

Content

- About This Report
- Message from the Chairman
- Sustainability Strategy Blueprint
- FENC's Contribution to UN SDGs
- Identification of Stakeholders and Material Topics
- Boosting Stakeholder Dialogue
- Sustainable Recognitions

Special Report

1. Safe Workplace Amid COVID-19
2. Green Growth Through Circular Economy
- 3. The Path to Net Zero Through Low-Carbon Transformation**
4. Fostering Robust Governance
5. Enabling Unlimited Innovation
6. Navigating a Green Future
7. Creating Inclusive Society
8. Cultivating Compassionate Bonds
9. Advocating Balanced Coexistence
10. Appendix

Special Report **3** The Path to Net Zero Through Low-Carbon Transformation

FENC has taken immediate steps towards the global vision of GHG reduction, answering the call with comprehensive measures to lower carbon emissions. The Energy Task Force, FENC's designated entity for environmental and energy management, has coordinated the establishment of short- to long-term targets. Energy conservation and carbon reduction teams are established at all production sites to set up carbon reduction pathways based on the 5 major strategies in order to build a green and low-carbon operating model.

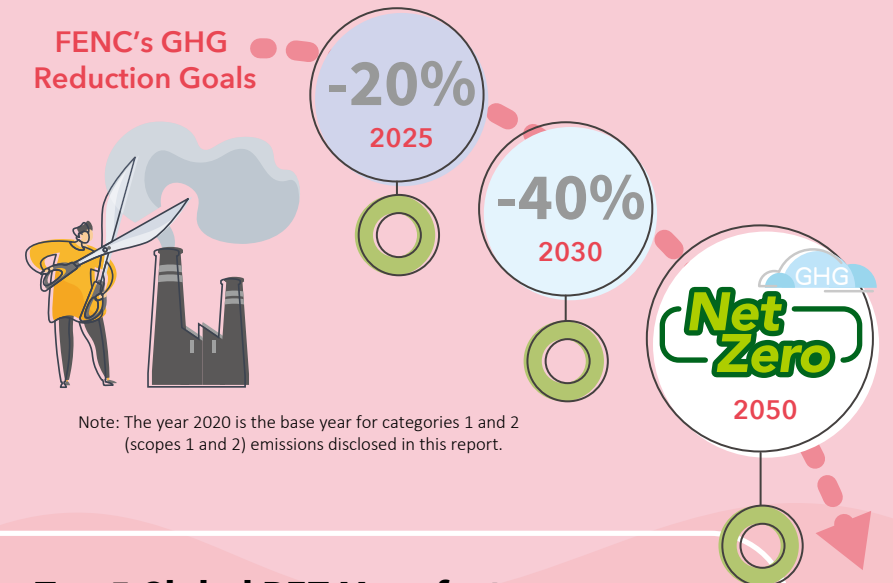
Effects of climate change and global warming are growing severe. In August 2021, Intergovernmental Panel on Climate Change (IPCC) released the Sixth Assessment Report (IPCC AR6), indicating the dire consequences excessive post-industrial CO₂ emissions have brought upon the earth, and the early arrival of global temperature rise by 1.5°C. If the world is to curb the temperature rise before the end of the 21st century, it would require a total transformation in economic development and energy use. The only feasible path is net zero emissions by 2050. Carbon management grabbed international attention in 2021. During the UNFCCC COP26 in 2021, over 200 countries adopted the Glasgow Climate Pact. Key outcomes include multiple nations stepping up their national 2030 climate targets by the end of 2022; phasing down unabated coal power for the first time; additional climate assistance for developing countries; regulations for global carbon trading.

In 2020, Financial Supervisory Commission R.O.C. issued Corporate Governance 3.0 – Sustainable Development Roadmap, requiring listed companies to make disclosures in sustainability reporting based on Task Force on Climate-Related Financial Disclosures (TCFD). In 2021, Environmental Protection Administration issued a notice on the upcoming amendment to the Greenhouse Gas Reduction and Management Act and the renaming of the act to the Climate Change Response Act, which will entail stipulations on 2050 net zero targets and earmarking carbon fee revenues. The growing governmental focus on carbon-related issues is evident.



Establishing GHG Reduction Goals with Strategic Foresight

The Energy Task Force, FENC's designated entity for environmental and energy management, coordinated the establishment of short, mid and long-term GHG reduction targets. FENC is also in the process of receiving approval from the Science Based Targets Initiative (SBTi). The approval is pending the announcement from SBTi on the guidance for the chemical sector.



Top 5 Global PET Manufacturers

The only one to have conducted the comprehensive GHG inventory and established absolute reduction targets

Such an aggressive attitude towards tackling carbon reduction and the pledge to reach net zero set FENC apart from its industry peers. Considering both current technology and future breakthroughs, the Company is taking the lead on the path to carbon reduction with determination and ambition.



Content

About This Report

Message from the Chairman

Sustainability Strategy Blueprint

FENC's Contribution to UN SDGs

Identification of Stakeholders and Material Topics

Boosting Stakeholder Dialogue

Sustainable Recognitions

Special Report

1. Safe Workplace Amid COVID-19

2. Green Growth Through Circular Economy

3. The Path to Net Zero Through Low-Carbon Transformation

1 Fostering Robust Governance

2 Enabling Unlimited Innovation

3 Navigating a Green Future

4 Creating Inclusive Society

5 Cultivating Compassionate Bonds

6 Advocating Balanced Coexistence

7 Appendix

Building Low-Carbon Operation Through Major Strategies 5

To reach the GHG reduction targets, FENC formulated 5 major strategies, taking actions towards carbon reduction while seeking cutting-edge technology to put the strategies into practice on the mitigation pathways.

1 Improving Energy Efficiency



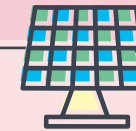
Expenditures on energy conservation projects have long been a critical link in FENC's response to climate change. The first special budget of NT\$2 billion was appropriated for energy conservation in 2010. Another NT\$2 billion was appropriated in 2017, and the latest special budget for energy conservation, which was appropriated in 2022, reached a new record with NT\$4.18 billion. New projects funded by the special budget are anticipated to reduce a minimum of 196,000 tCO₂e in GHG emissions. For more details, please refer to [3.1.1 Energy Management - Measures and Performance in Energy and Carbon Reduction](#).

2 Seeking Low-Carbon Fuels

The short-term plan focuses on replacing coal or crude oil, which are high-carbon fuels, with natural gas, which is relatively low in carbon emissions. The mid and long-term plans focus on replacing natural gas with hydrogen fuel and achieving energy transformation as the technology for developing hydrogen energy matures.



3 Developing Renewable Energy



FENC started installing solar power generators in 2016. Currently, 10 production sites in Taiwan, Mainland China and Vietnam have completed the installation with a total capacity of 13.39 million kWh in 2021. To reach the carbon-reduction targets, production sites yet to do so have initiated the evaluation process, and production sites with existing solar power systems are ready for expansion. It is anticipated that the total installed capacity will nearly triple by 2025, reaching 46,000 kW. For more details, please refer to [3.2.2 Renewable Energy](#).

OPTC Plant 2 is planning to install a biogas power generation system with 2,400 kW in capacity utilizing the biogas generated from the anaerobic wastewater treatment system. In addition, the plant is assessing the feasibility of other renewable energy options such as small wind turbines.

According to Renewable Energy Development Act, major energy users must incorporate 10% of green power in the energy mix. For production sites with 5,000kW of contract capacity, 10% of it must be green power. The stipulation is applicable to 6 FENC production sites in Taiwan, including Hsinpu Chemical Fiber Plant, Kuanyin Chemical Fiber Plant, Hukou Mill, OPTC Plant 1, OPTC Plant 2 and FEFC. All 6 have invested in renewable energy generation and are on track to comply with this requirement in 2023, which would be eligible for the early bird incentive.

4 Transforming Raw Material Use



FENC adopts low-carbon fuels with recycled and biomass alternatives as the main focus. With the competitive edge gained through its core technology, the Company aggressively develops innovative materials that are low-carbon and environmentally friendly and expands product applications.

★ **Recycled raw materials:** As the leader in the global rPET industry, FENC accomplishes a circular economy by turning waste into raw materials. For more details, please refer to [Special Report 2. Green Growth Through Circular Economy](#).

★ **Bio-based materials:** FENC focuses on the R&D of bio-based polyester materials that can be commercialized and mass-produced. For more details, please refer to [2.1 Instigating Production and Product Innovation](#).

5 Utilizing CCUS Technology

FENC hopes to capture carbon emissions from the boiler exhaust using carbon capture, usage and storage (CCUS) to reach carbon reduction.



Content

About This Report

Message from the Chairman

Sustainability Strategy Blueprint

FENC's Contribution to UN SDGs

Identification of Stakeholders and Material Topics

Boosting Stakeholder Dialogue

Sustainable Recognitions

Special Report

1. Safe Workplace Amid COVID-19

2. Green Growth Through Circular Economy

3. The Path to Net Zero Through Low-Carbon Transformation

1 Fostering Robust Governance

2 Enabling Unlimited Innovation

3 Navigating a Green Future

4 Creating Inclusive Society

5 Cultivating Compassionate Bonds

6 Advocating Balanced Coexistence

7 Appendix

Activating ISO 14064-1:2018 GHG Inventory

Prior to establishing GHG reduction targets, current carbon emissions within the industry must be examined. Hence, FENC activated the comprehensive GHG inventory project based on the latest ISO 14064-1:2018 standards. The 20 FENC production sites first identified major indirect GHG emission sources, and conducted GHG emission calculations on procured goods and services, fuels, upstream and downstream transportation, employee commute and business trips based on the 15 indicators for quantification from GHG Protocol-Scope 3 Accounting and Reporting Associated Standards, WRI and WBCSD, 2011. The Company conducted 24 internal training sessions and 8 official training sessions for internal auditors. The project mobilized 672 employees and 332 are now qualified internal auditors. The 20 production sites are on schedule to pass internal audits on GHG inventory by April 2022 and obtain external verification certifications by the third quarter of 2022, which covers 100% of the scope of implementation.

Note: Due to scheduled relocation for FEAZ, the external verification based on the latest ISO 14064-1:2018 will be scheduled after the plant is relocated.

Support for Climate Change Initiatives

No.1

FENC has long been dedicated to corporate sustainability. The Company takes concrete actions, looking to stay on par with top international corporations and cheering industry peers to work together towards finding solutions to curb climate change. On Friday, August 21, 2020, FENC signed the statement of support for the Task Force on Climate-related Financial Disclosures (TCFD). As of the end of January 2022, nearly 3,000 corporations worldwide have signed the statement. FENC is **the first petrochemical corporation in Taiwan** to do so, and the first traditional manufacturer in Taiwan to make the declaration of signing the statement.



Enhancing Stakeholder Engagement



Donald Fan, Acting President of Polyester Business, and B.C. Chang, Chief Operating Officer of Polyester Business, were interviewed by CSR@CommonWealth, a reputable online CSR platform. Three aspects were discussed during the interview, which started with the demand for carbon reduction measures from international customers. FENC continuously engages with these major international corporations with positive responses, forming partnerships that incorporate carbon reduction through circular design and avoidance. The second aspect centered on FENC's vertically integrated supply structure as well as its competitive edge stemming from over 3 decades of experience in PET bottle recycling. FENC tackles green product development from the land, ocean and air, transforming waste PET bottles, textiles, ocean plastics as well as industrial gas into raw materials. Lastly, the interview covered FENC's carbon reduction strategies, conveying to the world its determination in low-carbon operation and pathways to net zero.



FENC Building Low Carbon Operation as Answer to the Urgency of Net Zero (Chinese)

Photo Credit: CommonWealth Magazine



Business Weekly ESG and Taiwan Climate Partnership co-hosted 2021 Carbon Reduction Summit and invited FENC to share its experience during the event. B.C. Chang, Chief Operating Officer of Polyester Business, was among the speakers during the summit. He shared his talk during the session on Low-Carbon Life Circle: Environmental Textile. Mr. Chang shared the talk on the topic, The Sustainable and Circular Textile Industry, during which he discussed the development in the circular polyester industry as well as FENC's carbon reduction strategies and pathways. As of the end of February 2022, the talk had drawn over 1,000 views on the YouTube channel of Business Weekly. FENC's experience was also featured in the 1770th issue of the magazine, which was published on Thursday, October 14, 2021. The coverage features FENC's technological evolution, from turning waste PET bottles into new polyester materials and bottles, and the Company's utilizing the carbon capture technology to produce yoga apparels out of waste gas. FENC has always been a faithful soldier in the fight for net zero.



2021 Carbon Reduction Summit - Forming a Carbon Reduction Network in the Fight for Net Zero with Experiences from Prominent Corporations! (Chinese)

