

Feature: Internal Dialogue on the Challenge to a Carbon-Free Society

# What Are the Challenges of the Toyol Group Required in the New Stage of a Carbon-Free Society?

From the CO<sub>2</sub> emission reduction target of 30% reduction in fiscal 2030 compared to fiscal 2013, the Toyol Group has changed the target to 38% reduction in fiscal 2030 compared to fiscal 2013, and 40% reduction in 2031, the year of the 100th anniversary of its foundation. Regarding what efforts are needed to achieve the targets, and future challenges for building a carbon-free society, a dialogue was held by three members of the business division and Corporate Division, who were members of the target setting meeting structure.



Engineering Center Unit Leader, Corporate Division

Keiichi Watanabe



Executive officer in charge of the Powder & Paste Headquarters' Shinjo Works Unit, Hino Works Unit, and Business Strategy Unit

Keita Nagano



Business Supporting Unit Leader and Purchasing Team Leader, Corporate Division

Toshihiko Nitta

## Respond to Customer Needs Toward a Carbon-Free Society

**Harada (Facilitator):** You set the new higher targets for the promotion of decarbonization. Please tell us about the background of the targets, and current initiatives.

**Nitta:** One background of the new targets is that the Japanese government has declared net carbon neutrality by 2050 and raised the greenhouse gas (GHG) reduction targets. In 2018, the Toyol Group set the target of reducing CO<sub>2</sub> emissions from business activities by 30% by fiscal 2031 compared to fiscal 2013, and we were steadily reducing the emissions in line with our annual reduction target of 2.5%. However, we decided to step it up even more and work to achieve the new target of 38% reduction in fiscal 2030.

**Nagano:** Another background is the demands from the markets.

Our powder and paste business is globally engaged in sales activities, and our overseas customers require a higher level of environmental response than in Japan. Our German competitor in the global market set the target of carbon neutrality by 2025, and is actively working on the PR of the target. The demands from our customers are increasing day by day, such as being required to provide specific carbon footprints, so we need to respond to meet the demands.

Now, CO<sub>2</sub> emissions can be measured for each manufacturing site, and employees are taking action always being aware of CO<sub>2</sub> reduction. Many concrete ideas for the reduction have been brought to the surface. We are making efforts in two directions: to reduce the energy that we use, and to produce more groups of environmentally sound products than ever.

**Watanabe:** Even in the foil business, where the domestic market is the main focus, environmental response is an unavoidable challenge for the continuation of the business. In the business of processed products, we are reducing the usage of organic solvents as well as promoting the introduction of equipment that can recover solvent gas and reuse it as a heat source. In the material foil business as well, we will incorporate more effective measures while also referring to the measures taken by overseas competitors with a strong demand for decarbonization.

## Refine the Individuality of Toyo Aluminium and Continue the Challenge Toward Carbon Neutrality

**Harada:** At Toyo Aluminium, CO<sub>2</sub> impacts are calculated for both upstream and downstream parts of your supply chains. What are the challenges there?

**Nagano:** Aluminium requires a lot of electricity in the refining process of aluminium ingots, so from the perspective of decarbonization, it is a material of great concern to customers. Manufacturers that process aluminium ingots into products, such as our company, do not emit so much CO<sub>2</sub>, while the CO<sub>2</sub> impact from the production of aluminium ingots, which is an upstream part in our supply chains, accounts for 90%. Therefore, we must also consider its reduction.

**Nitta:** Our Purchasing Team, which procures aluminium ingots from countries all over the world, is focusing on the power source structure of each aluminium ingot brand and GHG emissions from each refining process. Low-carbon aluminium ingots (green aluminium) are produced using renewable electric energy sources and manufacturing methods that emit less GHGs, but this alone probably cannot meet the necessary amount. In addition, to grasp the GHG emissions by power source, even the same type of power source has variations in GHG emissions, so we are first investigating them. The additional costs will be clarified when the Carbon Border Adjustment Mechanism (CBAM) being planned by the EU is introduced, so we are preparing to develop and implement a mixed strategy for purchasing recycled and low-carbon aluminium ingots.

**Harada:** What efforts do you think will be necessary to achieve the 2050 carbon neutrality declared by the Japanese government?

**Watanabe:** We cannot easily declare carbon neutrality since we manufacture products while using energy in the manufacturing divisions. We would first like to do what we can do from a practical standpoint. In addition, we would like to create an environment in which we can actively implement measures with a large impact.

In our company as well, many people are probably feeling they have to do something, and I believe there must be some hidden ideas in them. Toyo Aluminium has a corporate culture where it is easy for everyone to speak up and for good ideas to be adopted. I believe that if we further promote this unique character of Toyo Aluminium, we will be able to actively pursue carbon neutrality as well.



Facilitator:  
ESG Communication,  
YUIDEA Inc.  
Creative Director  
Kyoko Harada

## Contribute to the Environment Through Both Business Divisions and Corporate Division

**Harada:** Another feature of aluminium products is that they can contribute to CO<sub>2</sub> emission reduction by being incorporated into customers' products. In the powder and paste business, you are contributing to the environment by developing materials for 3D printing as well as products that utilize the excellent heat dissipation function.

**Nagano:** In the field of materials for 3D printing, our company's products are highly evaluated in the world, and also as a heat dissipation material, we manufacture various products such as aluminium nitride. To move forward further, we will also focus on the development of environmentally friendly products such as water-based paint and powdered paint that do not use organic solvents, and pellet-like aluminium paste that does not contain solvents.

**Harada:** What efforts is the Corporate Division planning to make to contribute to reducing CO<sub>2</sub> emissions?

**Nitta:** We are working to promote recycling as one way to reduce CO<sub>2</sub> in SCOPE 3. In our company, there is a mechanism in which almost 100% of the aluminium foil scraps from manufacturing is recycled horizontally. However, to expand the recycling further, we need to recycle processed products of packaging materials with aluminium, films, and other materials bonded together such as food and medical products. Actually, in the last fiscal year, we repeated tests with process scraps of medical packaging materials, and were able to recycle them into aluminium ingots, although this is just a part of the recycling. We would like to establish a technology like this and develop it so that our company can take the initiative in promoting the recycling of aluminium processed products' processing scraps and finishing scraps that are currently waste, involving local governments and other organizations. At the same time, we think that product development that is premised on recycling is also necessary.

**Watanabe:** Decarbonization in production activities requires renewable energy introduction and energy conservation on a visible scale, and there have been voices that they want to make such efforts. The role of the Corporate Division is to cast these voices from manufacturing sites into shape through investment. With the conventional rules, it is difficult to find added value in investment to reduce environmental loads. We aim to achieve decarbonization by creating systems and mechanisms that enable active environmental investment and then proceeding with initiatives that utilize our corporate culture such as creating new ideas with government subsidy programs and through collaboration with various companies.