



# **Thaloll Group's Assessment of Climate-related Risks and Opportunties**

Updated: June 2026

### BRIEF DESCRIPTION OF MOST SIGNIFICANT TRANSITION RISK

Thaioil recognizes carbon pricing as a material transition risk as Thailand progresses toward mandatory carbon pricing mechanisms to support its decarbonization and net-zero ambitions. Under the draft Climate Change Act, Thailand is expected to introduce an Emissions Trading System (ETS), which will significantly influence the operating environment for carbon-intensive industries.

As a petroleum refining and petrochemical company, Thaioil is potentially exposed to increasing direct and indirect carbon-related costs arising from its operations, products, and supply chain. In this reporting year, Thaioil assessed the potential financial implications of a mandatory ETS on its business by 2035, assuming implementation from 2031 onwards. The assessment evaluated potential carbon compliance costs under a range of carbon price scenarios and analyzed their implications for operating expenditures.

### RESPONSE TO MITIGATE TRANSITION RISK

To manage carbon pricing risks, Thaioil has committed to reducing Scope 1 and 2 GHG emissions by 15% from the 2029 peak-year level by 2035 and achieving Net Zero by 2060, and prepared to accelerate its Net Zero target to 2050 (Accelerated Net Zero Target), provided there is support for economically viable technologies that enhance business competitiveness. These commitments are supported by *Thaioil Group’s 3Cs Climate Action Strategy: C1 – Cut Down Existing Emissions, C2 – Compensate Residual Emissions, and C3 – Control Future Emissions.*

In the near term by 2035, Thaioil’s decarbonization efforts are focused on C1 and C2 strategy. Under C1, key initiatives include energy-efficiency improvement projects, fuel switching to lower-emission fuels, and process optimization across refinery operations, supported by an Internal Carbon Price (ICP) to assess the financial impact of carbon pricing on investment decisions. While, under C2, Thaioil is building up carbon credits by pursuing reforestation investment opportunities, buying carbon credits on the spot market from partners from required timeframe, and utilizing carbon credits generated from the 239 MW Cogeneration Power Plant and the Solar Rooftop project to compensate for residual emissions. And beyond 2035, C3 will become increasingly important in achieving the Company’s long-term climate targets. This pathway will be informed by ongoing technology and feasibility assessments and includes the potential deployment of transformative low-carbon solutions such as carbon capture, utilization and storage (CCUS), low-carbon hydrogen, and sustainable products that support the transition to a low-carbon economy.

BOUNDARY  
Own Operations

AVG. ESTIMATED TIMEFRAME  
10 years (by 2035)

| FINANCIAL IMPACT BEFORE MITIGATION TAKING ACTION:<br>Increased OPEX at 2035 |            |
|-----------------------------------------------------------------------------|------------|
| Scenario                                                                    | IEA STEPS* |
| Impact<br>(Million THB)                                                     | -1,180     |

| FINANCIAL IMPACT AFTER TAKING MITIGATION ACTION:<br>Increased OPEX at 2035 |                     |
|----------------------------------------------------------------------------|---------------------|
| Scenario                                                                   | EIA STEPs           |
| Impact<br>(Million THB)                                                    | No Financial Impact |

Remarks: \*International Energy Agency (IEA) Stated Policies Scenario (STEPS)

BRIEF DESCRIPTION OF MOST SIGNIFICANT PHYSICAL RISK

Business depends on a reliable supply of freshwater for critical processes, including cooling systems, boiler feedwater, and steam generation. Consequently, water scarcity has been identified as the Company's most significant physical climate risk. This risk is considered chronic, driven by the combined effects of climate change, which is expected to intensify drought conditions and reduce water availability, and continued economic and industrial expansion in Thailand's Eastern Economic Corridor (EEC), where increasing water demand places additional pressure on regional water resources.

Recognizing the strategic importance of water security, Thaioil proactively assesses and manages water scarcity risks to enhance the resilience of its operations, safeguard production continuity, and minimize potential impacts on the environment and surrounding communities. To quantify the potential financial implications of this risk, Thaioil applies two climate scenarios to evaluate the effects of varying levels of water shortages on refinery operations. These assessments estimate the potential impact on EBITDA under different operational disruption scenarios and indicate that material financial impacts are expected to emerge from 2035 onwards.

RESPONSE TO MITIGATE PHYSICAL RISK

Thaioil has adopted a climate adaptation plan that includes installing thermal desalination or Seawater Reverse Osmosis to increase reliability, implementing a 3Rs strategy, monitoring natural reservoir levels daily, and cooperating with water suppliers, the PTT Group Water Management Team, and the Key Man Water War Room. Thaioil also runs a “Saving Water Campaign” to build awareness and encourage water conservation among employees. Moreover, the Company is pursuing a raw water utilization project drawing from a private pond, which has high potential and no impact on the water usage of communities and farmers, aimed at maximizing resource efficiency and increasing diversity in water supply management. In addition, the Company has already entered into raw water purchase agreements with private entities. Currently, the raw water transmission system and the Reverse Osmosis (RO) quality control system are under construction. This helps to mitigate potential risks in the production process and community as well as managing the risks in a timely manner.

BOUNDARY  
Own Operations

AVG. ESTIMATED TIMEFRAME  
10 years (by 2035)

FINANCIAL IMPACT BEFORE TAKING MITIGATION ACTION:  
EBITDA loss caused by dry-season water scarcity affecting operational continuity at 2035

| Scenario              | SSP 2.6 | SSP 8.5 |
|-----------------------|---------|---------|
| Impact (Million THB ) | -       | -600    |

ESTIMATED COST OF MITIGATION ACTIONS BY 2035  
6 Million THB

FINANCIAL IMPACT AFTER TAKING MITIGATION ACTION:  
EBITDA loss caused by dry-season water scarcity affecting operational continuity at 2035

| Scenario             | SSP 2.6             | SSP 8.5             |
|----------------------|---------------------|---------------------|
| Impact (Million THB) | No Financial Impact | No Financial Impact |

Remarks: \*Shared Socioeconomic Pathways (SSP)