2025 Climate Performance Assessment of Formosa Petrochemical Corporation

TCAN TAIWAN CLIMATE ACTION NETWORK 台灣氣候行動網絡

Key Takeaways

Formosa Petrochemical Corporation (FPCC) critically lags global peers in climate performance, marked by high carbon intensity, insufficient Scope 3 targets, and opaque transition planning. This exposes FPCC to escalating regulatory, market, and social risks, threatening its long-term viability. Urgent action is needed to establish a 1.5°C-aligned, Scope 3-inclusive net-zero roadmap with clear financial commitments and asset phase-out plans, driven by stronger investor accountability and supportive government policies.

1. Introduction: The Strategic Imperative of Climate Performance

Formosa Petrochemical Corporation (FPCC), established in 1992, is an upstream, vertically integrated petrochemical giant in Taiwan, handling crude oil import, refining petroleum products (e.g., gasoline, diesel), and producing petrochemical raw materials (e.g., ethylene, propylene). Its extensive operations contribute substantially to Taiwan's carbon footprint, making its climate performance critical for national decarbonization and its own long-term viability.

With FPCC facing an estimated NT$4.6 billion annual payment of carbon fees (potentially rising significantly by 2030), climate performance directly impacts financial viability. This also dictates investment risk and access to capital, as financial institutions increasingly scrutinize high-carbon emitters like FPCC to mitigate portfolio risks and accelerate net-zero transitions. Failure to present a credible transition plan can lead to higher borrowing costs and a diminished reputation. Furthermore, the pace of net-zero transition is a core competitive differentiator. The International Energy Agency (IEA) highlights that the global oil and gas industry must cut emissions by over 60% by 2030 to align with a 1.5°C pathway. Early movers investing in decarbonization technologies and diversifying into clean energy are poised to capture new market opportunities and avoid stranded high-carbon assets.

The climate transition for FPCC is not merely a regulatory burden but a profound strategic imperative that directly influences financial performance, access to capital, and long-term competitive positioning.

2. Formosa Petrochemical's Climate Disclosure and Baseline Performance

Greenhouse Gas Emissions and Reduction Targets

FPCC is Taiwan's second-largest corporate emitter, with 2023 Scope 1 and 2 emissions at 24.19 million tCO2e. Its targets aim for net-zero Scope 1 and 2 by 2050, from a 2007 baseline of 31.82 million tCO2e, with interim targets for 2025 (24.67 million tCO2e) and 2030 (22.71 million tCO2e). This 2007 baseline is problematic, predating the Paris Agreement and not aligning with SBTi recommendations (post-2015), which can inflate perceived reductions.

FPCC's Scope 3 emissions, primarily from 'Use of sold products,' are substantial and rising (e.g., 37.0248 million tons in 2022, accounting for ~80% of total emissions in 2021). Despite this, FPCC has set no Scope 3 reduction targets, rendering its decarbonization strategy fundamentally incomplete.

Decarbonization Strategies and Achieved Reductions

FPCC's decarbonization strategies, including energy efficiency and process improvement, yielded minimal impact, with total reductions of only 0.81% in 2024. While FPCC projects a threefold increase in planned projects for 2025, measures for such a boost are unspecified. Renewable energy plans are notably minimal, projected to reduce only 0.02% of total emissions. Crucially, FPCC lacks specific timelines for replacing its coal-fired cogeneration units, a major emission hotspot, despite regulatory pushes for replacement by 2030. The current strategies relying on incremental gains rather than transformative changes are insufficient for net-zero.

Identified Transition Risks: Financial Impacts and Management Gaps

FPCC identifies 'Carbon Fee Collection' as a high risk, estimated at NT$4.6 billion annually. Its proposed solutions, including internal carbon pricing and green energy evaluations, lack quantifiable financial data and have shown minimal actual reductions. 'Changes in Customer Behavior' is a medium risk, narrowly focused on transportation fuels and excluding the significant plastic reduction trend, with proposed solutions also lacking financial quantification. This contrasts sharply with detailed financial data provided for low-risk items like 'Water Consumption Fee,' highlighting a critical lack of transparency and concrete action for high-impact climate risks. FPCC has also repeatedly cited the 2021 TCFD report text for these high-risk solutions, indicating insufficient investment planning and benefit assessment.

3. Benchmarking Results from Global Initiatives

Transition Pathway Initiative (TPI)

The Transition Pathway Initiative (TPI) assesses how companies manage the transition to a low-carbon economy and their carbon intensity. While FPCC achieved a Level 4 in Management Quality, indicating strategic understanding, it critically lacks quantification of reduction impacts, commitment to phase out carbon-intensive capital expenditure, and linkage of executive pay to climate performance. In Carbon Performance, FPCC significantly lags peers; its 2022 carbon intensity (including Scope 3) was 101.26 gCO2e/MJ, 37.8% higher than the global average (73.46 gCO2e/MJ), making it the highest in TPI's assessment. Its projected carbon intensity shows a huge gap compared to the Paris Agreement's 1.5°C pathway, indicating FPCC is not on a credible net-zero path. For more details, visit Formosa Petrochemical - Transition Pathway Initiative.

Climate Action 100+ (CA100+)

Climate Action 100+ (CA100+), a global investor-led initiative, monitors FPCC's climate performance. In its Disclosure Framework, FPCC shows significant shortcomings, with partial compliance on targets due to insufficient Scope 3 coverage and executive remuneration not linked to climate performance. Its decarbonization strategy and capital allocation are non-compliant, lacking commitment to phase out high-carbon assets, quantified reduction contributions, or low-carbon CapEx disclosure. Information on climate policy engagement and just transition is also insufficient. CA100+ Alignment Assessments reveal complete misalignment with Paris Agreement goals in climate accounting and policy engagement. LobbyMap analysis further shows FPCC's climate policy engagement lacks transparency, opposes carbon taxes, has limited climate communication, and its industry association opposes national emission targets, indicating active resistance to decarbonization policies. For more details, visit Climate Action 100+.

World Benchmarking Alliance (WBA)

The World Benchmarking Alliance (WBA) assesses companies' low-carbon transition capacity. In WBA's 2023 Oil and Gas Benchmark of 99 oil and gas companies, FPCC ranked 77th (with a total score of 5.1/100), a significant decline from 24th in 2021, indicating severe underperformance. While performing better in management and engagement, FPCC significantly lags in emission reduction targets, low-carbon investment, products, and business model. WBA highlights its unchallenging 2007 baseline, lack of Scope 3 targets, insufficient board climate expertise/incentives, and absence of low-carbon business practices/CapEx. To align with 1.5°C, FPCC needs substantial annual reductions in Scope 1+2 (6%) and Scope 1+2+3 (4%) emission intensity. The zero score on 'Just Transition' is particularly concerning, signaling a critical social governance failure and a lack of business model adaptation. For more details, visit WBA's 2023 Oil and Gas Benchmark.

4. Call to Action: Driving Accelerated Change

For Investors and Shareholders:

1. **Demanding Accountability on Meaningful Climate Disclosure:** Actively require FPCC to disclose a detailed, quantifiable transition plan, including a clear breakdown of capital expenditure for high-carbon versus low-carbon projects, and specific timelines for high-carbon asset phase-out.
2. **Integrating Climate Performance into Decision-making:** Systematically incorporate FPCC's climate performance, particularly its Scope 3 management and low-carbon investment plans, into investment decision-making and post-lending oversight.
3. **Active Engagement by Shareholder Actions:** Utilize shareholder proposals and direct engagement to press FPCC for more ambitious targets, transparent reporting, and concrete action.

For Formosa Petrochemical's Senior Management:

1. **Set 1.5°C Aligned Targets, Including Scope 3:** Immediately update GHG reduction targets to align with the Paris Agreement's 1.5°C pathway, adopting a post-2015 baseline and comprehensively including Scope 3 emissions.
2. **Transform Capital Allocation & Phase Out High-Carbon Assets:** Commit to significant reallocation of capital expenditure towards low-carbon technologies, renewable energy, and sustainable products, with clear financial commitments and timelines. This includes allocating at least 50% of future capital expenditure to low-carbon technologies and clean energy by 2030, supported by clear financial return assessments. Establish and publicly disclose a firm timeline for phasing out high-carbon assets, such as coal-fired cogeneration boilers (e.g., before 2030), to avoid stranded assets and align with regulatory expectations.
3. **Integrate Just Transition & Proactive Policy Engagement:** Develop and implement a robust just transition plan that assesses social impacts on employees and local communities, including retraining programs and re-employment support. Publicly clarify and support ambitious climate policies, ensuring consistency across all lobbying activities and industry association memberships, moving away from active opposition to crucial decarbonization policies.

For Government Policy

1. **Strengthen Carbon Pricing & Provide Decarbonization Incentives:** The Ministry of Environment should progressively increase carbon fee standards to incentivize faster and deeper decarbonization, as well as offer robust policy incentives, such as preferential loans or tax credits, for low-carbon technology research, development, and deployment.
2. **Strengthen Requirements on Climate Performance and Disclosure:** The Financial Supervisory Commission should continue to refine *The Taiwan Sustainable Taxonomy* 2.0 by adopting more rigorous "Technical Screening Criteria" and including elements of just transition into "does not cause significant harm" (DNSH) criteria.
3. **Engage Industry on Policy Alignment with net-zero goal:** The Ministry of Economic Affairs should actively engage with industry associations to encourage transparency in their climate policy stances and promote alignment with national net-zero goals.