2019 SUSTAINABILITY REPORT



ECOS.

PLANT-POWERED CLEAN



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Introduction

EFP's vision is to create value. We aim to do this for our customers, by making them more competitive; for our employees, by offering them opportunities to learn, grow, and share in the value they create; for our stakeholders, by seeking to meet, or exceed, their expectations for value creation; and for the communities in which we operate, by exhibiting our commitment to sustainable products in everything we do, EFP actively contributes to economic progress, environmental stewardship, and social development.

Early in 2010, we took the next step in our permanent quest for excellence—setting out to organize EFP entirely around customer groups instead of traditional product lines. In 2019, the ever-changing business environment created new challenges and opportunities that led us to shift our strategy toward knowledge-based activities, responding to deep shifts in our customers' needs and acting on the great potential of new information technologies. We are proud to be partners in several important programs to ensure sustainability in our operations. These are detailed in the following sections.





EFP Environmental Policy

Environmental management is ingrained in EFP's culture. Environmental protection is among EFP's top corporate priorities. We address environmental issues in all of our operations and public policies and have adopted the following 15 principles as our environmental protection policy.

1. Corporate priority

To recognize environmental management as among our highest corporate priorities and as a key determinant to sustainable development; to establish policies, programs, and practices for conducting operations in an environmentally sound manner.

2. Integrated management

To fully integrate these policies, programs, and practices into each business as an essential element of all management functions.

3. Process of improvement

With regulations as a starting point, to continue to improve corporate policies, programs, and environmental performance, taking into account technical developments, scientific understanding, consumer needs, and community expectations, and apply the same environmental criteria internationally.

4. Employee education

To educate, train, and motivate employees to conduct their activities in an environmentally responsible manner.

5. Prior assessment

To assess environmental impacts before starting a new activity or project, decommissioning a facility, or leaving a site.

6. Products and services

To develop and provide products and services that have no undue environmental impact, are safe in their intended use, are efficient in their consumption of energy and natural resources, and can be recycled, reused, or disposed of safely.



7. Customer advice

To advise and, where relevant, educate customers, distributors, and the public on the safe use, transportation, storage, and disposal of products and apply similar considerations to the provision of services.

8. Facilities and operations

To develop, design, and operate facilities and conduct activities that take into consideration the efficient use of renewable resources, the minimization of adverse environmental impacts and waste generation, and the safe and responsible disposal of residual wastes.

9. Research

To conduct or support research on the environmental impacts of raw materials, products, processes, emissions, and wastes associated with the enterprise and the ways to minimize such adverse impacts.

10. Precautionary approach

To modify the manufacture, marketing, or use of products and services, or the conduct of activities, consistent with scientific and technical understanding, to prevent serious or irreversible environmental degradation.

11. Contractors and suppliers

To promote the adoption of these principles by contractors acting on behalf of the enterprise, encourage and, where appropriate, require improvements in their practices to make them consistent, and encourage the wider adoption of these principles by suppliers.

12. Emergency preparedness

To develop and maintain, where significant hazards exist, emergency preparedness plans in conjunction with the emergency services, relevant authorities, and the local community, recognizing potential transboundary impacts.

13. Transfer of technology

To contribute to the transfer of environmentally sound technology and management methods throughout the industrial and public sectors.

14. To contribute to the common effort to be a part of the development of public policy and to business, governmental, and intergovernmental programs and educational initiatives that will enhance environmental awareness and protection.

15. Openness to concerns

To foster openness and dialogue with employees and the public, anticipating and responding to their concerns about the potential hazards and impacts of operations, products, wastes, or services, including those of transboundary or global significance.

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The Green Power Partnership

The U.S. Environmental Protection Agency (EPA) established the Green Power Partnership (GPP) in 2001 to protect human health and the environment, by increasing organizations' voluntary green power use to advance the American market for green power and the development of renewable electricity sources. The GPP is helping to build the American green power industry and meet Clean Air Act requirements, by reducing the pollution, and the corresponding negative health and environmental impacts, associated with conventional electricity use. Since the inception of the GPP, the voluntary market has grown by nearly 5,000%. The program provides a framework that includes credible usage benchmarks, market information, technical assistance, and public recognition for companies and organizations that use green power. In return for technical assistance and recognition, Partners commit to use green power for all, or a portion, of their annual electricity consumption.

Since the GPP's inception in 2001, with 21 founding Partners, GPP Partners have contributed significantly to the American renewable energy industry. Current Partners' green power use represents nearly 40% of the voluntary green power market in the U.S., an 11,000% growth in Partners' green power use since the GPP's inception. Partners currently use enough renewable electricity to power more than 3.3 million average American homes for a year (yearend 2016 data).

In 2016, Partners supported more than 485,000 jobs in the U.S.



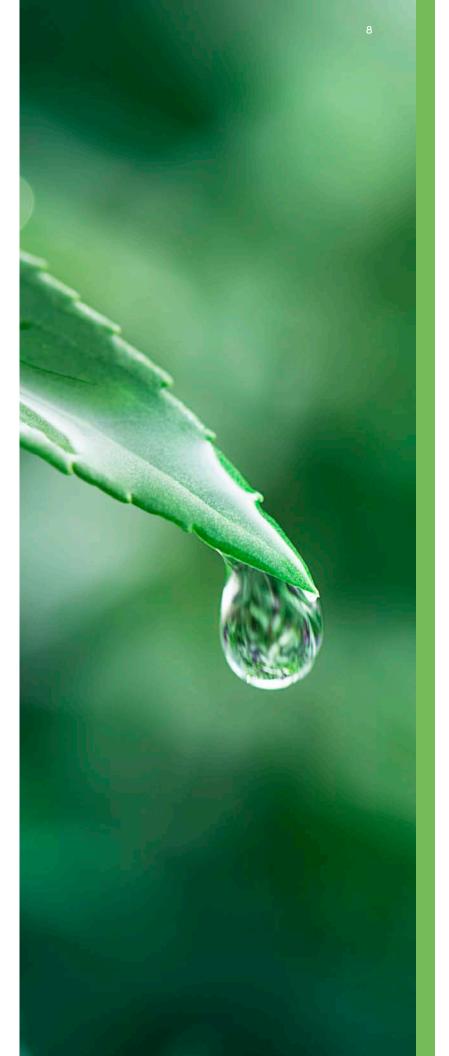


The EPA SmartWay Partnership

The SmartWay Transport program was developed in 2003 by the EPA, industry stakeholders, and environmental groups. SmartWay has more than 3,000 partners, including manufacturers, shippers, logistics companies, and truck, rail, barge, and multimodal carriers. Annually since its inception, the partnership estimates that the program has helped save nearly 280 million barrels of oil and more than 5.3 billion gallons of gas, along with \$38 billion in fuel costs. Additionally, emissions have been reduced by 134 million tons.

EFP has been a partner in this program for three years, and we renew our partnership annually. We use SmartWay's tools and innovative approaches to assess the environmental and energy efficiency of shipping within our supply chains and help reduce fuel use and associated emissions. Since 2008, our use of the SmartWay Transport program has helped the company reduce carbon emissions from shipping by 50% and from transportation by more than 20%, helping us achieve a 14% total reduction in carbon emissions across our supply chain operations. We recently submitted data on our shipping and energy-conservation efforts associated with the transportation of raw materials and the distribution of finished products. The SmartWay Transport program reviewed and validated this information before approving the company's partnership renewal.





The Benefits of Becoming a SmartWay Shipper

- Reduce the environmental impact of manufacturing process.
- Establish a company's commitment to reducing the environmental impact of freight transportation.
- Develop an industry-standardized baseline or benchmark for the company's carbon footprint.
- Obtain the metrics and data needed to make better decisions that reduce the impact.
- Demonstrate Corporate Social Responsibility.
- Showcase achievements to those consumers who embrace sustainability in purchasing decisions.
- Communicate a company's efforts to a broad group of stakeholders.
- Resonate with a value-driven millennial workforce.
- Exhibit leadership.
- Define a leadership position in a world that expects corporate action on climate.
- Develop strategic partnerships that help maximize the impact.
- Influence the supply chain to establish efficiency as a priority.
- Manage the risk.
- Demonstrate a company's sustainability status to investors.
- Prepare for the future of environmental business risk and governance.



WasteWise

All U.S. businesses, governments, and nonprofit organizations can join WasteWise as a partner, endorser, or both. Current participants range from small local governments and nonprofit organizations to large multinational corporations. Partners demonstrate how they reduce waste, practice environmental stewardship, and incorporate sustainable materials management into their waste-handling processes. Endorsers promote enrollment in WasteWise as part of a comprehensive approach to helping their stakeholders realize the economic benefits of reducing waste.

There are three main levels of participation for both partners and endorsers within WasteWise. The guide below outlines the various levels and associated commitments for each status level. Some of the levels have a time limit; however, most do not. The levels of participation include:

- Planning WasteWise participation.
- Helpful resources for WasteWise participants.
- Ten steps to being WasteWise.
- Tips for reaching the waste reduction goals.
- Metrics for waste reduction.
- Forming a waste reduction team to maintain waste reduction participation—planning, designing, and implementing activities.

By forming a team, employees throughout an organization can share in the company's efforts. The team may be responsible for:

- Working with the organization's management to set short- and long-term waste reduction goals.
- Gathering and analyzing information related to the design and implementation of the planned activities.
- Promoting the program to other employees and educating them on ways to participate.
- Monitoring progress.
- Reporting the status of planned activities to management.
- Reporting on an organization's waste reduction efforts annually to WasteWise.
- Conducting a waste assessment or waste audit—a systematic review of a facility and its operations to quantify waste generation and identify management practices. Waste assessment data gives a team a much better understanding of the types and amounts of waste their organization generates.





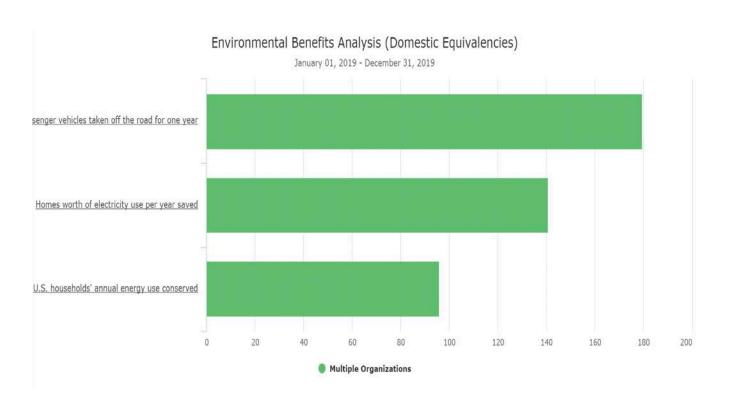
Wastewise Process

The scope of participation was defined. The waste reduction activities and resources were focused on certain areas of the organization. To determine the scope, facilities and key operations for waste reduction opportunities were examined, and then the waste reduction areas on which to focus were selected.

The options were evaluated. The waste assessment results were used to choose waste reduction activities. Brainstorming outcomes are always taken into consideration to identify potential activities, and the most promising options are listed and evaluated in terms of economic and operational feasibility. When analyzing and selecting options:

- The focus is on waste prevention that would help eliminate waste at the source, saving natural resources and energy and cutting costs.
- Next, evaluate recycling options to manage waste that cannot be prevented. Before collecting recyclables, identify markets for them.
- Finally, opportunities are examined to buy or manufacture recycled-content products.
- Goals are set that can be tracked and measured. The results of waste assessment are used to identify activities to help prevent waste, expand recycling, and increase the purchasing or manufacturing of recycled-content products.
- The planned activities are implemented.

Waste reduction successes are announced and shared with the team and community to maintain momentum, increase awareness, and sustain management support. Sharing success with the community demonstrates an organization's environmental stewardship.



WasteWise Requirements and Reporting

To remain an active participant of WasteWise, EFP must complete a report in the SMM Data Management System:

Submitting annual data for the previous year EFP must establish an annual goal for a self-directed quantitative increase in the waste diverted (a combination of waste prevention, recycling, and composting tonnage) compared to the previous year. The goal can be for an increase in a single activity or across all activities.

A focus on social performance

In this report, we continue to account for our environmental and social performance. The implementation of sustainability initiatives and the development of environmental product declarations, based on an LCAs, are progressing well. We have studied the social impacts, arising from EFP activities, on employees and their families, on the local community, and on society at large. External social scientists have supported the case study teams with objective expertise. We intend to use the findings from these studies to improve the management of social performance throughout EFP.

Goals and Actions

The EFP Sustainability team has worked to continuously raise our environmental performance to a high level, and their advice and guidance have helped EFP move toward an integrated approach to sustainable development. Going forward, we have now adopted the name "sustainability team" to reflect this integrated approach.

It is clear that sustainability is becoming an important component of shareholder value and a critical factor for public acceptance. Consistent policies and focused efforts over the last nine years have firmly ingrained environmental management into EFP culture as an integral part of our daily business.

Increasing stakeholders' value, while striving to be a good corporate citizen, is a mission that concerns us all. In the years to come, as EFP pursues new directions and enters new markets, we will see the emergence of many more stakeholders and interested parties. Serving their different needs to maintain our license to operate and enhance our business performance is a challenge we will take on.

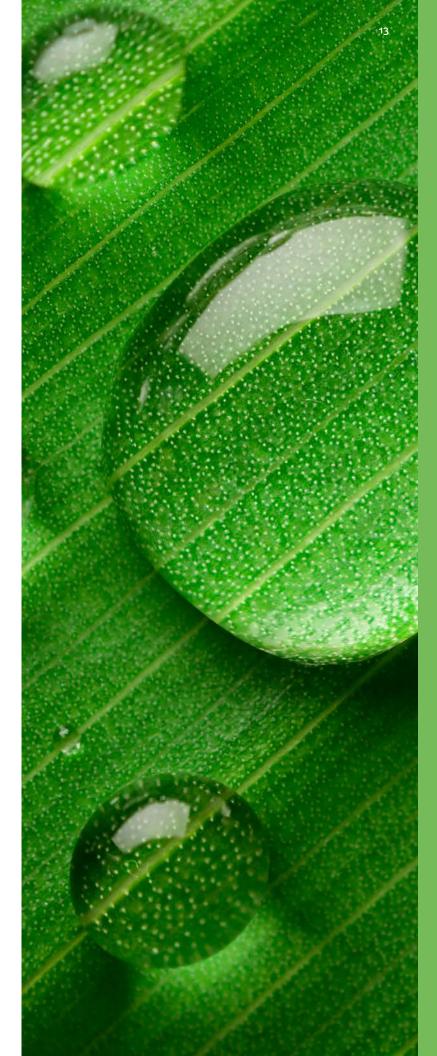


EFP Social Policy

As an active participant in society, through our business activities and their economic, environmental, and social impact, EFP recognizes social performance as key to sustainable development. Along with our ambition to make a positive contribution economically and environmentally, we see social performance as the third dimension of sustainability. We have drawn up a social policy, applicable to areas that EFP can directly influence. To continuously improve the policy, we will engage in stakeholder review and consultation on it.

EFP recognizes social performance as a key to sustainable development and has included social performance management as an integral part of its corporate strategy. This goes further than simple compliance with government regulations and avoidance of liabilities. It represents a preemptive stance, with adaptation to facility-specific needs, as a means of establishing competitive advantage. Our social policy points the way for social performance management within EFP.





Beyond Compliance

Although responsibility for social infrastructures generally belongs to governments, there is a growing interest within business, combined with pressure from stakeholders, for companies to commit to, and demonstrate, corporate social responsibility and, thereby, help society to be more sustainable. At EFP, we regard corporate social responsibility as a commitment by business to contribute to sustainable economic development, working with employees, their families, the local community, and society at large to improve their quality of life.

Industry already has a large social responsibility, regulated by laws and influenced by public opinion. Compliance is a prerequisite to maintain a company's license to operate—paying wages and taxes and providing suitable working conditions and health and safety procedures. But baseline performance is not enough. Most socially responsible companies have an ambition to go well beyond compliance with national and international regulations. Their stakeholders demand nothing less. At EFP, we have been running corporate social responsibility programs since 2010, focusing on general community support and education for employment.





Making Strides





The American Cancer Society (ACS) is a nationwide, community-based voluntary health organization dedicated to eliminating cancer as a major health problem. The organization researches cancer and its causes, to find answers and better treatments, and fights for lifesaving policy changes. It provides everything from emotional support to the latest cancer information for those who have been touched by cancer. Most people know the organization for their research, but they also promote healthy lifestyles to help prevent cancer.

EFP collaborates with, and participates in, the annual American Cancer Society's Making Strides Against Breast Cancer. We have been solid partners of the ACS in their efforts to help find a cure and make breast cancer screenings and programs available to those who need care. Each of our teams did a magnificent job raising funds, attending walks in each state, and supporting the cause

Experience of sustainability initiatives

Having practiced sustainable guidelines for ten years, now in place at all four facilities, EFP has gathered much useful experience. For example, we have found that:

- A formal environmental management system that is correctly implemented improves an organization's environmental performance. Correct implementation involves setting objectives and goals for the significant environmental aspects and committing to continuous improvement.
- Performance improvement usually comes from a number of relatively small projects and not from one big project. This is because there are few opportunities for substantial improvements in a modern company.
- Sustainability initiatives often provide opportunities for cost savings, particularly in waste and energy management. If, for example, energy consumption is a significant aspect, the organization can often identify projects that produce annual savings equivalent to the total cost of implementing the environmental management system, with a payoff time of 12



months or less.

- The implementation of sustainability initiatives offers many opportunities for employee involvement—for example, in identifying environmental aspects and formulating objectives for performance improvement. Employees usually become engaged in these initiatives. They want to know more about environmental matters and the effects of their daily activities.
- The same set of environmental principles applies everywhere. EFP has four sites certified for sustainability initiatives —all employing the same principles for environmental performance management.
- The implementation of sustainability initiatives can, advantageously, be extended beyond manufacturing and service sites to include sales companies, installation companies, and full-service contracts where EFP has an organization permanently based at a customer's site.

Looking over the wall

Each EFP factory decides which voluntary initiatives to take to help the local community. This independence partly explains why EFP social action programs. The approach also makes it possible to better address the specific problems of the community.

An eye on the environment

The company has introduced selective waste removal at all sites, and there are ongoing environmental awareness training programs for employees. These initiatives are having a positive ripple effect in the local communities. The removal and processing of solid and liquid wastes are some of the most important environmental challenges facing large cities. Companies must do what they can to help. For example, they can adapt their production processes to minimize harmful emissions into the air and rivers and reduce the quantity of solid wastes they generate.



Suppliers and Customers

Suppliers view EFP as a leader in terms of research and development and technical knowhow. The company is seen as good at delivering its side of agreements and was praised for forward thinking on environmental matters. Contractual relationships vary from very good to average. While some suppliers see communication as effective, others see a need for improvement in administrative matters.

Some small suppliers feel that they are not important to the company and suggest that EFP's listening abilities could be improved.





THE TIMELINE



1967

Our founder, Van Vlahakis, arrives in the United States from Greece in 1958. After graduating from Roosevelt University and working as a chemist in the cleaning products industry, Van begins to see the negative health effects of harsh chemicals and starts his own cleaning products company in his garage.



1990

EFP introduces ECOS Laundry Detergent, which quickly becomes our flagship product.



2010

Our Midwestern Division facility opens in Addison, Illinois, powered by the largest commercial solar array in Illinois.



1989

EFP is incorporated to begin selling products at retail locations.



2008

The US EPA's Design for the Environment (DfE) Safer Detergents Stewardship Initiative (SDSI) designates EFP with Champion-level recognition for environmental leadership in the use of safer surfactants, the highest level of recognition offered under the SDSI.



2010

EFP receives California's highest environmental honor, the California Governor's Environmental & Economic Leadership Award (GEELA) for conserving California's resources, protecting and enhancing the environment, building public-private partnerships, and strengthening the state's economy. (EFP receives this award for the second time in 2016.)



2012

A major motion picture about Van's life and work, A Green Story, premieres.



2013

We achieve carbon neutrality, in part by switching all of our facilities to 100% renewable energy, saving over 56 million pounds of carbon dioxide emissions annually.



2011

Our Northwestern Division facility opens in Lacey, Washington.



2013

Our global sales office in Greece opens, expanding our international reach.



2014

Kelly Vlahakis-Hanks, Van's daughter, is named president and CEO.



2016

- Our corporate headquarters opens in Cypress, California.
- Our flagship manufacturing facility officially opens its doors on Earth Day. With the move, our manufacturing capacity in California increases by over 30%. The Cypress building proudly runs on 100% clean energy and includes a solar panel garden to take advantage of our HQ's sunny Southern California location.



2015

- Our manufacturing facilities receive TRUE Zero Waste Platinum certification.
- Through extensive sustainability initiatives, including the reduction of unnecessary waste, recycling, and improved resource efficiency, we achieve a 95% diversion of waste from landfills and incineration at our four manufacturing sites. By working to close the loop on excess waste, we cut greenhouse gas emissions, reduce pollution, and add value to the communities in which we do business.
- We officially open our Northeastern Division facility in Parsippany, New Jersey on Earth Day. We welcome officials and community leaders to learn more about our deep commitment to, and heritage in, green cleaning. Relocating allows us to accommodate increased demand for products on the East Coast, as well as from international markets.
- All products are rebranded to ECOS.
- The ECOS brand takes center stage with a modern, fresh look and feel. Rebranding our offering to align with our most popular product, ECOS Laundry Detergent, we unify our products under the ECOS brand to make the plant-powered goodness of our entire line more recognizable to consumers, no matter where they shop.



2016

• After a six-year concerted effort to actively reduce water usage through more water-efficient manufacturing practices and the elimination of water waste, we achieve a new sustainability milestone as a waterneutral manufacturer.



2017

- We celebrate our fiftieth anniversary.
 This major milestone is marked with wellattended events that welcome local leaders and community partners into our facilities to celebrate 50 years of green cleaning.
- We share this achievement by giving back to our communities and making contributions to non-profit partner organizations, such as the Discovery Cube museum in Southern California, Seattle Children's Hospital, and Roosevelt University in Illinois, our founder's alma mater, to establish the Eftichios Van Vlahakis Organic Chemistry Lab where students can research new formulas and products based on renewable resources.



2019

ECOS is named U.S. EPA Safer Choice Partner of the Year for the third time (also awarded to us in 2015 and 2017) by the EPA for our leadership in establishing new Safer Choice-certified products, our dedication to ingredient transparency, and continually innovating greener products.



2018

Our corporate headquarters is recognized as a Top Workplace. This annual award from the Orange County Register recognizes over 100 companies in the county that have created a positive working environment for their employees. Our collaborative culture, inspiring mission, and supportive work atmosphere earn us this honor.

Awards and Recognition



Recent Awards and Certifications:

- U.S. EPA Region 9 WasteWise Award (2020, 2019)
- U.S. EPA Safer Choice Partner of the Year (2019, 2017, 2015)
- U.S. EPA WasteWise Partner of the Year, Small Business (2016, 2017)
- U.S. EPA Green Power Leadership (2016, 2012)
- U.S. EPA SmartWay Partnership (2018)
- ISO 9001:2015 Certification for Quality Management System (2019)
- Orange County Register Top Workplace (2019)
- Natural Child World Eco-Excellence Award (2019).

Attention to the Supply Chain

With all of EFP's facilities having implemented sustainability initiatives, we will now turn our focus to our suppliers' environmental performance. This is becoming vitally important as we subcontract more and more production. Preference will be given to suppliers that have implemented environmental management programs and, in particular, those that are certified for sustainability initiatives. For those that are not, EFP requires some minimum standards to be met. This applies chiefly to the suppliers of direct materials and services (those that go directly into manufacturing). These suppliers must have:

- 1. An environmental management policy.
- 2. Identified the significant environmental aspects in manufacturing the products supplied to EFP.

Other costs could also be classified as environmental, as they contribute to improved environmental performance. However, in practice, it is often difficult, or impossible, to separate environmental costs from other costs. For example, investments in research and development or to boost productivity usually improve both business and environmental performance, but it is not possible to apportion these costs meaningfully between the two.







Focus on Products

Environmental product declarations (EPDs) and environmental declarations (eds) are important tools for communicating environmental performance. An EPD describes, in a credible and understandable way, the environmental performance of a product, system, or service over its entire life cycle. An ed describes the environmental performance of the engineering, construction, service, and other activities of an entire business area or other organizational unit.

EFP has made good progress in developing EPDs for its major product lines. This will enable our customers to compare the environmental performance of our products with that of competing products, in the same way that they are able to compare, for example, technical specifications, quality, and price.

Life Cycle Assessment

A life cycle assessment (LCA) is a management tool for appraising and quantifying the total environmental impact of products or activities by analyzing the entire life cycle of materials, processes, products, technologies, services, and other activities. EFP's LCA database stores information about the environmental impact of each aspect, such as the use of energy and resources, and is being continually expanded. This information is obtained from official sources and relevant suppliers.

Occupational Health and Safety

We have been collecting data on health and safety performance for several decades. These data now cover all manufacturing and service sites. However, administration sites, such as sales offices, have not yet been included. As of this year, we are consolidating occupational health and safety (OHS) data at a corporate level. Although there are still some differences in the way data are collected, defined, and reported, we are publishing our initial findings. In the coming years, as we learn from experience, more indicators will be added, including social performance, as required by our new social policy. We will collaborate with EFP's supply management department to strengthen EFP criteria for the selection of key suppliers.

EFP is committed to cutting greenhouse gas emissions from its facilities by one% annually over the five-year period ending 2030 It is important that we continue to meet this goal and demonstrate that EFP can be counted in the vanguard of organizations that are doing something concrete to counter the threat of global warming, and that we are not just talking about it

A further challenge for our local sustainability officers is to continue to integrate quality management with environmental management systems at each site. By initiating a broad education and training program, we aim to facilitate the spread of combined systems.







Social Performance

As a follow-up to the introduction of our social policy, we are considering to embark on a program of initial dialogue with EFP main stakeholders. This will involve outlining and reviewing the social performance programs at each facility. We will also select additional operational performance indicators, some of which can be included in the scope of our internal programs.

Throughout the year, we will carry out employee training programs in order to raise awareness of our policy, and its implementation, throughout the group. In ongoing support of the UN Global Compact, we will take steps to bring this compact to a local level, by creating local initiatives and projects that embody its principles. During 2020, EFP will continue to look for more projects and partners.

Health and Safety

- Our Health and Safety Policy has the following goals:
- To provide a safe and healthy working environment at all sites and facilities and take adequate steps to prevent accidents and injury to health arising out of the course of work by minimizing, as far as is reasonably practicable, the causes of hazards inherent in a working environment.
- To facilitate regular consultation with all employees to address areas of concern.
- To respect the right of all personnel to form and join trade unions of their choice and bargain collectively.
- To ensure that the representatives of personnel are not the subject of discrimination and have access to their members in the workplace.
- To make sure, in the case of major layoffs, that a social benefits and guidance plan is in place and already known to employees or their official representatives.
- To establish and maintain appropriate procedures to evaluate and select major suppliers and subcontractors on their ability to meet the requirements of EFP's social policy and principles and maintain reasonable evidence that these requirements are being met.
- To promote and participate in community engagement activities that actively foster economic, environmental, social, and educational development, as part of EFP's commitment to the communities in which it operates.
- To uphold the highest standards in business ethics and integrity and support the efforts of national and international authorities to establish and enforce high ethical standards for all businesses.

Glossary

Carbon dioxide (CO2). A colorless and, at room temperature, gaseous substance found in the atmosphere as part of nature's life cycle. Human activities, especially the burning of fossil fuels, can increase levels of carbon dioxide in the atmosphere, which is believed to affect the climate. Carbon dioxide is the primary greenhouse gas.

Ecoefficiency. The combination of efficiency and ecological aspects in the pursuit of sustainable development. An environmental management program is an instrument for achieving ecoefficiency. Ecotoxicity. The potential of a substance to harm ecosystems. Emission. The release or discharge of any substances, effluents, or pollutants into the environment.

Emissions trading. A tool for reducing emissions of greenhouse gases. Sources of a particular pollutant (most often carbon dioxide) are given permits to release a specified number of tons of the pollutant. A government or trading agency issues only a limited amount of permits consistent with the desired level of emissions. The owners of the permits may keep them and release the pollutants or reduce their emissions and sell the permits. The fact that permits have a value and can be sold or traded gives owners an incentive to reduce emissions. In 1997, the Kyoto Protocol included emissions trading as a means of controlling greenhouse gases.

Environmental aspects. The elements of an organization's activities, goods, or services that can interact with the environment.

Environmental declaration (ed). A description of the environmental impact of activities, such as engineering, construction, and services. EFP introduced the concept of eds as a complement to environmental product declarations. Eds cover entire business areas—not individual products—specify overall environmental goals, state policies, and define methods to achieve the goals. Environmental impact. Any change to the

environmental impact. Any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organization's activities, products, or services or human activities in general.

Environmental management system (EMS). The part of an overall management system that includes organizational structure, planning activities, responsibilities, practices, procedures, processes, and resources for developing, implementing, achieving, reviewing, and maintaining an environmental policy.

Environmental performance. The measurable results actually attained by an organization through environmental management.

Environmental product declaration (EPD). A



description of the environmental performance of a product, system, or service over its entire life, from raw material acquisition, manufacturing, and use to waste disposal and decommissioning.

Fossil fuels. Fuels found in earth's strata, formed from organisms of an earlier geological age. Fossil fuels include oil, natural gas, coal, and peat.

Global warming. The increase in the earth's mean temperature that is, or is believed to be, occurring as a result of human activities that affect the earth's atmosphere.

Global warming potential (GWP). The index used to translate the level of emissions of various gases into a common measure to compare their contributions to the atmosphere's absorption of infrared radiation. GWPs are calculated as the absorption that would result from the emission of 1 kg of a gas to that from the emission of 1 kg of carbon dioxide over 100 years.

Greenhouse effect. The effect that certain variable constituents of the earth's lower atmosphere have on surface temperatures. Greenhouse gases keep ground temperatures at a global average of approximately 15°C. In their absence, the global average would be below the freezing point of water. Environmental scientists are concerned that changes in the atmosphere's CO2 content, caused by human activities, could have a dangerous warming effect on the earth's atmosphere. Greenhouse gases. The gases that contribute to the greenhouse effect and global warming. The most significant are carbon dioxide (CO2), water vapor (H2O), methane (CH4), nitrous oxide (N2O), chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF6).

Hazard. A material condition that may cause damage, injury, or other harm, frequently established through standardized assays performed on biological systems or organisms. Hazard and exposure constitute risks.

Hazardous waste (HW). Waste that requires special disposal techniques. Different states have different definitions and regulations, and national standards are frequently changed.

Interested party. An individual or organization that is directly affected by the activities of an enterprise. Corporate management has a responsibility to interested parties, including customers, employees, shareholders, suppliers, communities, and others.

Life cycle assessment (LCA). A management tool for appraising and quantifying the total environmental impact of products or activities, over their entire lifetime, by analyzing the entire life cycle of particular materials, processes, products, technologies, services, or activities. LCA comprises three complementary components—inventory, impact, and improvement analysis.

Nonrenewable energy resources. Irreplaceable energy resources, representing an energy capital that must be conserved and utilized wisely. These include coal, oil, natural gas, and fuels for nuclear energy, such as uranium.

Ozone (O3). A form of oxygen with three oxygen atoms. The upper atmosphere's ozone layer protects life against harmful ultraviolet radiation, while ground-level ozone is a pollutant that is harmful to life forms and can cause breathing disorders.

Precautionary approach. The approach promoted under the Framework Convention on Climate Change to help stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous interference with the Earth's climate system.

Primary energy. Energy that has not undergone transformation. Sources of primary energy that can be transformed into electricity and heat include crude oil, coal, natural gas, and water used to generate hydroelectric power.

Product specific requirements. The rules that define the data that should be included in LCAs that generate data for environmental product declarations. Rules are prepared in cooperation between manufacturers, importers, industry organizations, environmental agencies, and those with good knowledge of the environmental properties related to a certain product category.

Recycling. The reintroduction of used materials or liquid residual products into manufacturing processes. It is a natural part of resource conservation. Today, many products are designed and manufactured with recycling in mind. Renewable energy sources. Energy sources that replenish themselves naturally within a short period, making them continuously available. Sources of renewable energy include hydroelectric power, geothermal energy, ocean thermal energy, wave power, solar energy, wind power, peat, and fuelwood.

Stakeholder. See interested party.

Sustainability (or sustainable development). Sustainability incorporates meeting the needs of the present, without compromising the ability of future generations to meet their own needs, and combining economic growth and greater prosperity with environmental and social quality for people around the world. Sustainability has three interdependent dimensions: ecological sustainability, social sustainability, and economic sustainability. Sometimes, a fourth dimension—cultural sustainability—is added.

Volatile organic compounds (VOCs). Compounds that easily evaporate and spread in close surroundings and the atmosphere. They are often directly or indirectly hazardous to the environment and health. The largest releases of volatile organic compounds stem from the combustion of fossil fuels. Other sources are solvents and paints. VOCs include toluene, xylene, styrene, naphthalene, and ethanol.

Waste. Different types of residues that are considered to lack any utility value. A resource—something that is considered useful—is the opposite of waste. What is considered to be waste or a resource may depend on its location and on who is defining it.











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