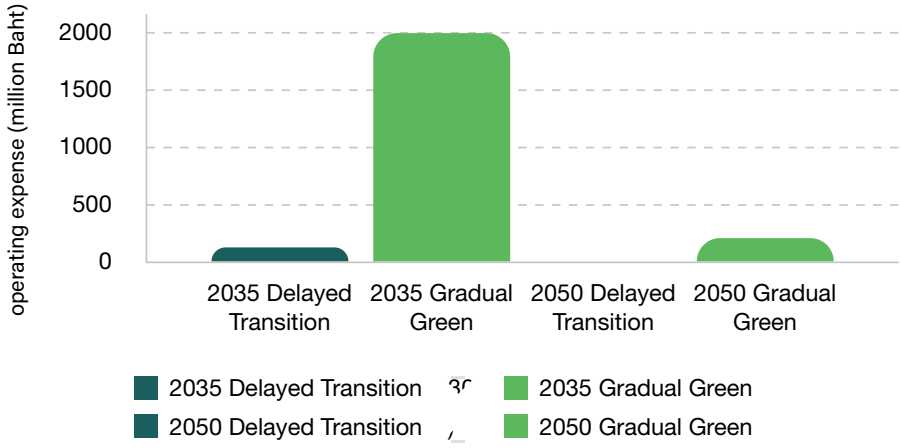
Reduce Excess Oxygen in the Heater Furnace

The Company implemented a project to optimize excess oxygen levels in the heater furnace by upgrading the flue gas damper control system, improving fuel efficiency and combustion performance. The upgrade enables more precise air flow control, reducing excess air and enhancing combustion stability, resulting in an increase in heater efficiency from 82% to 86%. This improvement has led to fuel energy savings of approximately 43,705 GJ per year and a reduction in GHG emissions of approximately 2,810 tCO_2e per year, generating estimated cost savings of Baht 15–22 million annually. The project, completed during the year, reflects the Company's commitment to energy efficiency, reducing environmental impacts, and supporting its long-term energy conservation strategy.

Topic	Description
Responses and adaptation plan	**Main Fractionator Heater Coating (VGOHT Unit)** The Company implemented a coating project for the Main Fractionator Heater in the VGOHT unit to improve fuel energy efficiency and reduce heat loss by applying a high-temperature coating to the furnace interior. This enhanced heat utilization and reduced fuel gas consumption by approximately 4.6%, resulting in energy savings of around 10,173 GJ per year and cost savings of approximately Baht 2.56 million annually. The project demonstrates strong economic viability while reducing GHG emissions by approximately 543 tCO_2e per year and supporting the Company's long-term sustainability objectives. The project was completed during the year, with an investment of Baht 1.56 million and a payback period of approximately nine months. **Clean Energy Management** **Solar Floating Project** The project utilizes three reservoirs primarily designated for water supply production, with solar panels installed on the earthen surfaces (approximately 200 rai). The system has a total installed capacity of 12.5 MW (peak of 8.5 MW), which is distributed to IRPC's industrial facilities. This project was awarded the Thailand Voluntary Emission Reduction ("T-VER") certificate by the Thailand Greenhouse Gas Management Organization ("TGO") and is expected to reduce GHG emissions by an average of 9,459 tCO_2e per year over the 7-year carbon credit calculation period from 1 January 2021 to 31 December 2027. The project was completed during the year. **Hydrogen & Derivatives** IRPC has been working with PTT Group to study Hydrogen & Derivatives as a strategic pathway to support the low-carbon energy transition and future decarbonization opportunities. The study focuses on three key areas: the domestic and regional H2/NH3value chain, NH3 co-firing, and technologies related to H2 production and NH3 cracking. With PTT Group represents an important strategic option for IRPC's long-term decarbonization and new business development. The initiative is currently in an early-stage development phase, focusing on policy readiness, partnership formation, market assessment, infrastructure gap analysis, and technology screening before moving toward investment decision-making. **Carbon Capture, Utilization and Storage ("CCUS")** IRPC in collaboration with the PTT Group, is advancing a CCUS initiative, achieving significant progress in regulatory development, commercial readiness, and technical collaboration. The initiative is now moving toward operational preparation, including commercial structuring, cost benchmarking, technical assessments of transportation and capture requirements, and the study of pilot units to enable future implementation. **Carbon Credits Management** Further details of this project are disclosed in Section "7.1.2 Carbon Credits".

Topic	Description
Current financial effects	There were no material financial impacts in the current year, as carbon pricing in Thailand remains at an early stage, with only a carbon tax mechanism formally introduced. This carbon tax is currently treated as part of the existing excise tax structure and, therefore, has not led to any significant changes in product pricing, oil demand, or the Company's cost structure. However, the implementation of response measures and adaptation plans resulted in capital expenditures of approximately Baht 494 - 823 million in 2025 (2024: Baht 448 - 747 million) for Asset Efficiency Improvement projects and approximately Baht 30 - 50 million in 2025 (2024: Baht 30 - 50 million) for Clean Energy Management projects. These capital expenditures represent investments in emissions reduction initiatives aimed at mitigating future carbon cost exposure. The planned sources of funding for these projects are primarily derived from the Company's operating cash flows and bank loans.
Financial effect in the next annual reporting period	The Company does not expect the impacts described above to result in any material adjustment to the carrying amount of assets and liabilities within the next annual reporting period.
Anticipated financial effects over the short, medium, and long term	Over the medium to long term, IRPC conducted a quantitative transition risk analysis to assess the potential impacts of ETS under two scenarios, namely Gradual Green scenario and Delayed Transition (business-as-usual) scenario. Based on the assumption that IRPC successfully reduces GHG emissions in line with its decarbonization plan, the Company still expects potential increases in operation costs due to carbon pricing mechanisms, particularly from the purchase of emission allowances for emissions exceeding the allocated ETS cap. The estimation costs under each scenario are illustrated in the bar chart below.

Figure 5-5: Impacts of ETS on operating expenses [8]



The response measures and adaptation plans under the Company's two key pillars of ERA strategy —Eco-operation & Technology, and Absorption and Offset—include planned investments of approximately Baht 540 - 1,859 million per year over the short to medium term. In long term, the Company will continue to closely monitor climate-related regulatory developments and adjust its strategy as appropriate.

The planned sources of funding for these projects are expected to be primarily derived from the Company's operating cash flows and bank loans.

[8] The key assumptions applied in estimating the impacts of ETS on operating expenses are as follows:
GHG emissions: Emissions are projected based on business-as-usual (BAU) level, with reductions achieved in line with the Company's decarbonization plan.
Free allowance (%): The percentage of GHG emissions covered by free allocation under the ETS.
· Delayed Transition scenario: The free allowance is assumed to be 88% in 2035 and 44% in 2050 of the base-year GHG emissions.
· Gradual Green scenario: The free allowance is assumed to be 68% in 2035 and 0% in 2050 of the base-year GHG emissions.
GHG emissions subjected to ETS penalty: GHG emissions subject to ETS are calculated as business-as-usual (BAU) GHG emissions less free allowance GHG emissions.
ETS pricing: ETS pricing is based Carbon cost projections under each scenario.
· Delayed Transition scenario: Carbon prices are assumed to reach 33 USD/tCO2e (1,073 Baht/tCO2e) in 2035 and 139 USD/tCO2e (4,518 Baht/tCO2e) in 2050.
· Gradual Green scenario: Carbon prices are assumed to reach 65 USD/tCO2e (2,113 Baht/tCO2e) in 2035 and 160 USD/tCO2e (5,200 Baht/tCO2e) in 2050.
Exchange rate: A constant exchange rate of THB 32.5 per USD is applied throughout the analysis.
Effective year of ETS: ETS is assumed to start in 2031.

5.3.2 · TRANSITION RISK

Changing Market Preferences

Long-term · 2050

Table 5-4: Details of potential impacts on IRPC's business model and mitigation strategies for changing market preferences (transition risk)

Topic	Description
Nature of the risk	Awareness of climate change, together with global and domestic trends toward a low-carbon society, has increased preferences for transitioning away from oil and gas toward low- or zero-carbon energy sources. In Thailand, national targets to achieve net zero GHG emissions by 2050 have led to the introduction of new laws and regulatory mechanisms, including the Climate Change Act, Emissions Trading System ("ETS"), and a carbon tax initiative. These developments are increasing pressure on businesses to accelerate the transition from fossil fuels to cleaner energy sources. Furthermore, the rapid growth of electric vehicle (EV) adoption and advancements in low-carbon technologies have contributed to a decline in oil demand. This trend is consistent with the World Energy Outlook report published by the International Energy Agency (IEA), which forecasts a significant decline in oil demand in Southeast Asia by 2050. In 2025, revenue from petroleum products accounted for Baht 181,494 million, representing 78% of the Company's total revenue. Although increasing awareness of climate change and low-carbon society trends exposes the Company to transition risks related to petroleum products, these trends also create opportunities for the Company, particularly in petrochemical products. Further details regarding these opportunities are disclosed in Section "5.3.4 Opportunity – Circular Economy for Petrochemical Products".
Effects on business model and value chain	**Decline in demand for conventional oil products:** A reduction in demand for conventional oil products may adversely affect refinery utilization rates and revenue generation **Strategic business adjustment:** The Company may need to realign its business strategies toward higher-value or lower-carbon products to sustain long-term performance **Stakeholder pressure:** Increasing expectations from investors and other stakeholders may require the Company to operate the business in a more environmentally friendly manner, potentially influencing strategic priorities, capital allocation, and operational practices.
Responses and adaptation plan	Changing market preference to low-carbon energy risk are integrated into the Company's strategic framework, supporting both business resilience and long-term growth as follows:

Core Uplift: Focuses on enhancing the efficiency and competitiveness of petroleum operations, through improved production processes, cost management, and product development aligned with market demand.

Step up & Beyond: Seeks investment opportunities in new business and continuously advancing business diversification initiatives

Current financial effects

There were no material financial impacts in the current year, as sales volume of petroleum products in the current period decrease only 2% compared with the previous year (2024), equivalent to a reduction of 1.58 million barrels. Furthermore, the decline in sales volume may have been influenced by various factors, and the Company is unable to clearly determine the extent to which the decrease was attributable to changes in customer preferences.

Financial effect in the next annual reporting period

The Company does not expect the impacts described above to result in any material adjustment to the carrying amount of assets and liabilities within the next annual reporting period.

Anticipated financial effects over the short, medium, and long term

The Company estimates that the decline in oil demand in short and medium term will not have a material impact on its financial performance. However, IRPC expects that a significant decline in oil demand resulting from changing market preferences may occur over the long term. As a result, revenue from petroleum products could decrease. Moreover, research and development expenses and capital expenditure may increase as the Company upgrades existing infrastructure to improve operational efficiency and develops new sustainable products.

To mitigate the impact of declining sales volumes of petroleum products, IRPC plans to respond through business diversification, particularly by expanding its petrochemical businesses. The short to medium investment plan for these initiatives is estimated at approximately Baht 22 - 36 million per year. For the long term plan, the Company will continue to closely monitor market developments and adjust its strategy as appropriate.

The planned sources of funding for these climate-related investments are primarily derived from the Company’s operating cash flows and bank loans.

Climate-related Physical Risks

IRPC has used both internal and external information sources (e.g. Aqueduct, CLIMADA and World Bank Climate Change Knowledge Portal) to support the identification and assessment of physical risks, including both acute and chronic risks that could be expected to affect its business operations. The assessment considers three scenarios: SSP1-2.6 (RCP 2.6), SSP2-4.5 (RCP 4.5) and SSP5-8.5 (RCP 8.5).

The descriptions of the climate-related scenarios used in the assessment are as follows:

Table 5-5: Physical risk scenario analysis

SCENARIO	DESCRIPTION	GLOBAL MEAN TEMPERATURE CHANGE IN 2100
SSP1-2.6 (RCP 2.6)	**Sustainability:** Focuses on a world that prioritizes sustainable development, with strong policies promoting environmental protection, reducing inequality, and shifting towards renewable energy. Presents a vision of future with low challenges to mitigation and adaptation.	Aims to maintain global temperature increases well below 2°C while pursuing significant efforts to limit warming to 1.5°C.
SSP2-4.5 (RCP 4.5)	**Middle of the Road:** Represents a scenario where trends follow historical patterns, with moderate challenges to both mitigation and adaptation. Assumes a balance between economic growth and environmental sustainability, leading to gradual progress in addressing climate change.	Likely results in a temperature increase of around 2°C, depending on the effectiveness of policies.
SSP5-8.5 (RCP 8.5)	**Fossil-fueled development:** Depicts a scenario driven by rapid economic growth fueled by fossil fuels, with a focus on technological advancements. Presents low challenges to mitigation but high challenges to adaptation, as environmental degradation and climate impacts increase.	Likely leads to a temperature increase of 3°C or more due to continued reliance on fossil fuels.

Based on the Company's assessment, water scarcity was identified as a material physical risk due to the critical role of water in refinery and petrochemical production processes. Water Scarcity may affect the reliability of infrastructure and the continuity of supply chains, particularly in areas that depend heavily on stable water resources and climate conditions. Accordingly, SSP5-8.5 (RCP 8.5) was used as the business-as-usual scenario for disclosing the impacts of this risk in this section.

5.3.3 · PHYSICAL RISK

Water Scarcity

Short · 2026 | Medium · 2035 | Long · 2050

Table 5-6: Details of potential impacts on IRPC's business model and mitigation strategies for water scarcity risk (physical risk)

Topic	Description
Nature of the risk	IRPC's primary petroleum and petrochemical production sites are located in areas with high exposure to water stress, particularly in IRPC Industrial Zone, Rayong Province, Thailand. Petroleum refining and petrochemical production operations require significant volumes of water to support production processes and operational activities. Furthermore, the Company's refinery and petrochemical plant located in the IRPC Industrial Zone account for 100% of its petroleum and petrochemical production volume.
Effects on business model and value chain	**Operational disruption:** Water scarcity may disrupt production continuity and reduce operational efficiency **Increased reliance on water sourcing:** The Company may need to increase its reliance on water sourcing, including sourcing raw water from external suppliers, as well as investing in desalination, water recycling systems, and additional treatment processes
Responses and adaptation plan	IRPC has established a comprehensive Business Continuity Plan (BCP), referred to as the "Water Crisis Management Plan", to manage drought-related risk. The plan consists of four stages designed to enhance preparedness, governance and monitoring in response to situations that may affect production processes or disrupt business operations. **1. Prevention and Mitigation** • Preparedness for the surveillance, monitoring, and assessment of water conditions and drought risks through networks at both organizational and national levels. • Maintain adequate raw water reserves within the water storage facilities • Study alternative raw water supply and backup water sources, such as seawater desalination technology, groundwater extraction and receiving water supply from regional water service providers. • Prepare, inspect, and maintain equipment for water treatment plan to ensure continuous operational readiness. • Conduct training programs, allocate sufficient budgetary resource, and designate authorized personnel to oversee and manage water- and drought-related risks. **2. Preparedness and Trigger Based Response** IRPC defines drought trigger points based on water storage volumes in reservoirs and reductions in water allocation in Rayong Province. For each trigger levels, the Company has establish a corresponding operational response plan, including production adjustments for specific products, to prioritize water use for critical operations and minimize business impacts.

3. Emergency Response Management

In the event of an official drought declaration, the Company will identify the applicable trigger level and implement the BCP accordingly, with appropriate planning and management approval based on the assessed risk level. Initial actions include maintaining raw water storage in the Company's reservoirs, together with organization wide water conservation measures. If water availability remains insufficient, additional measures will be implemented, such as increasing the cycle of concentration in cooling water systems, expanding water reuse systems, reducing production in line with the predefined plan, and implement emergency backup water sourcing measures.

4. Recovery and Improvement

Post-emergency recovery is considered one of the most critical stages of the BCP framework, enabling the Company to promptly resume normal operations. Key activities in this stage include:

- Damage assessment
- Recovery prioritization
- Restoration and repair
- Communication and stakeholder expectation management
- Review and improve action plan
- Restoration of reputation and customer confidence

Current financial effects	There were no financial impacts from water scarcity risk in the current year. However, IRPC has established comprehensive Water Crisis Management Plan, including drought preparedness measures, alternative water supply arrangements, operational adjustment measures, and infrastructure investments, to mitigate potential impacts from future water scarcity. Funding for these projects is primarily expected to be derived flows from the Company's operating cash flows and bank loans.
Financial effect in the next annual reporting period	The Company does not expect the impacts described above to result in any material adjustment to the carrying amount of assets and liabilities within the next annual reporting period.

Anticipated financial effects over the short, medium, and long term

IRPC estimates the anticipated financial impacts across short, medium and long term for operational areas exposed to high water stress risk. The Company expects that water stress risk could potentially affect its financial performance and cash flow as follows:

Business operation impacts: Business disruptions arising from the inability to maintain normal operation may result in reduced revenue from petroleum and petrochemical products.

Sourcing alternative raw water: Procurement of raw water from alternative sources, including third-party water service providers, may lead to an increase in the Company's operating expenses.

Furthermore, the Company continuously reviews and enhances its Water Crisis Management Plan to ensure that mitigation measures and response actions remain effective and align with evolving risk conditions. The Company does not expect the implementation of these measures to result in any material additional operating expenses. However, if water stress conditions exceed the defined trigger points, the Company may implement additional mitigation measures, including the expansion its reservoirs capacity, installation of treated wastewater recycling system, and development of seawater desalination system. The implementation of these systems may result an increased in the Company's fixed assets reporting in the statement of financial position during the period in which the systems are installed and become operational.

Climate-related Opportunities

In parallel with the transition risks assessment, IRPC conducted an assessment of climate-related opportunities, covering key factors supporting the transition to a low-carbon economy, including resource efficiency improvements, energy transition, product and service development, emerging market opportunities, and organizational resilience. IRPC applied the same scenarios used in the transition risk analysis described in the previous section: Gradual Green and Delayed Transition.

The Company recognized that the transition to a low carbon economy also creates opportunities to develop new solutions, support emissions reduction, and promotes the circular economy in a rapidly evolving petrochemical market.

Consistent with the transition risk assessment, IRPC applied the Delayed Transition scenario as the business-as-usual scenario for assessing impact of climate-related opportunities in this section.

5.3.4 · OPPORTUNITY

Circular Economy for Petrochemical Products

Medium · 2035 | Long · 2050

Table 5-7: Details of potential impacts on IRPC's business model and mitigation strategies for circular economy for petrochemical products (opportunity)

Topic	Description
Nature of the opportunity	Transitioning to a low carbon economy also creates opportunities for IRPC, particularly within petrochemical business. These opportunities arise from evolving customer preferences and increasing environmental awareness. The adoption of circular economy practices enabling IRPC to strengthen its competitive advantage through enhanced research and development (R&D) and innovation, leading to differentiated petrochemical products and more sustainable product offerings. This supports the Company's sustainable growth, enhances long-term business resilience, and reducing risks associated with declining oil demand and environmental impacts over the long term. In addition, these developments may enable the Company to access new markets and generate additional revenue streams. Further details regarding changing market preference are disclosed in Section "5.3.2 Transition Risk – Changing Market Preferences". Furthermore, revenue from petrochemical products amounted to Baht 47,002 million in 2025, representing 20% of the Company's total revenue. Of this amount, Baht 3.2 million of total petrochemical revenue was generated from sustainable petrochemical products.
Effects on business model and value chain	• Fosters R&D and innovation: Enhances the Company's competitive advantage through the development of differentiated petrochemical products, enabling IRPC to better respond to evolving customer needs and sustainability expectations. • Strengthens market position and supports sustainable growth: Enhances the Company's long-term business resilience while mitigating risks associated with resource scarcity and environmental impacts. • Creates new market opportunities and additional revenue streams: The adoption of circular economy practices enables the Company to access new markets and generate additional revenue through the development of value-added and sustainable petrochemical products.

Responses and adaptation plan

To capture green business opportunities, IRPC reshapes its business portfolio under its ERA Strategy, with an emphasis on research, development and innovation. The Company also provides alternative solutions through the development of environmentally friendly products, as follows:

- Products that have Carbon reduction label (HDPE, PP, PS and EPS) which are applicable for various products, for instance, plastic bags, electrical appliances, heat insulation, etc. IRPC developed these products in terms of energy saving and chemical usage reduction in the production processes reservoirs and registered Carbon Reduction Label.
- P301K a product used in the plastic sheets of floating solar project which uses lower quantities of HDPE.
- Expandable Polystyrene (EPS), which is produced using styrene monomers as feedstock and pentane as the blowing agent, with no ozone-depleting CFCs involved in the process.

Moreover, the Company is dedicated to developing practical solutions for the industry, alongside environmental responsibility, under the concept of “Make Greater Things – Creating What Matters for Life” in POLIMAXX brand. Products are grouped according to their distinct values as follows:

LIFE-PRO Group

A group of polymers that prioritize user safety, free from health-hazardous chemicals. These are suitable for use in food packaging, medical products, as well as everyday health-related items.

DURA-PRO Group

A group of polymers known for their exceptional strength and durability, designed as raw materials for products in the automotive, construction, and electrical appliance industries.

ECO-PRO Group

A group of environmentally-friendly products containing natural components, promoting sustainable energy use, and contributing to the reduction of energy consumption in the production processes.

Current financial effects	Revenue from sustainable petrochemical products amounted to Baht 3.2 million in the current year, increasing by Baht 2.3 million, compared with 2024, mainly attributable to recyclable polymer products. In addition to prior investments, in 2025 IRPC continued to invest in new products through research and development activities, reflecting the Company's ongoing commitment to innovation, product development, and long-term business growth. The planned sources of funding for these innovative projects are primarily derived from the Company's operating cash flows and bank loans.
Financial effect in the next annual reporting period	The Company does not expect the impacts of circular economy for petrochemical products opportunity described above to result in any material adjustment to the carrying amount of assets and liabilities within the next annual reporting period.
Anticipated financial effects over the short, medium, and long term	IRPC expects that these new products will contribute positively to the Company's future revenue generation and overall financial performance. However, research and development expenses and capital expenditures are expected to increase as the Company continues to invest in the development of new innovative products and technologies to better respond to evolving customer needs, sustainability trends, and changing market preferences. From an investment perspective, IRPC continues to invest in research and development initiatives in the short to medium term, amounting to Baht 22-36 million per year. For the long term, the Company will continue to closely monitor emerging opportunities and adjust its investment plans accordingly to capture additional growth opportunities and long-term business value in the future.

5.4 Climate Resilience

5.4.1 Business and Strategy Resilience

The table below summarizes the outcomes of the climate-related scenario analysis, including the potential impacts on IRPC's businesses, as well as the capacity to adjust or adapt its strategy and business model.

Table 5-8: Potential business impacts and capacity to adjust or adapt its strategy based on scenario analysis outcomes

Carbon Cost — TRANSITION RISK

SCENARIO	SHORT · 2026	MEDIUM · 2035	LONG · 2050
Gradual Green	Low	High	High
Delayed Transition	Low	High	High

POTENTIAL BUSINESS IMPACTS

Increased operational costs:
Carbon prices are projected to rise significantly, particularly over the medium to long term, leading to a structural shift in the cost base of petroleum and petrochemical products. As a result, the Company is expected to incur higher operating expenses associated with carbon pricing mechanisms, particularly emissions trading schemes.

Pressure on profit margin:
Carbon pricing mechanisms affect profit margins, particularly for carbon-intensive products, and could reduce overall competitiveness if such costs cannot be fully passed on to customers.

Increased capital expenditure:
The Company may be required to allocate increased capital expenditure toward decarbonization initiatives, such as energy efficiency improvements, low-carbon technologies, and carbon offset mechanisms.

Reputation:
Failure to achieve the Company's Net Zero target may negatively affect IRPC's reputation and stakeholder confidence, potentially impacting customer demand, business opportunities, and competitiveness.

CAPACITY TO ADJUST OR ADAPT STRATEGY AND BUSINESS MODEL

Short-term

- Enhance operational efficiency through energy efficiency improvements and investment in renewable energy (e.g., floating solar).
- Monitor carbon regulations to proactively assess potential impacts and develop appropriate response and mitigation plans.

Medium-term and Long-term

- Invest in and operate large-scale CCUS projects to reduce unavoidable emissions from operations and support the circular economy.
- Scale up decarbonization initiatives across the portfolio under ERA strategy, including Asset Efficiency Improvement and Clean Energy Management projects.
- Develop cost pass-through and pricing strategies to partially reflect carbon-related cost increases while minimizing customer impact and proactively communicate the value proposition of low-carbon products and services to support customer understanding and acceptance.
- Achieve net zero operations by fully implementing a comprehensive set of decarbonization technologies and strategies to attain net zero emissions across Scope 1, Scope 2, and significant Scope 3 categories, in alignment with national and global climate targets.

Changing Market Preferences TRANSITION RISK

SCENARIO	SHORT · 2026	MEDIUM · 2035	LONG · 2050
Gradual Green	Low	Low	High
Delayed Transition	Low	Low	Medium

POTENTIAL BUSINESS IMPACTS

Decreased petroleum revenues:

A decline in oil demand driven by changing market preferences toward low- or zero-carbon energy sources could reduce the Company's petroleum revenue, which represents its core business.

Increased research and development cost and capital expenditure:

Significant investments may be required for research and development of new sustainable products, as well as for upgrading existing assets and infrastructures to improve production efficiency and support business transformation.

CAPACITY TO ADJUST OR ADAPT

The Company will closely monitor oil demand trends and changing market preferences to enable timely and appropriate responses to market developments. In addition, the Company focuses on research and development initiatives, customer engagement, and market analysis to better anticipate evolving customer needs and strengthen its long-term business resilience.

Water Scarcity PHYSICAL RISK

SCENARIO	SHORT · 2026	MEDIUM · 2035	LONG · 2050
SSP1-2.6	High	High	High
SSP2-4.5	High	High	High
SSP5-8.5	High	High	High

POTENTIAL BUSINESS IMPACTS

Limited Water Availability:
Regional authorities may enforce mandatory water consumption restrictions or temporarily reduce water allocation to industrial zones, which could affect industrial operations.

Increased Water Procurement Cost:
Increasing water scarcity may lead to higher sourcing costs and operating expenses.

Production efficiency and operational disruptions:
Limited water availability may affect cooling systems, which are critical to petroleum and petrochemical production processes. This could reduce operational efficiency, require production adjustments, or potentially lead to temporary plant shutdowns.

CAPACITY TO ADJUST OR ADAPT

The Company expects that its Water Crisis Management Plan will be effective in addressing various levels of water stress risk. IRPC has established production adjustment measures to mitigate potential impacts under different water shortage scenarios, as follows:

Table 5-9: Water Consumption Mitigation and Response Measures

WATER CONSUMPTION REDUCTION [9]	MITIGATION AND RESPONSE
5% – 20% 20%	**Reduction of Water Consumption and Production Capacity:** Reducing water usage and adjusting production capacity by prioritizing inventory levels and customer orders.
30% 50%	**Reduction in production capacity and Plant Shutdowns:** adjusting production capacity and temporarily shutting down certain plants to reduce water consumption.

Furthermore, the Company may implement emergency alternative water sourcing measures as follows:

Short-term Plan

- Utilization of groundwater supply to support operations
- Procurement of water from other regional water service providers
- Deploy a mobile treated wastewater recycling system and a mobile seawater desalination system

Medium- and Long-term Plan

- Expansion of reservoir capacity
- Installation of treated wastewater recycling system and a mobile seawater desalination system

[9] Water consumption reduction refers to the percentage reduction in water consumption from the allocated water quota, as requested by relevant regional regulatory authorities.

Circular Economy OPPORTUNITY

SCENARIO	SHORT · 2026	MEDIUM · 2035	LONG · 2050
Gradual Green	Low	Medium	Medium
Delayed Transition	Low	Medium	Medium

POTENTIAL BUSINESS IMPACTS

Increased in revenue and market growth of sustainable products: The rapid and early expansion of the sustainable petrochemical market may provide the Company with a competitive advantage by generating new revenue streams, diversifying its portfolio away from conventional fossil-based production.

Increased in R&D and capital expenditure: The development of new products requires ongoing investment in research and development activities, the exploration of new technologies, and the enhancement of existing infrastructure to support the production and commercialization of sustainable products.

CAPACITY TO ADJUST OR ADAPT

The Company will closely monitor market trends for sustainable petrochemical products, emerging sustainable technologies, and relevant laws and regulations, including the Global Treaty on Plastics and extended producer responsibility (EPR) requirements, to identify and capture new business opportunities. In addition, the Company focuses on research and development initiatives to support the development of innovative and sustainable petrochemical products that align with evolving customer preferences, environmental expectations, and the transition toward a low-carbon and circular economy.

5.4.2 Significant Areas of Uncertainties in Assessment of Climate Resilience

In assessing climate resilience, the Company recognizes several significant uncertainties and areas requiring the exercise of judgment, as outlined below:

Model Uncertainty

Climate models are based on simulations and cannot capture all variables, given the complex and non‑linear nature of the climate system. In addition, there are limitations associated with the availability and quality of data used in the analysis.

Scenario Uncertainty

The selected scenarios are subject to inherent limitations, including uncertainties associated with forward‑looking information, which may change as new information becomes available.

Assumption Uncertainty

The assumptions applied in assessing climate-related physical risks remain uncertain, as projections of the frequency, severity, and extent of future events depend on multiple factors, including climate change, infrastructure development, and management measures. Furthermore, key parameters of climate-related transition risks (e.g. carbon price, timing and stringency of policy enforcement) are limited and vary widely by jurisdictions and sectors. As a result, the outcomes of the analysis are sensitive to changes in these assumptions.

Risk Management

6.1 Climate-related Risk Management Process

In light of the current volatility and uncertainty arising from external factors related to climate change, as well as the Company's ongoing efforts to enhance its business competitiveness, IRPC has implemented a comprehensive climate-related risk management process aligned with the Enterprise Risk Management ("ERM") framework and its overall governance structure. This approach ensures that risks are systematically assessed and aligned with strategic objectives and corporate governance standards.

Figure 6-1: Risk management process

Context Setting

Establishing the organizational context, taking into account IRPC's business activities and stakeholders across the value chain to support the identification and assessment of risks.

Risk Assessment

Identification: IRPC identifies physical and transition risks arising from climate change and assesses these risks across entities within the reporting boundary, as disclosed in Section "3.4 Reporting Boundary".

Physical Risk Identification: IRPC uses both internal and external data to identify risks that could impact its operation. Internal data is derived from historical risk information and past experiences encountered by the Company, while external data is sourced from publicly available information related to climate science and relevant industries, prepared by internationally trusted organization such as the World Bank Climate Knowledge Portal, the UN Environment Programme Finance Initiative (UNEP FI), CLIMADA, IFRS S2 Industry-based Guidance on implementing Climate-related Disclosures ("IFRS S2 IBG"), and Aqueduct.

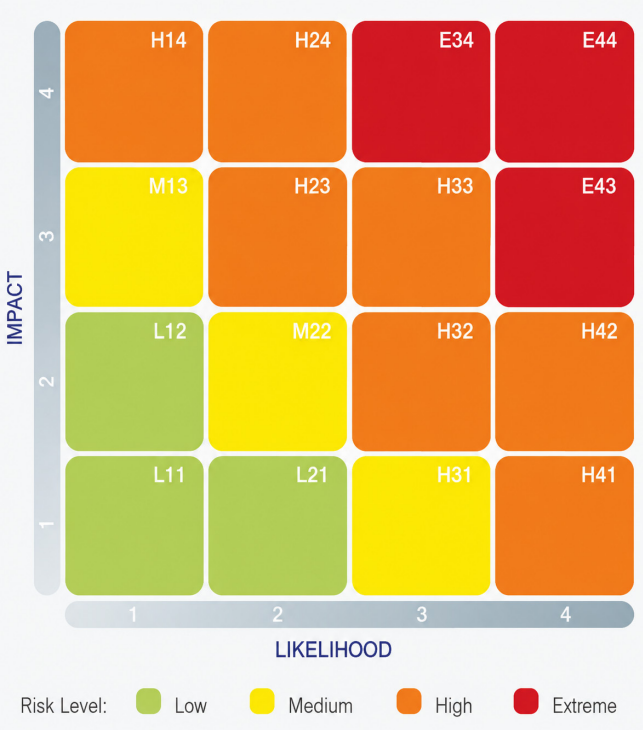
Transition Risk Identification: The identification of transition risks is based on credible external data sources, such as the UN Environment Programme Finance Initiative (UNEP FI) and IFRS S2 IBG, combined with inputs and consultations from relevant stakeholders.

In addition, the Company incorporates scenario analysis as part of its physical risk identification process, referencing scenarios developed by the Intergovernmental Panel on Climate Change (IPCC), including SSP1-2.6 (RCP2.6), SSP2-4.5 (RCP4.5) and SSP5-8.5(RCP8.5). In parallel, the Company applied PTT Group pathways—namely the Gradual Green and Delayed Transition scenarios—to support its transition risk identification process.

Analysis: IRPC analyzes the likelihood and potential impacts of climate-related risks using climate scenarios and environmental data.

Evaluation: IRPC utilizes a corporate risk matrix to prioritize and evaluate climate-related risks based on their potential to disrupt operations, financial performance, and regulatory compliance. Risk level is categorized into four levels: Low (Green), Moderate (Yellow), High (Orange) and Critical (Red). The risk matrix is presented below:

Figure 6-2: Risk process



Risk Mitigation

Established risk appetite criteria to prevent the Company's operations from being exposed to risks beyond the level that the organization can accept. The risk appetite clearly defines the limits for each type of risk, including climate-related risks and serves as a guideline for strategic decision-making by the Board and the management in pursuing new business opportunities, achieving operational excellence, and ensuring sustainability. It provides directions for decision-making at all levels in the organization.

Monitoring and Review

The Company conducts quarterly reviews of climate-related risks and regularly reports relevant metrics to the Board of Directors (BoD), including financial stability measures, environmental compliance indicators, and operational performance metrics. In addition, stress testing and scenario analysis are utilized to assess the Company's resilience under various climate-related scenarios.

6.2 Change in the Risk Management Process

During the current reporting period, there have been no changes to the risk and opportunity management process compared with the previous reporting period. However, IRPC continuously monitors and reviews its risk management practices to ensure the effectiveness and efficiency of risk mitigation measures amid changing circumstances.

6.3 Climate-Related Opportunity Management Process

The Company identifies sustainability-related opportunities in conjunction with its risk assessment, taking into consideration key factors such as resource efficiency, energy transition, products and services development, emerging market opportunities, and organizational resilience. The management of climate-related opportunities is closely integrated with IRPC's strategic decision-making processes, ensuring that climate-related risks and opportunities are systematically considered in investment planning, long-term commitments, and operational strategies.

SECTION I 07

Metrics and Targets

7.1 Climate-related Targets

7.1.1 Greenhouse Gas Emissions Targets

IRPC has committed to achieving net zero emissions by 2050, in alignment with the strategic direction of the PTT Group, Thailand's NDC 3.0, and international climate commitments.

To achieve its net zero emissions commitments, IRPC has set ambitious absolute gross GHG emissions reduction targets at the organizational level, covering the short, medium, and long term. The Company is committed to achieving net zero GHG emissions for Scope 1 and Scope 2 by 2050, compared to the 2019 baseline. Interim milestones include a 20% reduction in direct and indirect GHG emissions (Scope 1 and Scope 2) by 2030 from the 2019 baseline.

Baseline 2019	Target 2026	Interim 2030	Net Zero 2050
4.12	3.83	–20%	–100%
$MtCO_2e$ · Scope 1 & 2	$MtCO_2e$ Scope 1 & 2	from baseline	from baseline

Table 7-1: GHG emissions targets

TARGET	GHG EMISSIONS — SCOPE 1 & 2 [10]			
	Actual Baseline 2019	Target in 2026	Interim Target 2030	Net Zero Target 2050
% Reduction Target	–	7% from baseline	20% from baseline	100% from baseline
Total Gross GHG Emissions Target ($MtCO_2e$)	4.12	3.83	3.30	–

In the current year, the Company upgraded its Net Zero GHG emissions target from 2060 to 2050 and strengthened its climate strategy by shifting its primary focus from carbon neutrality to achieving net zero emissions. To support these revised Interim and Net Zero targets, the Company also updated its baseline year from 2018 to 2019 and revised its annual GHG emissions reduction targets.

IRPC has jointly declared its intention with TGO to set GHG emissions reduction targets aligned with scientific-based principles in order to achieve its Net Zero target. In addition, IRPC is currently in the process of validating its target with TGO in 2025.

In addition, the Company has established a policy for CGSC to review its climate-related targets, including GHG emissions reduction targets, on an annual basis or when there are significant changes in the business or external context.

[10] The greenhouse gas emission reduction targets cover all 7 types of GHG as defined by TGO.

7.1.2 Carbon Credits

IRPC is actively involved in carbon credits initiative as part of its ERA Strategy. The Company has implemented nature-based carbon credit projects and registered under the Thailand Voluntary Emission Reduction ("T-VER") Program. The carbon credits generated from these projects are intended to support achievement of the Company's Net Zero targets.

Sustainable Reforestation Project

IRPC implements its "Sustainable Reforestation Project" in collaboration with the Mae Fah Luang Foundation, the Royal Forest Department, and the Department of Marine and Coastal Resources In 2025, IRPC expanded reforestation efforts with the Royal Forest Department in Chiang Rai Province, covering an additional 2,400 rai. The total forest area under the project now reaches 34,506 rai, comprising 106 rai of mangrove forest in Satun Province, 4,400 rai of terrestrial forest in Chiang Rai, and 30,000 rai of community forests managed by the Mae Fah Luang Foundation across Chiang Rai, Chiang Mai, Nan, Lampang, Yasothon, and Amnat Charoen Provinces. The project aims to cover another 270,000 rai by 2030.

34,506
rai total under project

+2,400
rai expanded in 2025, Chiang Rai

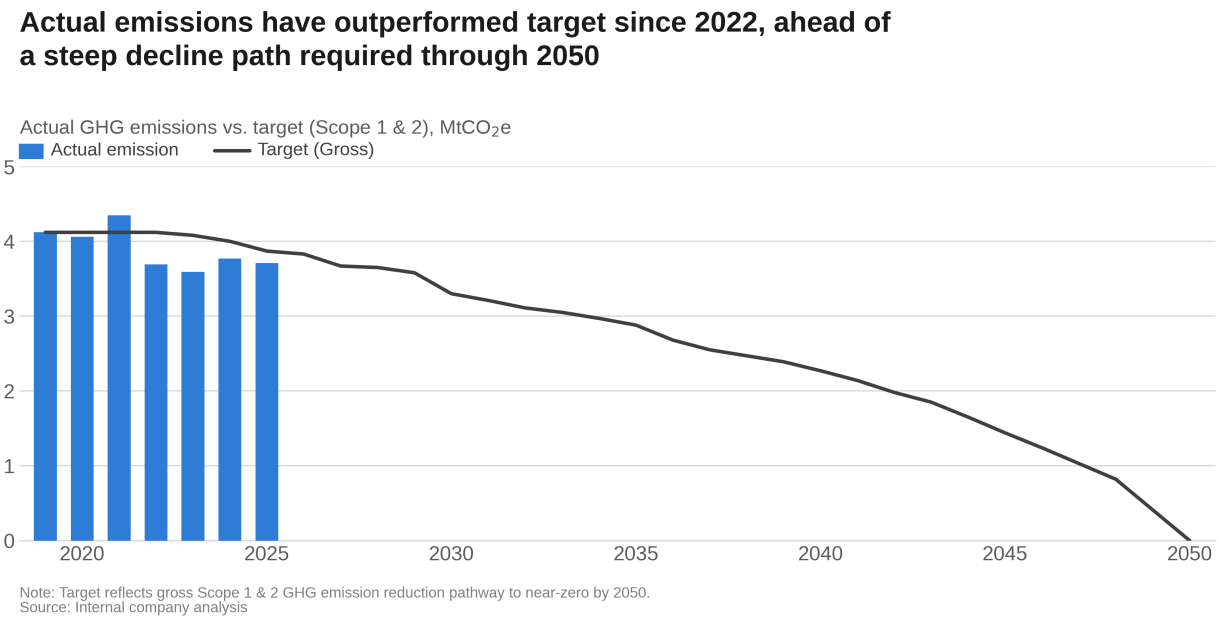
270,000
rai targeted by 2030

7.1.3 Progress Against Targets

To strengthen the pathway toward achieving its Interim and Net Zero targets, the Company has established annual GHG emissions reduction targets and regularly monitors performance against these targets. The graph below presents the annual gross GHG emissions reduction targets, illustrated by the green line, compared with the actual GHG emissions performance shown in blue bar charts.

As shown in the graph below, IRPC has successfully met its annual emissions targets, demonstrating its commitment to a sustained reduction in GHG emissions over time.

Figure 7-1: GHG emissions performance against targets



7.2 Greenhouse Gas Emissions Performance

The table below summarizes IRPC's absolute greenhouse gas (GHG) emissions for the reporting period.

Table 7-2: GHG emissions performance

GHG EMISSIONS PERFORMANCE[11] (Unit: $MtCO_2e$)	2024	2025
Scope 1 Direct GHG Emissions	**3.29**	**3.20**
Scope 2 Indirect GHG Emissions		
Location-based Scope 2 GHG emissions	0.52	0.52
Market-based Scope 2 GHG emissions	0.48	0.51
Scope 3 Other Indirect GHG Emissions	**11.37**	**13.34**
Category 1: Purchased Goods and Services	0.40	2.75
Category 11: Use of Sold Products	10.92	7.97
Others	0.05	2.62
Total GHG Emissions (Scope 1, 2 Market-based & 3)	**15.14**	**17.05**
Total GHG Emissions from Scope 1 and Scope 2 Market-based	**3.77**	**3.71**

The GHG performance indicators, including all three Scope of GHG emissions, are independently verified by a third party, SGS (Thailand) Co., Ltd, in accordance with ISAE 3000 (Revised) and ISAE 3410. This verification enhances the credibility and reliability of the Company's disclosures. Please refer to the GHG Assurance Report available at: IRPC Assurance Statement 2025 (https://irpc.co.th/wp-content/uploads/2026/07/IRPC_Assurance-Statement_2025.pdf)

To achieve its GHG emissions targets, the Company has implemented various activities and projects, as described in Section "5.3.1 Transition Risk – Carbon Cost" aim at reducing greenhouse gas emissions. The performance of these activities and projects, covering Scope 1 and Scope 2 GHG emissions reductions, is presented in the table below.

[11] GHG emissions performance covers all 7 types of GHG as defined by TGO.

Table 7-3: GHG emissions reductions from initiative projects

PROJECTS (Unit: $MtCO_2e$)	**2024**	**2025**
Asset Efficiency Improvement	0.23	0.25
Clean Energy Management	0.02	0.02
Total GHG reduction projects	**0.25**	**0.27**

Contractual instruments used in relation to Scope 2 GHG emissions

IRPC entered into an electricity purchase agreement with its associated company for electricity generated from natural gas. In 2025, the Company redeemed 844,725 MWh (2024: 822,894 MWh), resulting in net absolute Scope 2 GHG emissions of 0.35 MtCO2e (2024: 0.34 MtCO2e).

In addition, IRPC entered into a steam purchase agreement with its associated company. In 2025, the Company redeemed 0.97 million ton (2024: 0.89 million ton), resulting in net absolute Scope 2 GHG emissions of 0.13 MtCO2e (2024: 0.14 MtCO2e).

7.3 GHG Emissions Measurement Approaches

IRPC developed its GHG inventory in alignment with ISO 14064-1 and the Greenhouse Gas Protocol (GHG Protocol), following the assessment and calculation methodologies adopted by the PTT.

7.3.1 Reporting Boundary for GHG emissions

IRPC's GHG accounting approach is based on the Operational Control Approach. The Company accounts for GHG emissions from operations over which it has operational control where:

1) IRPC holds 100% in equity share of the entity; or
2) IRPC has the full authority to introduce and implement its operating policies at the operation.

IRPC believes that the operational control approach is the most appropriate method for measuring its GHG emissions performance, as there are entities outside the Company's financial reporting boundary over which the Company exercises operational control. Under this approach, 100% of the Scope 1 and Scope 2 GHG emissions from operations over which IRPC has operational control are accounted for in IRPC's GHG emissions inventory.

GHG emissions from entities over which IRPC does not have operational control, such as joint ventures and other investments, are excluded from Scope 1 and Scope 2 emissions and are instead accounted for under Scope 3 emissions, where applicable.

7.3.2 Methodologies, Inputs and Assumptions

The measurement methods, input data, and assumptions applied in the calculation of GHG emissions for each scope are presented below. There was no change to the measurement methods used for GHG emissions across all scopes during the reporting period.

Table 7-4: GHG emissions measurement methodologies, inputs and assumptions

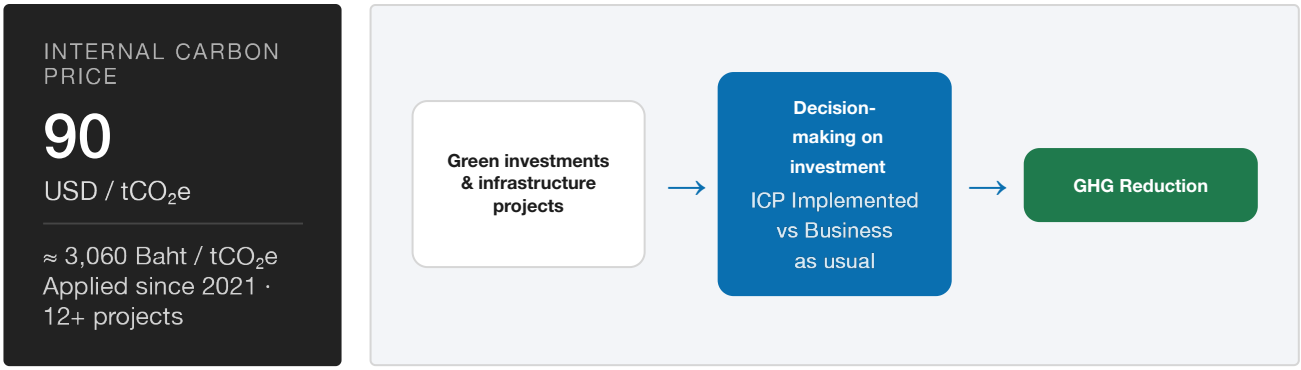
SCOPE	MEASUREMENT APPROACH	INPUTS	ASSUMPTIONS	REASON
Scope 1	Activity data collection from: •Fuel consumption and fuel type •Quantity and type of gas generated from the wastewater treatment system	• Total fuel consumption volume • Total wastewater volume from wastewater treatment system	• Average emission factors based on -TGO Emission Factors -GHG inventories published by U.S. Environmental Protection Agency (U.S. EPA) • Global Warming Potential (GWP) is based on the IPCC Fifth Assessment Report (AR5) with a 100-year time horizon.	TGO has developed reliable and widely recognized GHG emissions factors that are appropriate for the Thailand context. For certain gases for which TGO emission factors are not available, the Company applies emission factors from other reputable sources, including those published by the U.S. EPA.
Scope 2	Location-based approach	Electricity Bills	Grid Emission Factor from TGO.	TGO has developed GHG emission factor data for the national electricity grid, covering electricity generated from both the Electricity Generating Authority of Thailand (EGAT) and private power producers.
	Market-based approach	Electricity used volumes	Emission Factors using contractual instrument	
Scope 3	Category 1: Purchased Goods and Services — Average data method	Feedstock purchase volume	Average emission factors based on - TGO Emission Factors - GHG inventories published by U.S. Environmental Protection Agency (U.S. EPA) - SimaPro databases developed by PRé Sustainability	TGO and other internationally recognized sources have developed reliable GHG emissions factors that are appropriate for both the Thai and international contexts.
	Category 11: Use of Sold Products — Average data method	Fuel product volumes	Average emission factors based on TGO Emission Factors	TGO has developed reliable and widely recognized GHG emissions factors that are appropriate for the Thailand context.

7.4 Internal Carbon Pricing (ICP) Implementation

IRPC implemented internal carbon pricing (ICP), also known as a shadow price, across the Company to integrate carbon emission costs into decision-making. Since 2021, ICP has been applied alongside other financial tools, such as internal rate of return (IRR), in the evaluation of green investments and infrastructure projects. The ICP is applied across all business decision-making processes and covers Scope 1 and Scope 2 emissions, ensuring that the full carbon cost is considered in project evaluation and strategic planning. Its application supports cost–benefit analysis, drives energy efficiency and low-carbon investments, incentivizes the consideration of climate-related issues in decision-making and risk assessment, helps identify low-carbon opportunities, informs strategy and financial planning, supports navigation of emerging regulations, encourages efforts to reduce value chain emissions, facilitates alignment with climate-related policies and targets, provides a basis for considering carbon offsets, and enables stress-testing of investments under varying carbon-cost scenarios.

The Company set ICP at 90 USD/tCO2e (3,060 Baht/tCO2e) in accordance with the guidelines on the determination of carbon pricing and low carbon investment recommended by TGO in collaboration with World Bank. IRPC has applied the ICP in its Renewable projects and Energy Efficiency Improvement. More than 12 projects are using shadow pricing, for example, Floating Solar Phase II for PP Plant, VDU Heater Energy Efficiency Improvement for Lube Plant, Melt blown expansion project for Polypropylene, Global Hygiene: Spun bond Expansion project for Polypropylene, etc.

Figure 7-2: Internal carbon pricing (ICP)



7.5 Industry-based Metrics

In preparing its climate-related financial disclosures, IRPC has considered and applied the following industries specified in the Industry-based Guidance on Implementing IFRS S2 Climate-related Disclosures ("IFRS S2 IBG"):

VOLUME 13
Oil & Gas — Refining & Marketing (RM)

VOLUME 47
Chemicals (CH)

Table 7-5: Industry-based metrics

TOPIC	IFRS S2 IBG CODE	METRICS	UNIT	2024	2025
Greenhouse Gas Emissions	EM-RM-110a.1 RT-CH-110a.1	Gross global Scope 1 emissions, percentage covered under emissions limiting regulations [12]	%	Nearby 100%	Nearby 100%
Water Management	EM-RM-140a.1 RT-CH-140a.1	Total water withdrawn [13]	Million m^3	40.51	41.18
		Total water consumed [14]	Million m^3	19.47	19.38
		Percentage of water withdrawn in regions with High or Extremely High Baseline Water Stress	%	100	100
		Percentage of water consumed in regions with High or Extremely High Baseline Water Stress	%	100	100
	RT-CH-140a.2	Number of incidents of non-compliance associated with water quality permits, standards and regulations	Case	None	None
Energy Management	RT-CH-130a.1	Total energy consumed	Million MWh	17.14	18.14
		Percentage grid electricity	%	5.27%	4.48%
		Percentage renewable	%	0.17%	0.15%
		Total self-generated energy Electricity Steam Renewable energy	Million MWh Million ton MWh	1.53 4.12 28,594	1.46 8.15 27,308
Product design for Use-phase Efficiency	RT-CH-410a.1	Revenue from products designed for use-phase resource efficiency	Million Baht	Not separately disclosed	
Product Specifications & Clean Fuel Blends	EM-RM-410a.2	Revenue for advanced biofuels products	Million Baht	None [15]	None [15]
	EM-RM-410a.3	Total volumes of renewable fuels produced for fuel blending.	Metric tons	None [15]	None [15]
		Total volumes of renewable fuels purchased for fuel blending.	Litre	210,597,318	189,859,166
Activity Metrics	RT-CH-000A	Total production volume of petrochemical product	Million tons	2.23	2.19
	EM-RM-000.A	Refining throughput of crude oil and other feedstocks	Million barrels	71.60	73.95
	EM-RM-000.B	Refining operating capacity	barrels per calendar day (BPD)	196,000	203,000

[12] Currently, Thailand does not have a specific law imposing a direct “cap” or “quota” on greenhouse gas emissions. Therefore, it is assumed that nearly 100% of IRPC’s Scope 1 GHG emissions are regulated under relevant environmental and pollution control laws, including Thailand’s national regulations, such as the Factory Act B.E. 2535.
[13] The presented water withdrawal includes water withdrawn from the filtration plant in Ban Khai, Rayong. However, a portion of this withdrawn water is supplied to other industrial facilities within the IRPC Industrial Zone. This reported volume excludes water withdrawal associated with the Head office branch in Bangkok.
[14] This reported volume excludes water consumed associated with the Head office branch in Bangkok and oil depot in Ayutthaya, Chumphon and Samut Prakan.
[15] Currently, IRPC has not established a specific strategy for advanced biofuels or renewable fuels for blending purposes but continues to monitor related market and technology developments.

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Conceptual foundations				
Reporting Entity	S1.20	An entity's sustainability-related financial disclosures shall be for the same reporting entity as the related financial statements.	3.4 Reporting Boundary	10
Connected information	S1.22	An entity shall identify the financial statements to which the sustainability related financial disclosures relate.	3.2 Financial Statement Connection	9
	S1.24	When currency is specified as the unit of measure in the sustainability related financial disclosures, the entity shall use the presentation currency of its related financial statements.		
General requirements				
Timing of reporting	S1.64	An entity shall report its sustainability-related financial disclosures at the same time as its related financial statements. The entity's sustainability-related financial disclosures shall cover the same reporting period as the related financial statements.	3.2 Financial Statement Connection	9
Comparative information	S1.70	Unless another IFRS Sustainability Disclosure Standard permits or requires otherwise, an entity shall disclose comparative information in respect of the preceding period for all amounts disclosed in the reporting period. If such information would be useful for an understanding of the sustainability-related financial disclosures for the reporting period, the entity shall also disclose comparative information for narrative and descriptive sustainability-related financial information.	3.3 Adoption of IFRS Sustainability Disclosure Standards and Transition Reliefs	9
Statement of compliance	S1.72	An entity whose sustainability-related financial disclosures comply with all the requirements of IFRS Sustainability Disclosure Standards shall make an explicit and unreserved statement of compliance. An entity shall not describe sustainability-related financial disclosures as complying with IFRS Sustainability Disclosure Standards unless they comply with all the requirements of IFRS Sustainability Disclosure Standards.	3.1 IFRS Sustainability Disclosure Standards	9
Judgements, uncertainties and errors				
Judgements	S1.74	An entity shall disclose information to enable users of general-purpose financial reports to understand the judgements, apart from those involving estimations of amounts, that the entity has made in the process of preparing its sustainability-related financial disclosures and that have the most significant effect on the information included in those disclosures.	3.5 Judgment, Uncertainties and Proportionality	11
Measurement Uncertainty	S1.77	An entity shall disclose information to enable users of general-purpose financial reports to understand the most significant uncertainties affecting the amounts reported in its sustainability-related financial disclosures.	3.5 Judgment, Uncertainties and Proportionality	11

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	S1.78	An entity shall: (a) identify the amounts that it has disclosed that are subject to a high level of measurement uncertainty; and (b) in relation to each amount identified in paragraph 78(a)		
Governance				
Governance	S2.5	The objective of climate-related financial disclosures on governance is to enable users of general-purpose financial reports to understand the governance processes, controls and procedures an entity uses to monitor, manage and oversee climate-related risks and opportunities.	4. Governance	12
	S2.6	To achieve this objective, an entity shall disclose information about: (a) the governance body(s) (which can include a board, committee or equivalent body charged with governance) or individual(s) responsible for oversight of climate-related risks and opportunities. (b) management's role in the governance processes, controls and procedures used to monitor, manage and oversee climate-related risks and opportunities.		
Strategy				
Strategy	S2.8	The objective of climate-related financial disclosures on strategy is to enable users of general-purpose financial reports to understand an entity's strategy for managing climate-related risks and opportunities.	5. Strategy	17
	S2.9	Specifically, an entity shall disclose information to enable users of general-purpose financial reports to understand: (a) the climate-related risks and opportunities that could reasonably be expected to affect the entity's prospects; (b) the current and anticipated effects of those climate-related risks and opportunities on the entity's business model and value chain; (c) the effects of those climate-related risks and opportunities on the entity's strategy and decision-making, including information about its climate-related transition plan; (d) the effects of those climate-related risks and opportunities on the entity's financial position, financial performance and cash flows for the reporting period, and their anticipated effects on the entity's financial position, financial performance and cash flows over the short, medium and long term, taking into consideration how those climate-related risks and opportunities have been factored into the entity's financial planning; and (e) the climate resilience of the entity's strategy and its business model to climate-related changes, developments and uncertainties, taking into consideration the entity's identified climate-related risks and opportunities.		
Climate-related risks and opportunities	S2.10	An entity shall disclose information that enables users of general-purpose financial reports to understand the climate-related risks and opportunities that could reasonably be expected to affect the entity's prospects. Specifically, the entity shall: (a) describe climate-related risks and opportunities that could reasonably be expected to affect the entity's prospects;	5.1 Time Horizons 5.3 Climate-related Risks and Opportunities	17 18

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		(b) explain, for each climate-related risk the entity has identified, whether the entity considers the risk to be a climate-related physical risk or climate-related transition risk; (c) specify, for each climate-related risk and opportunity the entity has identified, over which time horizons—short, medium or long term— the effects of each climate-related risk and opportunity could reasonably be expected to occur; and (d) explain how the entity defines short term, medium term and long term and how these definitions are linked to the planning horizons used by the entity for strategic decision making.		
Business model and value chain	S2.13	An entity shall disclose information that enables users of general-purpose financial reports to understand the current and anticipated effects of climate-related risks and opportunities on the entity's business model and value chain. Specifically, the entity shall disclose: (a) a description of the current and anticipated effects of climate-related risks and opportunities on the entity's business model and value chain; and (b) a description of where in the entity's business model and value chain climate-related risks and opportunities are concentrated (for example, geographical areas, facilities and types of assets).	5.3 Climate-related Risks and Opportunities	18
Strategy and decision-making	S2.14	An entity shall disclose information that enables users of general purpose financial reports to understand the effects of climate-related risks and opportunities on its strategy and decision-making. (a) information about how the entity has responded to, and plans to respond to, climate-related risks and opportunities in its strategy and decision-making, including how the entity plans to achieve any climate-related targets it has set and any targets it is required to meet by law or regulation. (b) information about how the entity is resourcing, and plans to resource, the activities disclosed in accordance with paragraph 14(a). (c) quantitative and qualitative information about the progress of plans disclosed in previous reporting periods in accordance with paragraph 14(a).	5.2 Transition Plan 5.3 Climate-related Risks and Opportunities 7.1.1 Greenhouse Gas Emissions Targets	17 18 40
Financial position, financial performance and cash flows	S2.15	An entity shall disclose information that enables users of general purpose financial reports to understand: (a) the effects of climate-related risks and opportunities on the entity's financial position, financial performance and cash flows for the reporting period (current financial effects); and (b) the anticipated effects of climate-related risks and opportunities on the entity's financial position, financial performance and cash flows over the short, medium and long term, taking into consideration how climate-related risks and opportunities are included in the entity's financial planning (anticipated financial effects).	5.3 Climate-related Risks and Opportunities	18
	S2.16	Specifically, an entity shall disclose quantitative and qualitative information about: (a) how climate-related risks and opportunities have affected its financial position, financial performance and cash flows for the reporting period;		

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		(b) the climate-related risks and opportunities identified in paragraph 16(a) for which there is a significant risk of a material adjustment within the next annual reporting period to the carrying amounts of assets and liabilities reported in the related financial statements; (c) how the entity expects its financial position to change over the short, medium and long term, given its strategy to manage climate-related risks and opportunities; (d) how the entity expects its financial performance and cash flows to change over the short, medium and long term, given its strategy to manage climate-related risks and opportunities (for example, increased revenue from products and services aligned with a lower-carbon economy; costs arising from physical damage to assets from climate events; and expenses associated with climate adaptation or mitigation).		
	S2.17	In providing quantitative information, an entity may disclose a single amount or a range.		
	S2.21	If an entity determines that it need not provide quantitative information about the current or anticipated financial effects of a climate-related risk or opportunity applying the criteria set out in paragraphs 19-20, the entity shall: (a) explain why it has not provided quantitative information; (b) provide qualitative information about those financial effects, including identifying line items, totals and subtotals within the related financial statements that are likely to be affected, or have been affected, by that climate-related risk or opportunity; and (c) provide quantitative information about the combined financial effects of that climate-related risk or opportunity with other climate-related risks or opportunities and other factors unless the entity determines that quantitative information about the combined financial effects would not be useful.	3.5 Judgments, Uncertainties and Proportionality 5.3 Climate-related Risks and Opportunities	11 18
Climate resilience	S2.22(a)	An entity shall disclose information that enables users of general purpose financial reports to understand the resilience of the entity's strategy and business model to climate-related changes, developments and uncertainties, taking into consideration the entity's identified climate-related risks and opportunities. The entity shall use climate-related scenario analysis to assess its climate resilience using an approach that is commensurate with the entity's circumstances. In providing quantitative information, the entity may disclose a single amount or a range. Specifically, the entity shall disclose: (a) the entity's assessment of its climate resilience as at the reporting date	5.4 Climate Resilience	34
	S2.22(b)	(b) how and when the climate-related scenario analysis was carried out, including: (i) information about the inputs the entity used. (ii) the key assumptions the entity made in the analysis. (iii) the reporting period in which the climate-related scenario analysis was carried out.	5.3 Climate-related Risks and Opportunities	18
Risk Management				
Risk Management	S2.24	The objective of climate-related financial disclosures on risk management is to enable users of general purpose financial reports to understand an entity's processes to identify, assess, prioritize and monitor climate-related risks and	6. Risk Management	38

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		opportunities, including whether and how those processes are integrated into and inform the entity's overall risk management process.		
	S2.25	To achieve this objective, an entity shall disclose information about: (a) the processes and related policies the entity uses to identify, assess, prioritize and monitor climate-related risks; (b) the processes the entity uses to identify, assess, prioritize and monitor climate-related opportunities, including information about whether and how the entity uses climate-related scenario analysis to inform its identification of climate-related opportunities; and (c) the extent to which, and how, the processes for identifying, assessing, prioritizing and monitoring climate-related risks and opportunities are integrated into and inform the entity's overall risk management process.		
Metrics and targets				
Metrics and targets	S2.27	The objective of climate-related financial disclosures on metrics and targets is to enable users of general purpose financial reports to understand an entity's performance in relation to its climate-related risks and opportunities, including progress towards any climate-related targets it has set, and any targets it is required to meet by law or regulation.	7. Metrics and Targets	40
	S2.28	To achieve this objective, an entity shall disclose: (a) information relevant to the cross-industry metric categories; (b) industry-based metrics that are associated with particular business models, activities or other common features that characterize participation in an industry; and (c) targets set by the entity, and any targets it is required to meet by law or regulation, to mitigate or adapt to climate-related risks or take advantage of climate-related opportunities, including metrics used by the governance body or management to measure progress towards these targets.		
Climate-related Metrics	S2.29	An entity shall disclose information relevant to the cross-industry metric categories of: (a) greenhouse gases	7.2 Greenhouse Gas Emissions Performance 7.3 GHG Emissions Measurement Approaches	42 44
		(b) climate-related transition risks—the amount and percentage of assets or business activities vulnerable to climate-related transition risks; (c) climate-related physical risks—the amount and percentage of assets or business activities vulnerable to climate-related physical risks; (d) climate-related opportunities—the amount and percentage of assets or business activities aligned with climate-related opportunities; (e) capital deployment—the amount of capital expenditure, financing or investment deployed towards climate-related risks and opportunities;	5.3 Climate-related Risks and Opportunities	18

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		(f) internal carbon prices	7.4 Internal Carbon Pricing (ICP) Implementation	45
		(g) remuneration	4.4 Climate-Related Management Incentives	16
	S2.32	An entity shall disclose industry-based metrics that are associated with one or more particular business models, activities or other common features that characterize participation in an industry. In determining the industry-based metrics that the entity discloses, the entity shall refer to and consider the applicability of the industry-based metrics associated with disclosure topics described in the Industry-based Guidance on Implementing IFRS S2.	7.5 Industry-based Metrics	45
Climate-related Targets	S2.33	An entity shall disclose the quantitative and qualitative climate-related targets it has set to monitor progress towards achieving its strategic goals, and any targets it is required to meet by law or regulation, including any greenhouse gas emissions targets. For each target, the entity shall disclose: (a) the metric used to set the target; (b) the objective of the target (for example, mitigation, adaptation or conformance with science-based initiatives); (c) the part of the entity to which the target applies (for example, whether the target applies to the entity in its entirety or only a part of the entity, such as a specific business unit or specific geographical region); (d) the period over which the target applies; (e) the base period from which progress is measured; (f) any milestones and interim targets; (g) if the target is quantitative, whether it is an absolute target or an intensity target; and (h) how the latest international agreement on climate change, including jurisdictional commitments that arise from that agreement, has informed the target.	7.1 Climate-related Targets	40
	S2.34	An entity shall disclose information about its approach to setting and reviewing each target, and how it monitors progress against each target, including: (a) whether the target and the methodology for setting the target has been validated by a third party; (b) the entity's processes for reviewing the target; (c) the metrics used to monitor progress towards reaching the target; and (d) any revisions to the target and an explanation for those revisions.		
	S2.35	An entity shall disclose information about its performance against each climate-related target and an analysis of trends or changes in the entity's performance.	7.1.3 Progress Against Targets	41
	S2.36	For each greenhouse gas emissions target disclosed in accordance with paragraphs 33-35, an entity shall disclose: (a) which greenhouse gases are covered by the target. (b) whether Scope 1, Scope 2 or Scope 3 greenhouse gas emissions are covered by the target.	7.1.1 Greenhouse Gas Emissions Targets 7.1.2 Carbon Credits	40 41

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		(c) whether the target is a gross greenhouse gas emissions target or net greenhouse gas emissions target. If the entity discloses a net greenhouse gas emissions target, the entity is also required to separately disclose its associated gross greenhouse gas emissions target. (d) whether the target was derived using a sectoral decarbonization approach. (e) the entity's planned use of carbon credits to offset greenhouse gas emissions to achieve any net greenhouse gas emissions target.		

List of Abbreviations

ABS	Acrylonitrile-Butadiene-Styrene
BAU	Business-as-usual
BCP	Business Continuity Plan
BoD	Board of Directors
CCUS	Carbon Capture, Utilization, and Storage
CEO	Chief Executive Officer
CFCs	Chlorofluorocarbons
CGSC	Corporate Governance and Sustainability Committee
EGAT	Electricity Generating Authority of Thailand
EPR	Plastics and Extended Producer Responsibility
EPS	Expandable Polystyrene
ERM	Enterprise Risk Management
ESG	Environmental, Social, and Governance
ETS	Emission Trading System
EV	Electric Vehicle
GHG	Greenhouse Gas
HDPE	High-Density Polyethylene
IBG	Industry-based Guidance
ICP	Internal Carbon Pricing
IEA	International Energy Agency
IFRS	International Financial Reporting Standards
IPCC	Intergovernmental Panel on Climate Change
IRR	Internal rate of return
ISO	International Organization for Standardization
ISSB	International Sustainability Standards Board
KPIs	Key Performance Indicators
LPG	Liquefied Petroleum Gas
MC	Management Committee
NDC	Nationally Determined Contributions
PP	Polypropylene
PS	Polystyrene
PTT	PTT Public Company Limited
R&D	Research and Development
RMC	Risk Management Committee
RMCC	Risk Management and Internal Control Committee
RCP	Representative Concentration Pathways
SAN	Acrylonitrile Styrene
SDC	Sustainability Development Committee
SEC	Securities and Exchange Commission
SSP	Shared Socioeconomic Pathways
SET	Stock Exchange of Thailand
TGO	Thailand Greenhouse Gas Management Organization
T-VER	Thailand Voluntary Emission Reduction
VGOHT	Vacuum Gas Oil Hydrotreating

REPORTING PERIOD

1 Jan – 31 Dec 2025

REPORTING ENTITY

IRPC Public Company Limited