# Environment

# Initiatives for Environmental Protection

### **Basic Approach**

ESG Initiatives

As part of our environmental protection efforts, Topia obtained ISO 14001 certification (environmental management system, hereafter "EMS") in November 2007, and has since renewed its certification. Since FY2019, we have been strengthening activities to further reduce energy consumption based on the guidance and suggestions of our energy managers.

### **Environmental Policy**

#### **Basic Philosophy**

Topia strongly recognizes that maintaining a sustainable global environment is the most important issue for mankind. We will contribute to the future of mankind and the earth by promoting the reduction of environmental impact through our business activities.

### Guidelines for Actions

Topia aims to accomplish its basic philosophy by promoting the following activities through our business activities.

- 1. Compliance with environmental-related laws and regulations
- 2. Promotion of resource and energy conservation (promotion of a decarbonized society)
- 3. Contribution to the establishment of a circular society
- 4. Prevention of environmental pollution
- 5. Initiatives toward international community goals
- 6. Promotion of the environmental policy
- 7. Awareness and understanding of the environmental policy
- 8. Disclosure of the environmental policy

### Environmental Management System (EMS)



Since acquiring the ISO 14001 certification (EMS), Topia has been working on the 5S (Sort, Set, Shine, Standardize, and Sustain) activities in order to reduce negative impact on the global environment. We are also continuing our efforts to reduce greenhouse gas emissions.

ISO 14001 registration certificate



## **Regular EMS Promotion Meeting**

EMS activities include monthly in-house patrols on the environment, safety, and 5S. Additionally, regular EMS promotion meetings are held monthly to share information on energy consumption results and patrol results.

### **Regular Energy Management Meeting**

As part of our activities to reduce energy consumption, we introduce renewable energy, manage air conditioning, and accept suggestions for improvements at each plant. We also hold regular energy management meetings on a quarterly basis to share information and work toward future improvement.



Regular EMS Promotion Meeting



Regular Energy Management Meeting

# Initiatives to Accomplish a Decarbonized Society

## **Basic Approach**

Topia provides prototypes and products to a wide range of industries and sectors. We recognize that addressing "climate change" is a priority for any industry and could potentially become a "prerequisite" for transactions in the future. Therefore, we are reducing  $CO_2$  emissions in our activities through energy conservation and the introduction of solar power generation systems. Our team also aims to accomplish a carbon-neutral society by developing products supporting product weight reduction and electrification.

### **Basic Policy**

### [Production Activities]

In addition to monthly energy conservation summaries, PDCA management is implemented for each activity through reports and discussions at regular energy management meetings held quarterly. At our overseas locations, PDCA management is also implemented for each activity quarterly to strengthen cooperation with each site.

### [Product Development]

By communicating with customers on a daily basis, we accurately grasp their requests and needs. Then, we quickly disseminate this information within the company and coordinate among departments. Using Topia's strength in lightweight technology, we are actively suggesting the proposal and development of products that would satisfy the customer needs.

### **Promotion System**

Topia's Sustainability Promotion Committee Sustainability Management P.8, established in July 2021, deliberates and decides on important policies and initiatives contributing to climate change. With regard to energy-saving activities in production activities at our own plants, we promote energy management under the proposal of our energy management specialists.

## **Solar Power Generation**

Topia introduced solar power generation systems in Japan and overseas. By the end of FY2022, the cumulative solar power output became approximately 225 kW in Japan and 1,208 kW in China, respectively. Approximately 8% of Topia's total electricity consumption is covered by solar power generation.



Solar panels installed at the head office plant

In the future, we plan to promote solar power generation systems, and to cover 30% of all electricity consumption in Japan with renewable energy sources.

## Energy Conservation and Environmental Activities at Plants

In order to raise the awareness of each employee about energy conservation and environmental consideration, we introduced an award system in 2013. The results of the energy conservation and environmental activities are evaluated by EMS staffs through monthly patrols. The departments with the highest scores are given an award. In FY2023, the grand prize was awarded to the department that actively engaged in 5S initiatives throughout the year. Not only our company will participate in reduction



Energy conservation activities at the plant

activities as a company organization, but we will continue to consider expanding the system. That way, employees can voluntarily practice environmentally conscious behavior.

# Initiatives to Accomplish a Decarbonized Society

## **Decarbonization of Products**

Topia manufactures prototypes based on the latest materials and technologies to achieve both "weight reduction" and "safety and comfort." In April 2022, we introduced the world's first epoch-making automobile body frame manufacturing system, STAF, developed by Sumitomo Heavy Industries, Ltd.

This technology is characterized by the ability to mold the flanges (brim-like part), which are essential for assembling frames. This technology is approximately 30% lighter than conventional structures, and contributes to reducing  $CO_2$  emissions by air blow molding.

A new mechanical servo press machine was also introduced in February 2024. Not only does it reduce energy consumption by upgrading the equipment, it enables molding with less raw material input than conventional equipment. In terms of reducing raw materials and product weight, it also contributes to the reduction of Scope 3 emissions for both our business partners and us.



Manufacturing system "STAF"



New mechanical servo press machine

# Conversion to LEDs in All Plants

Topia is currently promoting the use of LEDs for indoor and outdoor lighting, and has achieved a 100% LED rate at its head office plant.



# Scope 1, 2, and 3 Calculation Results and Reduction Targets

In FY2023, as well as our own CO<sub>2</sub> emissions (Scope 1 and 2), we calculated the CO<sub>2</sub> emissions throughout the value chain (Scope 3), including emissions from purchased raw materials. Reduction Target of Greenhouse Gas (t-CO<sub>2</sub>/

For Scope 1 and 2, we have set a target of 21% reduction from fiscal 2021 levels (3% reduction per year) through FY2024 to FY2030.

For Scope 3, we plan to implement system improvements and other measures for Category 1 (purchased products and services) and Category 4 (transportation and delivery). These account for the largest percentage of  $CO_2$  emissions.



year) for the Group Companies in Japan

# **Reduction of Total Packaging Material Costs**

In an effort to reduce the number of packing steps required to ship products domestically and internationally, the company used to pack products into existing corrugated cardboard. However, a supplier came up with a new packaging material that uses reinforced, corrugated cardboard to match the shape of the product. This led to a reduction in CO<sub>2</sub> emissions and total cost.

Although material costs rose by 57% due to special packaging, the company succeeded in reducing packaging costs by 55% and transportation costs by 40%, resulting in a 37% reduction in total cost.  $CO_2$  emissions during transportation were reduced by 8% (28.3 tons), which is equivalent to the amount that 1,000 cedar trees can absorb in a year.

Total Packaging Material Costs for Shipping



#### Governance

# **Initiatives to Accomplish a Circular Economy**

### **Basic Approach**

Topia's environmental policy includes the concept of "building a recycling-oriented society," and promotes the efficient use of resources.

To achieve carbon neutrality, we plan to contribute by reducing industrial waste, reducing the burden of chemical substances, preventing air and water pollution, and effectively using resources.

### CASE 1

#### Circulation of Zinc Alloy Material (ZAS) for Molds

In press forming, mass-produced models use materials such as iron and cast iron. However, lead time is required before commercialization and reuse is impossible. Since its founding, Topia has produced prototypes in small quantities, so we use our own melting furnaces to cast ZAS and produce prototypes. This means that we have been



Topia's melting furnace used for ZAS casting

making efforts in line with the current recycling-oriented society, and we are also reducing costs by reusing ZAS.

#### Circulation of ZAS (Average Value/Percentage)



### Promotion of Recycling at the Plant

Topia's "one-of-a-kind manufacturing" approach to prototyping means that molds are indispensable for our prototypes. The ZAS casting method, one of the mold manufacturing methods, requires ZAS and casting sand.

ZAS has been melted and reused since Topia was established. We used to dispose sand for casting, but since fiscal 2012, we have invested in equipment to reuse sand for ZAS casting.

### CASE 2

### Circulation of Casting Sand

When making molds with ZAS, it is necessary to spread sand mixed with a hardener around the mold. The hardener mixed with the casting sand cannot be completely crushed, so it must be buried and disposed of as is.

Topia uses an agitator to crush used casting sand into random blocks. The purpose is to separate the hardener and reuse the sand.



Stirrer for recycling casting sand

#### Circulation of Casting Sand (Average Value/Percentage)

