

Contributing to semiconductor supply chain resilience through M&A support



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I was involved in a syndicated loan project to support an overseas M&A by Renesas Electronics Corporation. The loan provided part of the funds necessary for Renesas to acquire a British company, Dialog Semiconductor Plc, a provider of analog semiconductors with expertise in connectivity technologies such as Bluetooth.

As many readers would know, Renesas is a leading Japanese manufacturer of

semiconductor. Despite temporary hardships, in part due to 2011's Great East Japan Earthquake, Renesas has worked hard to strengthen its competitiveness through active overseas M&As and other means. The company's strengths lie in the manufacture and sales of products such as microcontrollers, analogue semiconductors, and power semiconductors and in the provision of a wide range of solutions. Dialog specializes in "analogue semiconductors," which control analogue signals such as light, temperature, sound, and vibration and convert them to digital signals. They are widely used in automobiles and industrial equipment and are indispensable for practical applications of IoT. Small lot production of a large variety of products is a feature of these kinds of products. Because they require meticulous fine-tuning of technologies and know-how to suit the customer's required performance, companies with many years of experience in analogue semiconductors have a competitive advantage in this field.

For Renesas, this acquisition forms part of an M&A strategy that it has been pursuing since 2017 to strengthen its analogue semiconductor business. It will enable Renesas to enhance its product portfolio by adding more engineers and other staff and to elevate its ability to offer products and solutions for the fast-growing IoT, industrial, and automotive markets.

The semiconductor is a core technology that supports not just single products, but Japan's overall industrial power. For this reason, it could be described as the "staple food" of Japan's manufacturing industries. Not only will this financing project provide financial support to the Japanese company's overseas expansion,

but it will also contribute toward the strengthening of the manufacturing base of domestic semiconductor manufacturers, a goal declared by the Government of Japan in its "Strategy for Semiconductors and the Digital Industry." Building the resilience of supply chains of key commodities, including semiconductors, is a major theme of Japan-U.S. cooperation. The "Strategy for Semiconductors and the Digital Industry" also states that so-called "legacy semiconductors," such as analogue semiconductors, have a role to fulfill in supporting the global supply chain. From this viewpoint, we believe that strengthening the manufacturing foundations of Renesas, which produces large volumes of legacy semiconductors, will also contribute toward strengthening Japan-U.S. cooperation.

JBIC, as a policy-based financial institution of Japan, needed to accurately identify this kind of political significance of the project and to confirm the risks of extending a long-term loan, which involved a large sum of money, before making a decision on the loan. We held many discussions with a wide range of stakeholders from both the public and private sectors, including Renesas's executives, other co-financing banks, and Japanese government officials, and we also built up consensus within JBIC. Ultimately succeeding in bringing the project together into a satisfactory form through these efforts has been an invaluable experience for me. Going forward, through the provision of long-term loans required for strategic M&As like this project, I hope to continue to support the business expansion and new business development of Japanese companies and contribute toward supply chain resilience for key products such as semiconductors.

Opening up the future of hydrogen through investment in overseas fund

I was in charge of JBIC's equity participation in the Clean H2 Infra Fund S.L.P., which invests in clean hydrogen-related projects around the world.

Today, the use of "hydrogen" is drawing attention in the context of the broader global trend of decarbonization. Fuel cells for automobiles and other machinery is one of the common use of hydrogen. This is because, when electricity and combustion heat that are generated from hydrogen combined with oxygen, only water is vented, and there are no carbon dioxide emissions. Also, hydrogen has the potential to contribute toward decarbonization in a wide range of industries. For example, hydrogen is being used on a trial basis as an alternative fuel to power the engines of ships and aircrafts. Also, the use of hydrogen in the iron ore reduction process, which currently generates CO2 emissions, will realize decarbonization of the iron manufacturing process. In these ways, it is believed that the use of clean hydrogen will make it possible to achieve decarbonization in a wide variety of industries previously considered difficult to reduce CO2 emissions.

On the other hand, there are many hurdles to be overcome at technology and cost to realize the social implementation of hydrogen. For example, upstream green hydrogen production technologies do not come into wide use in upstream processes and establishing the downstream infrastructure is needed for hydrogen supply. A massive investment of JPY50 trillion worldwide will be required by 2030 to overcome these challenges and establish the hydrogen business. However, the public spends that governments of individual countries are planning to inject would not enough to cover that need. Under these circumstances, the Clean H2 Infra Fund was established, mainly by Western companies, with the aim of investing in selected and promising hydrogen-related businesses globally, covering upstream to downstream in

the hydrogen value chain, by mobilizing private capital from around the world.

In our Medium-term Business Plan, JBIC has set an action plan for contributing to the realization of a decarbonized society by financing projects for promoting production, transportation, and utilization of hydrogen, and we had been seeking opportunities of further involvement in this field. Around that time, we became aware of that the Clean H2 Infra Fund was being established, and we began deliberating an equity participation in the fund. In its "Green Growth Strategy Through Achieving Carbon Neutrality in 2050," the Government of Japan is calling for international cooperation to promote the social implementation of hydrogen. JBIC's equity participation in this fund will contribute toward the promotion of this trend. Also, it is an investment in the sustainable fund* for clean hydrogen projects. For this reason, this investment has a positive impact from the perspective of the protection of the global environment. Having said that, the hydrogen business is an advanced field with many challenges, as mentioned above, and its track record of successful projects is still quite limited. Consequently, we needed to examine its potential closely from a variety of angles. To this end, we conducted research and analysis of the hydrogen market based on the hydrogen policies of many countries and International Energy Agency (IEA) forecasts. We also held numerous discussions with HY24 SAS, the French fund manager of the Clean H2 Infra Fund, about the fund's investment strategies to verify the fund's potential. We had a limited timeframe of about four (4) months to complete our deliberations with the aim of the early realization of social implementation of hydrogen decarbonized society. It was therefore no easy task to build consensus with our stakeholders, but finally our team completed this equity participation.

The Clean H2 Infra Fund is a unique fund in which many enterprises related to the hydrogen



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field, including industrial gas and fuel cells, have invested with earnest intention to establish a hydrogen market. Although negotiating online with HY24 SAS in France was a challenge, we shared a strong passion to unlock strategic and large-scale projects under development to accelerate the scaling up of hydrogen markets for the realization of decarbonized society, so they finally welcomed us as their only Japanese anchor investor. Building a trusting relationship in such a short period of time with our counterparts in France and sharing the same passion with them was a valuable experience and left a deep impression on me. I will definitely make use of this experience in my next challenges in new finance fields.

* The investment policy of the fund is to invest in hydrogen-related projects that conform to "climate change mitigation," which is one of the environmental objectives of the EU taxonomy regulation. In accordance with the European Union's Sustainable Finance Disclosure Regulation (SFDR), the fund will make sustainable investment as its objective and will measure how far its objective is attained based on quantitative benchmarks.

Loan for Acquisition of British Company Dialog Semiconductor Plc by Renesas Electronics Corporation

In December 2021, JBIC signed a loan agreement for up to JPY144 billion (JBIC's portion) with Renesas Electronics Corporation. This loan is intended to finance part of the funds necessary for Renesas to acquire British company Dialog Semiconductor Plc. By acquiring Dialog, Renesas aims to provide stronger and more comprehensive solutions for the fast-growing IoT, industrial, and automotive markets. This loan supports overseas business deployment by the Japanese company by providing the necessary long-term funds for overseas M&A. In doing so, it will back up the company's overseas expansion of its existing businesses as well as new business deployment, and contribute toward maintaining and improving the international competitiveness of Japanese industry.



dialog
SEMICONDUCTOR A Renesas Company

Semiconductors handled by Renesas
(Photo courtesy of Renesas Electronics Corporation)



<https://www.jbic.go.jp/en/information/press/press-2021/1223-015680.html>

Equity Participation in Clean H2 Infra Fund managed by Hy24 Globally Investing in Clean Hydrogen-Related Projects under GREEN Operations

In March, JBIC signed an agreement for equity participation in the Clean H2 Infra Fund S.L.P. of France. This fund is targeting EUR1,500 million, toward which JBIC plans to invest up to EUR100 million. The fund will invest in hydrogen-related projects around the world, such as green hydrogen production and refueling station projects. JBIC's participation in the fund is based on its Global action for Reconciling Economic growth and ENvironmental preservation (GREEN). JBIC's equity participation is expected to contribute toward reducing carbon emissions through the investments by the fund.



Team members visiting a hydrogen refueling station in Germany, one of the fund's investees.



<https://www.jbic.go.jp/en/information/press/press-2021/0307-015946.html>