

JPA's Committed Action Plan on the Environment

The Japan Paper Association

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Currently, we are facing the environmental problems as typified by global warming problems. Unlike the past pollution problems, these problems, caused by a wide variety of activities including our daily life, have wide-reaching impacts and cannot be resolved by individual countries or regions. Furthermore, we are urged to achieve sustainable development to meet the needs of both current and future generations. All people must take action against the limit of resources and environment that may bring humanity to the brink of disaster in the near future.

Based on the recognition of the necessity and effectiveness of voluntary and active efforts by all elements of society against resources and environment problems, the Japan Paper Association has established its Committed Action Plan on Environment. The action plan is designed in response to The Appeal on the Environment established by Keidanren (Japan Business Federation) in 1996, and focuses on the long-term objectives – environmentally sound material cycle, harmonious coexistence, participation and international activities – stated in the Basic Environment plan established by the Cabinet decision in 1994.

Basic Policy

1. Make utmost efforts including international activities towards solving global warming problems.
2. Strive for the establishment of a recycling society that protects the environment and uses the resources in a sustainable and effective manner.
3. Work toward the further development and spread of an environmental management system.

Action Plan

1. Measures against Global Warming

Basic measures against global warming by the pulp and paper industry are CO₂ emission reduction through energy saving and energy conversion from fossil energy to alternative energy such as renewable energy, and the promotion of cyclical use of carbon such as increasing CO₂ absorption and storage by forests.

The Japanese pulp and paper industry has been promoting effective use of energy. In the industry, waste liquor (black liquor) generated in the pulping process accounts for 30% of total energy consumption. In addition, the combined heat and power (CHP) system which uses high pressure steam generated from a boiler in the power generation is widely used in the industry, as it uses middle and low pressure steam in the papermaking process. The industry's electricity self-sufficiency is the highest of all industries with 73% in 2006.

Furthermore, the industry has been promoting the introduction of energy-saving paper machines and the use of recovered paper instead of mechanical pulp since the first oil crisis in 1973. As a result, gross energy consumption per unit production in 2001 decreased by 45% from 1973.

(1) Participants in the JPA's Committed Action Plan (hereafter referred to as "the participants") are committed to reducing fossil energy consumption per unit and fossil energy-derived CO₂ emission per unit on a five-year average basis from fiscal 2008 to fiscal 2012 by 20% and 16%, respectively, from the level of fiscal 1990 through making the following efforts:

- Actively introducing energy-saving equipment and system.
- Improving energy conversion efficiency through promoting introduction of a CHP system and of energy-use efficiency by decreasing and recovering ejected energy.
- Promoting the use of fossil energy alternatives such as waste wood and refuse paper and plastic fuel (RPF).
- Promoting efficient use of combustible waste including paper sludge and recovered paper pulp residue.
- Advancing the research and development of energy saving technology and equipment.

In addition to the above-mentioned efforts at each mill, the participants are committed to actively making the following efforts:

- Improving the modal shift rate and transportation efficiency in primary transportation from mill to market, and promoting rationalization of the delivery system in the market.
- Strengthening energy saving efforts at the head office, branch office and research institute.

(2) Afforestation and forest maintenance are of crucial importance from the standpoints of not only ensuring raw material for pulp and paper, but also measures against global warming, and require continuous efforts. JPA, as a member of the forest industry, is committed to the continuous promotion of

afforestation at home and abroad and expansion of the afforestation area to 700 thousand hectares by fiscal 2012, ending March 31 2013.

- (3) Promoting the use of thinned wood is expected to improve forest maintenance through expanding thinning practice, which will contribute to achieving 3.8% CO₂ reduction through forest sink stated in the Kyoto Protocol Target Achievement Plan of Japan, as well as efficient use of resources and revitalization of rural communities. For this reason, JPA member companies are committed to making active efforts to increase the use of thinned wood, in cooperation with forest owners, lumber companies and woodchip companies that are working toward reducing thinning cost and ensuring stable supply of thinned wood.

2. Building a Zero-Waste Economy and Society

- (1) From the standpoints of CO₂ absorption and storage, promoting cyclical use of carbon, and maintaining biodiversity, the participants are committed to the promotion of conservation of forest resources and shift towards the use of planted trees through the following efforts:
 - Promoting afforestation practice.
 - Promoting environmentally-balanced forestry practice and development of forest technology.
 - Promoting the efficient use of sustainably harvested wood.
 - Never handling illegally-sourced wood and wood products.
 - JPA shall set the action guidelines for illegal logging issues and audit member companies to enhance the credibility of their efforts.
 - Each participant is committed to setting its raw material procurement policy and developing the verifying system to procure and use legally-sourced wood.
- (2) In order to promote environment conservation such as reduction of waste generation and forest conservation, the participants are committed to achieving 62% of the recovered paper utilization rate by fiscal 2010 through increasing the recovery and use of recovered paper by making the following efforts:
 - Development of new recovered paper-based products.
 - Promoting recycling of recovered paper generated from business offices.
 - Advancing R&D of recycled paper products and recycling technology.
- (3) The participants are committed to reducing final disposal of industrial waste to 450 thousand tons on a wet weight basis by fiscal 2010 through curbing the generation and promoting efficient use of them through the following efforts:
 - Expanding recycling of industrial waste through strengthening cooperation with other industries.
 - Further reduction of disposal volume.
 - Research and study of new use of industrial waste.
- (4) The participants are committed to reducing final disposal of industrial waste and achieving more than 93% of effective utilization rate of industrial waste by fiscal 2010.(*).

* Effective utilization rate is calculated using the following formula:

Effective utilization rate = (industrial waste generation – final disposal) / industrial waste generation (on a wet weight basis)

- (5) The participants are committed to strengthening measures against environment risks caused by trace chemical substances.
- (6) The participants are committed to taking action guided by a global perspective but start from what is closest at hand.
 - Each participant is committed to being actively involved in environmental activities in the local community and to practice what it can, no matter how small.

3. Building and Diffusion of Environment Management System

In addition to compliance with environmental regulation, the participants are committed to developing, implementing and accessing an environment management plan to reduce environmental burdens at all stages of business activities from raw material procurement to manufacturing, use and disposal of products. The participants are committed to the incorporation of environmental consciousness into their business judgment and actively address environmental issues as business as usual.

4. Environmental Consciousness in Overseas Operations

The participants are committed to complying with the “Ten Points Environmental Guidelines” contained in the Keidanren Global Environment Chapter and actively conduct environmentally-friendly business operations in their overseas operations.

Revision history

1. Revision on September 20, 1999
As Keidanren (Japan Business Federation) requires all industries that established their own committed action plan on the environment to set the reduction target for final disposal volume of industrial waste, JPA revised the target as follows:
 - Initial target: Reduce final disposal per ton product (bone-dry weight basis) by 60% from the level of 1990.
 - Revised target: Reduce final disposal of industrial waste (wet weight basis) to 450 thousand tons.

2. Revision on January 22, 2001
JPA revised the target for the recovered paper utilization rate from “achieve 56% by fiscal 2000” to “achieve 60% by fiscal 2005”.

3. Revision on November 22, 2004
In the Japanese pulp and paper industry, reduction of CO₂ emission intensity had made little progress because it had promoted fuel conversion to coal in line with the post-oil policy. Therefore, before the implementation of the Kyoto Protocol, JPA strengthened measures against global warming as follows with the main aim of reducing CO₂ emission intensity:
 - Initial targets:
 - (1) Reduce fossil energy consumption per ton product by 10% from the level of fiscal 1990.
 - (2) Expand afforestation area at home and abroad to 550 thousand hectares by 2010.
 - Revised targets:
 - (1) Reduce fossil energy consumption per ton product and fossil energy-derived CO₂ emission per ton product by 13% and 10%, respectively, from the level of fiscal 1990.
 - (2) Expand afforestation area at home and abroad to 600 thousand hectares by fiscal 2010.

4. Revision on December 20, 2005
JPA revised the target for the recovered paper utilization rate from “achieve 60% by fiscal 2005” to “achieve 62% by 2010”.

5. Revision on March 20, 2007
JPA added its measures against illegal logging to the Action Plan after the Japanese government implemented its procurement policy that they would not use illegally sourced wood and wood products.

6. Revision on September 20, 2007

Before the start of the first commitment period of the Kyoto Protocol, JPA again revised the targets for energy reduction and afforestation area to strengthen its global warming measures:

- Revised targets:

- (1) On a five-year average basis from 2008 to 2012, reduce fossil energy consumption per ton product and fossil energy-derived CO₂ emission per ton product by 20% and 16%, respectively, from the level of fiscal 1990.
- (2) Expand afforestation area at home and abroad to 700 thousand hectares by fiscal 2012.

7. Revision on December 20, 2007

In addition to the target of reducing the volume of final disposal of industrial waste, JPA established its own target as follows:

- Achieve more than 93% of the effective utilization rate of industrial waste by fiscal 2010(*).

* Effective utilization rate is calculated using the following formula:

$$\text{Effective utilization rate} = (\text{industrial waste generation} - \text{final disposal}) / \text{industrial waste generation (on a wet weight basis)}$$

8. Revised in May 20, 2008

With the start of the first commitment period of the Kyoto Protocol, JPA added the section on promoting the use of thinned wood to the Action Plan to help achieve 3.8% CO₂ reduction through forest sink stated in the Kyoto Protocol Target Achievement Plan of Japan.