

Content

- Preface
- Special Report
- 1 Fostering Robust Governance

- 2 Enabling Unlimited Innovation
 - 2024 Highlight
 - Target and Progress
 - Sustainability Issues
 - 2.1 Instigating Production and Product Innovation
 - 2.2 Developing Green Products
 - 2.3 Honing Product Management
 - 2.4 Building Customer Rapport

- 3 Navigating a Green Future
- 4 Creating Inclusive Society
- 5 Cultivating Compassionate Bonds
- 6 Advocating Balanced Coexistence
- 7 Appendix

2

Enabling Unlimited Innovation

2.1 Instigating Production and Product Innovation	60
2.2 Developing Green Products	62
2.3 Honing Product Management	64
2.4 Building Customer Rapport	65

Target Readers:

- | | |
|---|--|
| ☐ Employee / Labor Union | ☒ Business Partner (Supplier / Contractor) |
| ☒ Direct Customer | ☐ External Audit Agency |
| ☐ Government | ☒ Shareholder / Investor / Financial Institution |



Content

- Preface
- Special Report
- 1 Fostering Robust Governance
- 2 Enabling Unlimited Innovation
 - 2024 Highlight
 - Target and Progress
 - Sustainability Issues
 - 2.1 Instigating Production and Product Innovation
 - 2.2 Developing Green Products
 - 2.3 Honing Product Management
 - 2.4 Building Customer Rapport
- 3 Navigating a Green Future
- 4 Creating Inclusive Society
- 5 Cultivating Compassionate Bonds
- 6 Advocating Balanced Coexistence
- 7 Appendix

2024 Highlight

Green Product Revenues
NT\$ 48.3 Billion
Accounting for 33%



The World’s First Commercialized
Shoes With **Midsoles** Made of **rPET**



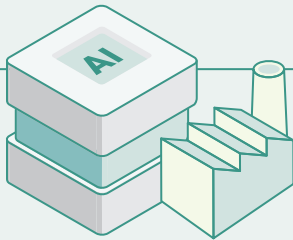
Developing **100%**
Chemically Recycled Polyester
Airbag Fiber

FEFC
Developing **PFC-Free** and
Water-Repelling Fiber
Reducing Negative Environmental Impact



Sustainable Products
Awarded at
ISPO Textrends

FEAZ
Building **HIVE Automated Factory**
Boosting Production Efficiency



Developing Carbon-reducing
100% Bio-based PEF Fiber

929
Patent Approvals

Co-hosting With Nike
The First Lean Learning Community for Suppliers



Content

- Preface
- Special Report
- 1 Fostering Robust Governance
- 2 Enabling Unlimited Innovation
 - 2024 Highlight
 - Target and Progress
 - Sustainability Issues
 - 2.1 Instigating Production and Product Innovation
 - 2.2 Developing Green Products
 - 2.3 Honing Product Management
 - 2.4 Building Customer Rapport
- 3 Navigating a Green Future
- 4 Creating Inclusive Society
- 5 Cultivating Compassionate Bonds
- 6 Advocating Balanced Coexistence
- 7 Appendix

Target and Progress

	Introducing Innovative Production	Increasing in Proportion of Green Product Revenue	Obtaining Product Certifications	Improving Customer Satisfaction
2030 Target	Introducing 5 innovative production process each year	Reaching 50 %	Obtaining the latest international product standards and passing customers' certifications	Implementing 3 customer satisfaction initiatives yearly
2027 Target	Introducing 5 innovative production process each year	Reaching 41 %	Obtaining the latest international product standards and passing customers' certifications	Implementing 3 customer satisfaction initiatives yearly
2025 Target	Introducing 5 innovative production process each year	Reaching 35 %	Obtaining the latest international product standards and passing customers' certifications	Implementing 3 customer satisfaction initiatives yearly
2024 Target	Introducing 5 innovative production process each year	Reaching 33 %	Obtaining the latest international product standards and passing customers' certifications	Implementing 3 customer satisfaction initiatives yearly
2024 Progress	Please refer to 2.1 Instigating Production and Product Innovation	Reaching 33%	Please refer to 2.2 Developing Green Products 2.3 Honing Product Management	Host 2024 product showcase. Collaborate with customers on product development.
Action Plan	- Continue incorporating AI and Industry 4.0 applications - Develop low-carbon production	- Accelerate research and development of green products - Expand production capacity - Enhance sales to customers	- Enhance production and provide quality products - Align with international certification standards	- Gain insights into customer needs through meetings and plant visits - Respond to customer requests on a timely manner and conduct review and improvements based on customer feedbacks
	8 DECENT WORK AND ECONOMIC GROWTH 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 12 RESPONSIBLE CONSUMPTION AND PRODUCTION 13 CLIMATE ACTION	8 DECENT WORK AND ECONOMIC GROWTH 13 CLIMATE ACTION 17 PARTNERSHIPS FOR THE GOALS	8 DECENT WORK AND ECONOMIC GROWTH 17 PARTNERSHIPS FOR THE GOALS

Content

Preface

Special Report

1 Fostering Robust Governance

2 Enabling Unlimited Innovation

2024 Highlight

Target and Progress

Sustainability Issues

2.1 Instigating Production and Product Innovation

2.2 Developing Green Products

2.3 Honing Product Management

2.4 Building Customer Rapport

3 Navigating a Green Future

4 Creating Inclusive Society

5 Cultivating Compassionate Bonds

6 Advocating Balanced Coexistence

7 Appendix

Sustainability Issues

Production and Product Innovation

Material

Significance and Purpose of Management for FENC

Innovation is the entrepreneur spirit that has been guiding FENC. With tremendous R&D momentum, we develop forward-looking products and transition into smart production and product services, making sustainability a reality through innovation, and generating green opportunities with circular economy.

Management Approaches and Effectiveness Evaluation Mechanisms

- Establish R&D Center and continue to infuse resources into the research and development of innovative products and production.
- Generate business opportunities through differentiation, value-adding and advantage in green products.

Authority

- Production Units
- R&D Center

Green Products

Material

Significance and Purpose of Management for FENC

To respond to the risks and opportunities posed by climate change while helping brand customers fulfill their green commitments, a total green transformation has begun at FENC. The Company revolutionized the product lineups with climate-mitigating features as in the eco-friendly series to foster sustainable development.

Management Approaches and Effectiveness Evaluation Mechanisms

- Focus on recycle, replace and reduce as well as develop eco-friendly products.
- Obtain green product labels and certifications.

Authority

- Petrochemical Business
- Polyester Business
- Textile Business

Product Accountability and Life Cycle Assessment

Material

Significance and Purpose of Management for FENC

FENC supplies to major international brands worldwide. With multiple production sites offering a wide spectrum of products, FENC satisfies customers with products of the highest quality.

Management Approaches and Effectiveness Evaluation Mechanisms

- Ensure product certification and compliance with international standards.
- Conduct life cycle assessments to understand potential environmental impacts posed by FENC products and mitigate such impacts through improvement measures.
- Establish a management mechanism governing materials and applicable issues to ensure full product compliance.

Authority

- Petrochemical Business
- Polyester Business
- Textile Business

Customer Relations Management

Significance and Purpose of Management for FENC

We establish committed dialogues with customers to help them achieve sustainability goals, and maintain rapport by providing diverse and innovative products with quality and the best after-sales service, building the reputation as a corporation that fosters both revenues and sustainability.

Management Approaches and Effectiveness Evaluation Mechanisms

- Establish Regulations Governing Customer Relationship Management as the principle guiding customer relations.
- Actively participate in various exhibitions, showcase the latest products and record exhibition performance (including customer data, signed order quantities and business development status).
- Managers of business units are to monitor the interaction between sales and customers and conduct customer satisfaction surveys to maintain customer orders.

Authority

- Petrochemical Business
- Polyester Business
- Textile Business

Content

- Preface
- Special Report
- 1 Fostering Robust Governance

2 Enabling Unlimited Innovation

- 2024 Highlight
- Target and Progress
- Sustainability Issues
- 2.1 Instigating Production and Product Innovation
- 2.2 Developing Green Products
- 2.3 Honing Product Management
- 2.4 Building Customer Rapport

- 3 Navigating a Green Future
- 4 Creating Inclusive Society
- 5 Cultivating Compassionate Bonds
- 6 Advocating Balanced Coexistence
- 7 Appendix

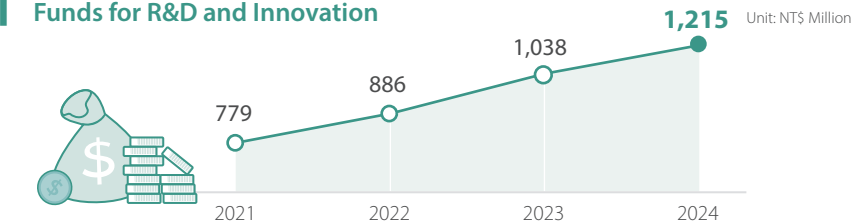
2.1 Instigating Production and Product Innovation

FENC is committed to continuous improvement and growth through the relentless promotion of new product launches and the enhancement of research capabilities. This includes focusing on the development of differentiated products that are high-value, eco-friendly, and highly functional. In addition, the company is actively adopting artificial intelligence technology to improve production efficiency and management effectiveness, thereby creating a competitive edge through digitalization.

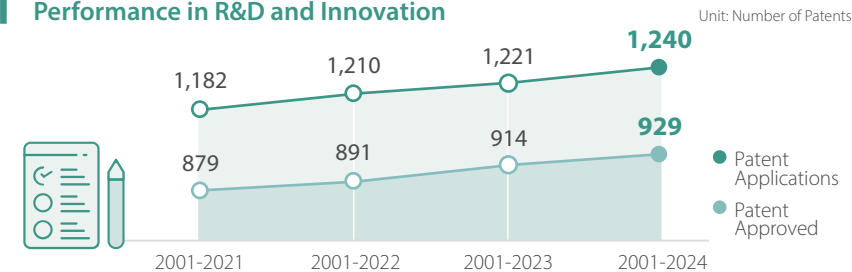
Diverse Innovative Momentum

- 1. **Dedicated R&D units:** Far Eastern Group R&D Center (R&D Center) in Taiwan and Sharon Center in the U.S. are dedicated to product research and development. Synergizing their resources and expertise, the two entities focus on the development of highly specialized products as well as the advancement and applications of recycling technologies. Product categories span high-functional polyester, environmental protection and recycling, health and medical services, automotive materials as well as functional apparels. R&D Center, being the largest research center in Taiwan for polyester materials, has been an endless source of innovations for FENC.
- 2. **Product development departments within each business unit:** With a diverse product lineup, FENC established product development departments under each business unit to accelerate customer engagement and product launch. The Company also founded Innovation Direct to Market (IDM) and a cross-industry technological platform to align with the R&D resources from brand customers and fast-track the commercialization of innovative products.

Funds for R&D and Innovation



Performance in R&D and Innovation



Note:
1. R&D Center was founded in 2001.
2. FENC acquired Sharon Center in the U.S. in 2018, and the transfer of patent ownership has been ongoing. Sharon Center received approval on 559 patents. As of the end of December 2023, ownership for 483 of them has been transferred.

Accelerating Digital Transformation

FENC has been incorporating an extensive mix of intelligent management systems to strengthen its smart production framework, such as the operation management information platform, intelligent recruitment system, WebHR integration system, customer contribution management system and big data visualization platform. To build smart factories, the Company has introduced the robotics and automated manufacturing, product quality prediction model, drone inspection and smart energy management system.



Boosting Production Efficiency With HIVE Automation at FEAZ



FEAZ has successfully reinvented itself from traditional manufacturing to a high-tech plant powered by automation and AI. FEAZ implemented the HIVE (Hub-Innovation-Vision-Evolution) plant automation, upgrading its facilities with advanced equipment supported by digital and intelligent technologies, which transformed the entire clothing production process. While boosting the overall production efficiency, the transformation also lowered the costs and maximized resource utilization.

Smart Equipment

FEAZ has incorporated smart cutting machines, which automatically perform high-precision cutting according to the digital design drawings and improve the fabric utilization rate. Compared with manual operation, smart cutting reduces time consumption and fabric waste. The plant is also replacing manual handling and sorting with smart transportation devices, such as the smart lifting system, container transfer unit and automated guided vehicle, to transport fabrics, auxiliary materials and semi-finished products, which reduces wait time during production and the risk of occupational injuries.

Radio Frequency Identification (RFID)

The RFID tag is used to attach information such as styles, color codes, production batches and storage locations to the raw material or product. Upon scanning the tag, the system instantly displays the storage location and usage of raw materials, which enhances the precision of raw material management. Managers and customers may also use RFID to track product logistics in real time, thus improving the transparency of customer orders.

Digital Management System

The management personnel use the manufacturing execution system (MES) to monitor the status of each process in real time to ensure on-time delivery. The MES is also connected to the enterprise resource planning system to integrate the order, production, warehousing and logistics data with the capability of automatic calculation and scheduling to reduce the time spent on paper documentation and manual scheduling, which minimizes error rates and improves production agility.

IoT Technology

The IoT technology facilitates real-time data sharing among the equipment, materials and personnel in the production workshop. For instance, when the smart cutting machine completes fabric cutting, the system automatically notifies the smart lifting system to deliver the fabrics for the sewing operation, forming a seamless production flow with high efficiency.

The philosophy behind the HIVE factory automation is maximizing resource efficiency to minimize environmental impact. Automated and smart production has reduced manual labor by 5% and increased production efficiency by 15%. Furthermore, production optimization has established FEAZ as a trusted partner among its customers.

Content

- Preface
- Special Report
- 1 Fostering Robust Governance
- 2 Enabling Unlimited Innovation
 - 2024 Highlight
 - Target and Progress
 - Sustainability Issues
 - 2.1 Instigating Production and Product Innovation
 - 2.2 Developing Green Products
 - 2.3 Honing Product Management
 - 2.4 Building Customer Rapport
- 3 Navigating a Green Future
- 4 Creating Inclusive Society
- 5 Cultivating Compassionate Bonds
- 6 Advocating Balanced Coexistence
- 7 Appendix

International Spotlight With Multiple Recognitions for FENC’s Sustainable Innovations at ISPO Textrends



ISPO Textrends, which is considered the Oscars in the global textile industry, is a world-class platform that showcases sports and outdoor textile products. In 2024, nine of FENC’s innovative products received the ISPO Textrends Awards. The Company’s presence at the global award events has put its sustainable innovations under international spotlight and highlighted FENC’s leadership role in sustainability, innovation and the development of functional materials. The features of FENC’s award-winning products are as follows:

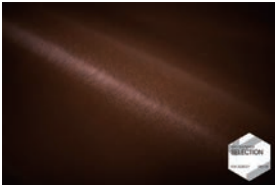
FENC® Carbon Fixation High Strength Fabric

FENC® Carbon Fixation High Strength Fabric, which contains the proprietary aramid fiber, FENC® Telix™, is made of chemicals sourced from carbon dioxide recycled through carbon sequestration. The production bypasses the use of concentrated sulfuric acid as a solvent, making it friendly to the environment. The product performs exceptionally in puncture and abrasion resistance, which is ideal for a wide range of products, such as backpacks, shoes and jackets.



FENC® Recyclable Vegan Leather

This eco-friendly product is made entirely of polyester, of which 68% is recycled materials. The use of polyester simplifies the recycling process, which protects Earth and its ecosystems by promoting reuse, sustainability and carbon reduction.



FENC® PCR Polyester Coated Textile

Featuring a waterproof and breathable coating made of rPET, FENC® PCR Polyester Coated Textile comes with a superb moisture-regulating property and enhanced fabric durability to withstand long periods of use. Made of 100% polyester, of which over 60% is recycled materials, the product is fully recyclable at the end of its life cycle.



FENC® RD24002A

FENC® RD24002A, a sustainable product created by fusing pineapple leaf fibers, FENC® Eco-friendly EM2™ (Enhanced Moisture Management) and environmental polyurethane materials, offers a leather-like texture with exceptional durability and lightweight quality. Ideal for a broad mix of applications, such as footwear, bags and fashion accessories, the product promotes the use of recycled resources while cutting carbon emissions and waste.



FENC® RD23002-1

The production of FENC® RD23002-1 incorporates the FENC Zero Solvent Coating & Lamination technology, which cuts carbon emissions by 50% compared with conventional methods. While adding environmental benefits, this innovation gives the product remarkable abrasion resistance, which is well-suited for footwear.



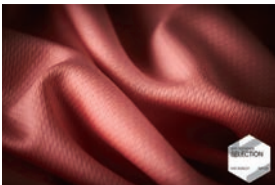
FENC® RD21002-01

FENC® RD21002-01 merges FENC® Eco-friendly EM2™, a cooling staple fiber, and the Modal rayon fiber through a low-temperature melt spinning technique, which consumes 40% less energy than the conventional production process while giving the product supple and fast-drying qualities.



FENC® RD23004-01

Made of FENC® Eco-friendly EM2™, FENC® RD23004-01 is a soft and quick-drying fabric with an exceptional moisture-regulating ability. The chemically modified recycled polyester is well-suited for the low-temperature melt spinning processing. With a production temperature 20°C lower than that for the conventional method, the product also reduces energy consumption and carbon emissions.



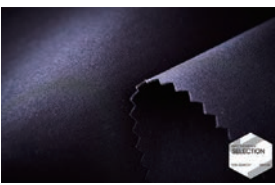
FENC® Hydrophilic Cationic Dyeable Thermoplastic Polyether-ester Elastomer Fabric

Soft to the touch, this product retains its color vibrancy well after dyeing. The fast-drying fabric comes with superb wickability that is 50% higher than that of its conventional counterparts. Being recyclable, this fabric can be seamlessly integrated into the existing polyester recycling process, which supports environmental sustainability.



FENC® Carbon-Fixation 3-layers

This proprietary carbon-fixing fabric is produced without solvents and isocyanate, a highly toxic pollutant. Its molecular structure is infused with 22% of carbon dioxide, marking a revolutionary breakthrough in the carbon capture and utilization technology with 60% less carbon emissions. Its hot-melt property allows direct bonding with other fabrics without any adhesives, giving it the advantage of cutting the weight by 20% while adding suppleness and flexibility.



Content

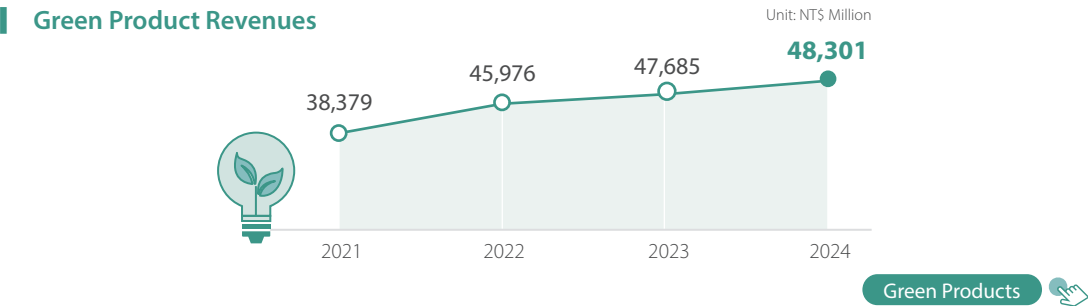
	Preface
	Special Report
1	Fostering Robust Governance
2	Enabling Unlimited Innovation
	2024 Highlight
	Target and Progress
	Sustainability Issues
	2.1 Instigating Production and Product Innovation
	2.2 Developing Green Products
	2.3 Honing Product Management
	2.4 Building Customer Rapport
3	Navigating a Green Future
4	Creating Inclusive Society
5	Cultivating Compassionate Bonds
6	Advocating Balanced Coexistence
7	Appendix

2.2 Developing Green Products

To embrace the risks and opportunities brought by climate change and help global brands fulfill their green commitments, FENC has focused its core strengths on green innovations and initiated a full-fledged green transformation. The Company is cultivating green competitiveness with 3R – recycle, replace and reduce as product strategies, developing eco-friendly products while safeguarding environmental sustainability.

Green Product Revenues

FENC set a record high in 2024 with NT\$48.3 billion in green product revenues, up by 1.3% from 2023 and marking revenue growth for the fourth straight year.



Green Product Certification

Global Recycled Standard (GRS) Version 4.0	Recycled Content Certification Version 7.0	Ocean Bound Plastic Recycling Standard Version 2.2
Carbon Footprint of Products ISO 14067 : 2018	The Association of Plastic Recyclers (APR)	Taiwan Green Mark
Based on Life Cycle Assessment ISO 14040 : 2006 ISO 14044 : 2006	Registration, Evaluation, Authorization and restriction of Chemicals (REACH)	
Organic Content Standard (OCS) Version 3.0	OEKO-TEX® Standard 100 Tested for Harmful Substances	bluesign® Standard
Global Organic Textile Standard (GOTS-NL) Version 7.0	Regenagri Content Standard, regenagriCS	Responsible Wool Standard (RWS) Version 2.2

Climate Mitigation Series

Product development focuses on the mitigation of climate change with replace, recycle and reduce at its core.

Replace fossil fuels	FENC devotes long-term research and development efforts to biomass as a replacement for fossil fuels to minimize their environmental impacts. Products that are most representative of the fruit of this effort are bio PET, which is made of biomass materials, and FENC®TOPGREEN®Bio3 PET Filament, which is made of recycled waste gas.
Recycle waste materials	FENC leads the global rPET industry with multiple innovations, including rPET resins made of recycled PET bottles. While rPET itself is value-adding, the production process reduces GHG emissions by 63% compared with that of virgin PET. Applications of rPET are wide-ranging, including food and non-food packaging, functional apparels, footwear and automotive materials as well as household goods. In recent years, the Company went on to develop textile recycling and chemical recycling technologies for polyester to expand the materials that can be recycled.
Reduce energy and resource consumption	FENC improves the energy and resource efficiency of the entire value chain. The Company reduces energy consumption during production, processing, delivery and usage to minimize GHG emissions associated with its products, which range from fast reheat PET resin, light-weight PET preform, refillable resin and dope-dyed filament.

Eco-Friendly Series

FENC has developed an impressive lineup of eco-friendly products. By using organic raw materials as well as toxin-free auxiliary materials, catalysts and additives, the Company aims to reduce pollutants derived from production and minimize negative environmental impacts. Featured products in this series include TOPGREEN®Sb free PET, FENC®TopClean and PFC Free Nylon 66 Filament.

Green Initiatives

We are seeking a balanced approach in economic and environmental development with active participation in green initiatives. By engaging in conferences and forums, we communicate with our customers, building consensus in the development goals for the future. The following is a list of the green initiatives that the Company has taken part in:

- Taiwan Circular Economy 100 (TCE100)
- The National Association for PET Container Resources (NAPCOR)
- The Association of Plastic Recyclers (APR)
- Packaging Recycling Organization Vietnam (PRO-Vietnam)
- Association of Taiwan Bio-based and Sustainable Material Industry (TBSM)
- Japan Clean Ocean Material Alliance (CLOMA)
- Japan Container and Packaging Recycling Association (JCPRA)
- Textile Exchange (TE)

Content

- Preface
- Special Report
- 1 Fostering Robust Governance
- 2 Enabling Unlimited Innovation
 - 2024 Highlight
 - Target and Progress
 - Sustainability Issues
 - 2.1 Instigating Production and Product Innovation
 - 2.2 Developing Green Products
 - 2.3 Honing Product Management
 - 2.4 Building Customer Rapport
- 3 Navigating a Green Future
- 4 Creating Inclusive Society
- 5 Cultivating Compassionate Bonds
- 6 Advocating Balanced Coexistence
- 7 Appendix

Co-developing 100% Chemically Recycled Polyester Airbags With Autoliv



OTIZ co-developed the industry’s first 100% chemically recycled polyester airbag with Autoliv, the world’s leading automotive safety supplier. The breakthrough denotes a success in crossing the technological threshold of applying recycled textile materials in automotive safety products.

As the global automotive industry pivots towards carbon neutrality and net zero emissions, Autoliv, a major European airbag manufacturer, had been seeking to develop low-carbon products by forming partnerships with suppliers powered by low-carbon technologies. OTIZ caught Autoliv’ attention with its 100% chemically recycled polyester. Together through trial and error, the partnership gave birth to the performance airbag sourced from recycled polyester, a product that has met all the functional criteria.

The 100% chemically recycled polyester airbag marks an unprecedented success in the industry’s attempt in using recycled raw materials. By continuously pushing technological advancement, FENC has created products sourced from recycled materials with the same performance as those from virgin polyester. In 2021, FENC set an industry record with the pioneering rPET tire cord fabrics, which have been commercialized. Now, FENC has done it again by expanding the polyester application to airbags, a crucial element in automotive safety. The breakthrough represents not only FENC’s ability to integrate the polyester technology innovatively, but a boost in confidence in the development of low-carbon automotive textiles.

Minimizing Environmental Impact From Energy and Resource Consumption in Downstream Processing With FEFC®dwr



FEFC®dwr, a nylon 66 product developed by FEFC, is completely PFC-free. This eco-friendly product, which boasts durable, water-repelling and water-resistant qualities with a fine texture, is currently being produced in partnership with multiple internationally renowned sports brands and seeing growth in popularity on the market.

Through material modification and production optimization, FEFC®dwr has achieved a water-proofing effect rivaling that of fabrics containing PFC and outperforming its counterparts in washability and durability. It has been used in a broad range of textile products, such as apparel for yoga, jogging and outdoor sports, as well as down jackets, women's underwear and high-end fashion. The polo shirt FEFC co-developed with Lululemon using FEFC®dwr has been introduced to the market in 2024, and additional collaborations with brand customers are underway. FEFC®dwr allows the downstream customers to bypass the use of water repellents, a practice that reduces energy and resource consumption. Meanwhile, as a PFC-free product, FEFC®dwr is protecting the environment from negative impacts.

The Carbon-reducing 100% Bio-based PEF Fiber



PEF is an environmentally friendly polyester material that can be 100% sourced from bio-based materials. With a molecular structure more tightly arranged than that of PET, PEF has a superior gas-barrier property that makes it well-suited for food packaging. According to a 2023 report on the life cycle assessment of PEF released by the bioplastics company, Avantium, PEF reduces carbon footprints by more than 33% compared with PET.

Aggressive efforts have been devoted to the innovative application of PEF in anticipation of its competitive positioning as a low-carbon and eco-friendly material. FENC delved into the development of 100% bio-based PEF fiber by leveraging its R&D advantage in textile and polyester. Through multiple experiments, the Company successfully created the PEF fiber, which has been tested as being able to deliver a deep-dyeing effect under temperature settings lower than those required for polyester fibers. Delivering color strength that could reach up to 1.4 times that of polyester, PEF also reduces energy and dye consumption during production.

By applying PEF in the textile industry, FENC has expanded the market scale for bio-based products, which also accelerates its pace towards carbon reduction and sustainability.

Content

	Preface
	Special Report
1	Fostering Robust Governance
2	Enabling Unlimited Innovation
	2024 Highlight
	Target and Progress
	Sustainability Issues
	2.1 Instigating Production and Product Innovation
	2.2 Developing Green Products
	2.3 Honing Product Management
	2.4 Building Customer Rapport
3	Navigating a Green Future
4	Creating Inclusive Society
5	Cultivating Compassionate Bonds
6	Advocating Balanced Coexistence
7	Appendix

The World's First Commercialized Footwear With rPET Midsoles



Currently, shoes available on the market consist of a mix of materials, such as rubber soles, leather or synthetic uppers and foam midsoles, which are tightly bonded with adhesives and often end up in incinerators due to the difficulty of separation for recycling, resulting in pollution in the environment and deviation from the global carbon reduction trends. As the carbon footprints and circularity of a product’s life cycle become decisive factors in product competitiveness, footwear brands have begun the search for mono-material shoes, making shoes recyclable to embody the circular economy.



Capitalizing on its know-how in polyester synthesis, FENC has developed polyester materials of diverse specifications through polymerization and by modifying the material property to suit the various shoe components, hence creating a solution to the difficulty in separating shoe components for recycling. FENC developed uppers, laces, linings, insoles, shanks and toe cap adhesive made of rPET, and midsoles from rTPEE. Unlike the virgin TPEE produced by its industry peers, FENC’s rTPEE is made of post-consumer-recycled PET bottles, which reduces carbon emissions by 10% to 30% compared with virgin TPEE, and completes a closed loop from “post-consumer waste” to “new post-consumer products.”

The rPET footwear material has obtained three patents and received recognitions at the ISPO Textrends Award. It has also been adopted by the mountain sports brand Salomon, which launched the world's first river trekking shoes containing materials such as 100% rPET and rTPEE in the first quarter of 2025. The recyclable materials have made total recycling a possibility in the footwear industry. FENC will expand the applications of these recycled materials for products such as casual and walking shoes to advance the sustainable development of the footwear industry.

Creating a Sustainable Lifestyle With New Applications of Used Coffee Grounds



FENC utilizes used coffee grounds collected from convenience stores as the raw material during yarn spinning for the downstream processing of non-woven dry wipes and facial masks. This innovation has set a precedent in Taiwan for the large-scale application of used coffee grounds in skin care and sanitary products, which were unveiled at the 2024 Asia Nonwovens Exhibition and Conference.

Each year, approximately 50,000 metric tons of coffee grounds are generated in Taiwan. FENC carbonizes the coffee grounds into activated charcoal using its existing production facilities, which delivers a production scale higher than that using extraction method in Taiwan. The charcoal boasts a deodorizing effect that has been third-party verified. Being a carbon-fixing product, it cuts 3 kgCO₂e of carbon emissions per kilogram. The transformation has helped convenience stores turn waste coffee grounds into sustainable products.

2.3 Honing Product Management

FENC has a diverse product structure that caters to leading international brands in the food, household goods, apparel and automobile industries. With worldwide market distribution, FENC must supply quality and competitive products that are tailored to customers’ high standards while complying with local regulations. FENC believes there is always room for improvement, never ceasing to optimize production and product quality and seeking to strengthen product management by integrating digital technology.

Product Quality and Safety Certification

• ISO 9001 Quality Management System	• HACCP Hazard Analysis and Critical Control Points
• IATF 16949 Automotive Quality Management Systems	• Halal Certification
• FSSC 22000 Food Safety System Certification	• India BIS Certification
• ISO 22000 Food Safety Management System	

Life Cycle Assessment

To assess the potential environmental impact of products made of different raw materials, FENC conducts product life cycle assessments based on the ISO 14040 and ISO 14044 standards or the guidelines of Product Environmental Footprint (PEF). Using systematic approaches, the assessment quantifies the environmental impact throughout a product’s life cycle, including the consumption of raw materials, energy and resources, as well as the GHG emissions. Multiple FENC products are included in the scope of the assessment. Among them are PTA, polyester filaments, recycled PET filaments, bio-PET filaments, dope dyed polyester filaments, low-melt bonding fiber and recycled low-melt bonding fiber and polyester tire cords. Following the cradle-to-gate approach, the assessment covers processes

Content

	Preface
	Special Report
1	Fostering Robust Governance
2	Enabling Unlimited Innovation
	2024 Highlight
	Target and Progress
	Sustainability Issues
	2.1 Instigating Production and Product Innovation
	2.2 Developing Green Products
	2.3 Honing Product Management
	2.4 Building Customer Rapport
3	Navigating a Green Future
4	Creating Inclusive Society
5	Cultivating Compassionate Bonds
6	Advocating Balanced Coexistence
7	Appendix

such as raw material extraction and production. For PET and rPET, the scope is expanded to include the point of delivery, encompassing a life cycle that stretches from raw materials to when the finished products reach the customers. According to the product life cycle assessment report, which was verified externally by TÜV Rheinland in 2017, environmental impacts of rPET and recycled polyester filaments sourced from recycled PET bottles are lower than those of their virgin counterparts.

In the future, the Company will gradually expand the product life cycle assessment process to more products and broaden the boundaries. A clear assessment of the scale and significance of potential environmental impacts from FENC products will help the Company tackle these impacts from product management, R&D and design.

Life Cycle Assessment

Business	Product	Boundary
Petrochemical Business	PTA	Raw material acquisition, manufacturing
Polyester Business	Solid state polymer: PET, rPET	Raw material acquisition, manufacturing, distribution
	Fiber: polyester filament, recycled PET filament, bio-PET filament, dope dyed polyester filament, low-melt bonding fiber and recycled low-melt bonding fiber	Raw material acquisition, manufacturing
Textile Business	Industrial fiber: polyester tire cord fabric	Raw material acquisition, manufacturing

Concerned Substance and Issue Management

- Products, raw materials and production processes at FENC do not involve (not applicable) genetic engineering, nanotechnology, stem cell research, conflict minerals, animal testing or endangered species.
- Safety Data Sheet (SDS) is provided for all FENC products in compliance with regulatory requirements, and managed and updated by designated personnel. Hazard assessment is conducted through the requirements listed on SDS, which cover risk identification, implement, required documentation, information provision and communication. The assessment ensures the safety of product usage, storage, delivery and disposal.
- None of the products produced by Polyester and Textile Businesses are under hazard categories 1 and 2 of Globally Harmonized System of Classification and Labeling of Chemicals (GHS). PTA, a product under Petrochemical Business, is classified under health hazard category 2 (serious damage/Category 2B of eye irritation: the effects are fully reversible within 7 days of observation; Category 2 for reproductive toxicity: suspected human reproductive toxicant.)
- All of our products comply with the regulations of the countries where they are manufactured and sold, as well as with our customers' chemical substance management standards.

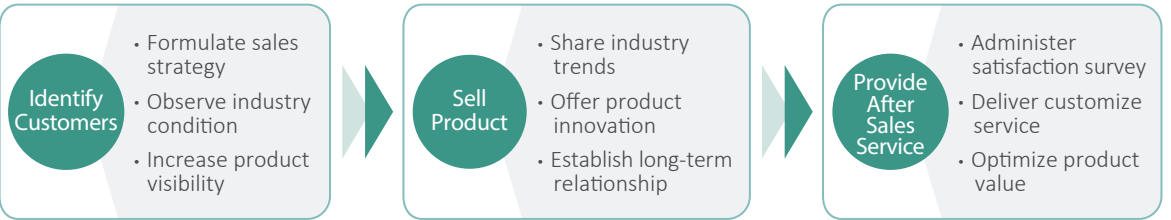
- During the reporting period, there were no incidences or disputes involving inappropriate usage, storage, transport or waste disposal regarding Company products.

2.4 Building Customer Rapport

FENC has a robust production and marketing framework powered by a vertically integrated production network that spans across the petrochemical, polyester and textile industries, which gives the Company the ability to respond to market trends and formulate R&D strategies with agility. Among FENC’s customers are major international brands across a wide spectrum of industries, and the Company bolsters these partnerships through diverse communication channels, such as in-person and virtual meetings, email correspondence, product launches and corporate visits. FENC also accepts invitations from international brands to attend their supplier conferences on a regular basis to assess customer needs.

FENC administers customer satisfaction survey to assess customer attitudes towards FENC’s products and services. The survey mechanism is determined and implemented by the production and business departments, and customer feedback is discussed during internal review meetings to formulate improvement plans and for follow-up purposes.

FENC’s Customer Relations



Compliance with Customer Requirements

We have signed agreements with brand customers, and abide by the ethical, safety and procurement rules set forth while aspiring for further self-improvement.

• Ethics provisions from brand customers and SEDEX Members Ethical Trade Audits (SMETA)
• Fair Trade Certified USA (FTC USA)
• Social & Labor Convergence Program (SLCP)
• Safety compliance standards of brand customers
• Green supply chain management
• Customs-Trade Partnership Against Terrorism, C-TPAT

Content

- Preface
- Special Report
- 1 Fostering Robust Governance
- 2 Enabling Unlimited Innovation
 - 2024 Highlight
 - Target and Progress
 - Sustainability Issues
 - 2.1 Instigating Production and Product Innovation
 - 2.2 Developing Green Products
 - 2.3 Honing Product Management
 - 2.4 Building Customer Rapport
- 3 Navigating a Green Future
- 4 Creating Inclusive Society
- 5 Cultivating Compassionate Bonds
- 6 Advocating Balanced Coexistence
- 7 Appendix

The First Supplier Lean Learning Community by FEAV



FEAV co-hosted the first Lean Learning Community with its customer, Nike, on December 13 and 14, 2023. The event featured lean production deployment as the theme, and Nike’s suppliers and partners were invited to brainstorm on the subjects of expanding production lines and productivity as well as improving production processes to enhance operational efficiency. FEAV shared its “building block” approach, which entails assigning varying combinations of staff at the same production line based on the complexity of the product styles. The method enables the manufacturing of multiple product styles through one production line, which cuts waste in labor and time while improving efficiency. The event received high praises from the 70 participants in attendance.

Supporting Puma Singapore Marathon With Flexible Resource Integration



The Standard Chartered Singapore Marathon, which is sponsored by Standard Chartered Bank, is a world-renowned event drawing more than 55,000 participants. Puma was the apparel sponsor of the 2024 marathon. To embody its goal of becoming a sustainable brand, Puma made the eco-friendly choice by opting for the lightweight double-sided fabric made of FENC’s 100% recycled polyester.

Facing a tight schedule and enormous demand, FENC capitalized its agile operation and integrated the internal resources. Within one month after the styles was confirmed, samples were provided to the customer, and within one and half months after the order was confirmed, all deliveries were fulfilled, thus meeting Puma’s expectation in shipping schedule and product specifications. FENC has demonstrated that in addition to its impressive green product lineup, the Company is able to provide a total solution through flexible production and advantages in sales and marketing.



Shining With Green Power at 2024 TITAS

The 2024 Taipei Innovative Textile Application Show (TITAS) was held between October 15 and 17 in Taipei Nangang Exhibition Center with a total of 385 suppliers from 11 countries in attendance, drawing approximately 32,000 buyers to the event.

FENC’s showroom, which was inspired by the 2024 Paris Olympics, featured the eco-friendly sports jerseys sourced from “the greenest materials.” These jerseys made their appearance during multiple international sports events. The main stage revisited the stylish purple athletics track at the Paris Olympics, setting off FENC’s flagship products on the interior wall. The center display, which was built upon a raised platform open on three sides, featured the popular tennis, football and basketball jerseys, as well as winners of major international fashion design awards, putting FENC’s expert knitting techniques, which is famed internationally, on display.

At the section devoted to eco-friendly automotive materials were the ultra-functional tire cord fabrics suitable for aircraft tires or air suspension, as well as seat belt and airbag yarns with carbon-reducing and environmental advantages. At the recreational sports section were a selection of over 20 specialty products, such as dresses, windbreaker jackets and sweatpants. Proudly displayed with these products was FENC’s long dedication to innovative textiles for the outdoors, sports and leisure, and lifestyle.

FENC adheres to the strategies of continuing transforming PET bottles into recycled polyester materials and accelerating the development of the rTEX textile recycling infrastructure, technology and production capacity. Among the recycled textile products exhibited during the 2024 TITAS was the eco-friendly fabric spun and woven from recycled polyester fibers blended with scraps from shoe factories. The production process bypasses the dyeing process, which reduces water consumption during the dyeing and finishing stage.

FENC’s TITAS display fully demonstrated its status as an industry pioneer, which was manifested through the R&D skills that gave way to the innovative green products and advanced recycling technologies. By transforming waste from diverse sources into value-added products, FENC is steering the industry revolution and transformation.