



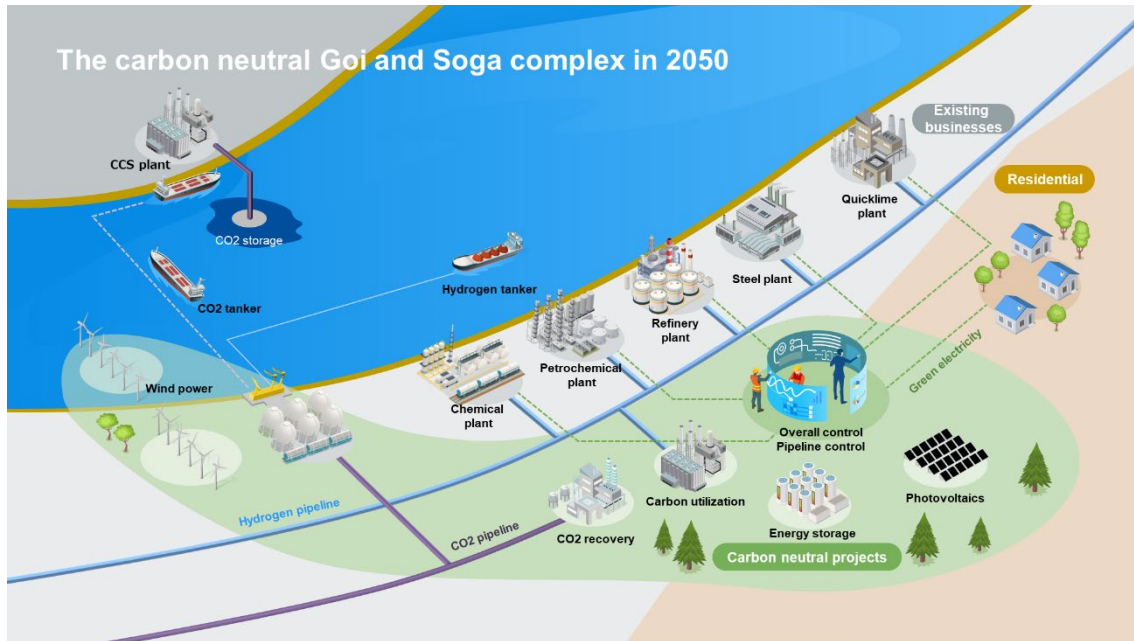
Tokyo, Japan – December 8, 2022

Cosmo Oil Co., Ltd.  
Denka Company Limited  
Iwatani Corporation  
JFE Steel Corporation  
JNC Corporation  
KH Neochem Co., Ltd.  
Maruzen Petrochemical Co., Ltd.  
UBE Elastomer Co. Ltd.  
Ube Material Industries, Ltd.  
Yokogawa Electric Corporation

Cosmo Oil / Denka / Iwatani / JFE Steel / JNC / KH Neochem /  
Maruzen Petrochemical / UBE Elastomer /  
Ube Material Industries / Yokogawa Electric

Signing of Memorandum of Understanding on Joint Study of Activities for the  
Realization of a Carbon Neutral Industrial Complex in Japan's Chiba Prefecture

Cosmo Oil Co., Ltd., Denka Company Limited, Iwatani Corporation, JFE Steel Corporation, JNC Corporation, KH Neochem Co., Ltd., Maruzen Petrochemical Co., Ltd., UBE Elastomer Co. Ltd., Ube Material Industries, Ltd., and Yokogawa Electric Corporation hereby announce the signing of a memorandum of understanding (MoU) on a joint study into activities for the establishment of a carbon neutral industrial complex in the Goi district of Ichihara City and the Soga District of Chiba City in Japan's Chiba Prefecture (hereafter referred to as the "carbon neutral Goi and Soga complex").



The carbon neutral Goi and Soga complex in 2050

The Goi and Soga districts form part of the Keiyo Rinkai industrial complex in Chiba, a prefecture adjacent to Tokyo that hosts Japan's largest concentration of materials and energy companies. The achievement of carbon neutrality at this industrial complex will enhance the overall competitiveness of the companies that maintain operations there and lead the way forward to a sustainable society.

From February 2021, Yokogawa has been undertaking a project\* to examine the feasibility of achieving carbon neutrality through inter-industry collaboration at the Goi industrial complex. The nine other companies, who have operations there, have joined Yokogawa in this undertaking, and Yokogawa has also involved its subsidiaries Yokogawa Solution Service Corporation and KBC Advanced Technologies Limited. Through this study, it has been established that inter-industry collaboration would be more effective than companies working on their own in reducing CO2 emissions, and that the recovered CO2 can be effectively utilized by the companies located within this industrial complex.

On the basis of the MoU, Yokogawa and these nine companies that are active in the energy, petrochemical, chemical, steel, materials, and other industries will study the feasibility of the commercialization of activities by the year 2030 that will be required to make the Goi and Soga industrial complex carbon neutral by 2050. These activities are as follows:

- (i) Introduction of an inter-industry energy management system to minimize CO2 emissions
- (ii) The recovery and effective utilization of CO2 through inter-industry collaboration
- (iii) Reduction in CO2 emissions through inter-industry collaboration in the utilization of hydrogen and other gas by-products from existing processes

Through this cooperation between businesses aiming for sustainable operations and a provider of advanced control systems and energy management systems for industrial processes, the participating companies aim to collectively achieve carbon neutrality at the Goi and Soga industrial complex and thereby lessen their environmental impact, while enhancing their own international competitiveness.

\*Project details:

Project commissioned by New Energy and Industrial Technology Development Organization (NEDO)

Project name: Carbon recycling and next-generation thermal power generation technology development / Next-generation thermal power generation technology promotion business / Feasibility study of carbon recycling business utilizing inter-industry collaboration in industrial complexes, etc. / Inter-industry collaboration study project in the Goi district of Chiba Prefecture

Project period: FY2020 - FY2022

### **About Cosmo Oil Co., Ltd.**

Based on our mission of a safe and stable supply of energy, which is indispensable to our daily life, the Cosmo Energy Group to which Cosmo Oil belongs has grown by having petroleum and petrochemical as its core business, and is now expanding renewable energy business from the perspective of long-term changes in the business environment.

Setting out our group management vision as "Harmony and Symbiosis with the Global Environment," Cosmo Energy aims to be the most environmentally friendly oil/energy corporate group, and based on our sixth consolidated medium-term management plan, Oil & New, we utilize our strengths to develop our service station network for the next-generation mobility society, to promote eco-friendly electricity sales, and to expand production of clean energy, mainly around wind power generation. Through these businesses, including that represented by this venture, we aim to contribute in solving social issues and building a sustainable society.

<https://www.cosmo-oil.co.jp/eng/index.html>

### **About Denka Company Limited**

Denka is a chemical manufacturer headquartered in Chuo-ku, Tokyo. The company specializes in developing business activities on a global scale across a wide range of fields, from inorganic and organic chemicals, to electronic materials and pharmaceuticals. Founded in 1915, Denka has steadily continued to develop and manufacture products that contribute to the development of society by fully utilizing its unique concepts and technological capabilities. Upholding its corporate slogan, “Possibility of chemistry”, the company and its president, Toshio Imai, are committed to contributing to the sound development of society while sincerely tackling the challenges that society is now confronting.

<https://www.denka.co.jp/eng/>

### **About Iwatani Corporation**

Iwatani is an integrated energy provider with the top share in the LPG market in Japan and engages in a wide range of businesses through four business segments: the core businesses of the Integrated Energy Business, centered on LPG; the Industrial Gases & Machinery Business, which handles a wide range of gas and machinery equipment for industrial applications; and the Materials Business and Agri-Bio & Foods Business, which are based on the foregoing.

Please visit our website for more information: <https://www.iwatani.co.jp/eng/>

### **About JFE Steel Corporation**

JFE Steel Corporation, one of the world’s leading integrated steel producers, was established through the consolidation of NKK Corporation and Kawasaki Steel Corporation in 2003. The company operates several steelworks in Japan and numerous branch offices and affiliates throughout the world. JFE Steel leverages world-class technologies and know-how to produce a wide range of products based on its “Only One, Number One” strategy of focusing on unique and best-in-class products.

Please visit our website for details. <https://www.jfe-steel.co.jp/en/index.html>

### **About JNC Corporation**

JNC Group, founded as Sogi Electric Company in 1906, has consistently contributed to developments of society as a pioneer of chemical industry of Japan ever since JNC has started to deploy renewable energy generation to the electrochemical field and domestic production of nitrogen fertilizers using the hydroelectric power thereby obtained.

The business domains of JNC Group are Performance materials, Energy and Environment, Consumer oriented goods, Chemical products, and Life chemicals.

Please visit website for details. <https://www.jnc-corp.co.jp/english/>

### **About KH Neochem Co., Ltd.**

KH Neochem provides premium chemical products in a variety of fields focused on our three core business areas of Basic Chemicals, Performance Materials and Electronic Materials. KH Neochem products are in fact used in all forms of goods essential to the global environment and comfortable living. KH Neochem aspires to continue contributing to a sustainable society by providing value through the business to achieve an environmentally conscious world and a richer life for people based on the foundations of safety, security, and trust. Visit [www.khneochem.co.jp/en/](http://www.khneochem.co.jp/en/) to find out more.

### **About Maruzen Petrochemical Co., Ltd.**

Maruzen Petrochemical is a chemical producer that develops, produces and sells petrochemical products. We develop and commercialize products including ethylene, propylene and the other basic petrochemical products that are the raw materials of plastics, synthetic fiber, synthetic rubber, coatings, etc., as well as functional raw materials with value added fractions. We are committed to promoting research and product development in order to contribute to industry and the lives of people by providing multi-function high-function raw materials geared to the diversifying needs of society. Please visit our website <https://www.chemiway.co.jp/en/> to find out more.

### **About UBE Elastomer Co. Ltd.**

Established on October 1, 2021, UBE Elastomer Co. Ltd. inherits the synthetic rubber business of UBE Industries, Ltd. (now UBE Corporation) and carries out the research and development, manufacturing, and sales of synthetic rubber and its raw materials. The company has four manufacturing bases in Chiba, Thailand, China, and Malaysia,

and supplies products to customers around the world.

<https://www.ube.co.jp/elastomer/>

### **About Ube Material Industries, Ltd.**

Ube Material Industries, Ltd., a member of the Mitsubishi UBE Cement Group, is a manufacturer of special inorganic materials headquartered in Ube City, Yamaguchi Prefecture. Using high-quality limestone, which is readily available in large quantities, as a raw material, we manufacture calcia-related products such as quicklime (calcium oxide) and slaked lime (calcium hydroxide). Also, by using quicklime as a raw material, we extract magnesium from seawater, and produce magnesia-related products such as magnesium hydroxide and magnesia clinker (a refractory raw material). A detailed explanation of our company can be found at <https://www.ubematerials.co.jp>.

### **About Yokogawa**

Yokogawa provides advanced solutions in the areas of measurement, control, and information to customers across a broad range of industries, including energy, chemicals, materials, pharmaceuticals, and food. Yokogawa addresses customer issues regarding the optimization of production, assets, and the supply chain with the effective application of digital technologies, enabling the transition to autonomous operations. Founded in Tokyo in 1915, Yokogawa continues to work toward a sustainable society through its 17,000+ employees in a global network of 122 companies spanning 61 countries.

For more information, visit [www.yokogawa.com](http://www.yokogawa.com)

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