

## **RWE, LOTTE CHEMICAL Corporation and Mitsubishi Corporation enter into a Joint Study Agreement to develop a clean ammonia project in Port of Corpus Christi in Texas, USA**

RWE, LOTTE CHEMICAL Corporation (LOTTE) and Mitsubishi Corporation (MC) have formed a strategic alliance to jointly develop stable and large-scale clean ammonia (green and blue ammonia) supply chains in Asia, Europe and the US.

Within this alliance RWE, LOTTE, and MC have now signed a Joint Study Agreement (JSA) to develop a large-scale integrated clean ammonia production and export project in Port of Corpus Christi, Texas, USA.

Under the JSA, the partners agreed to jointly study the development of a large-scale ammonia facility that integrates green and blue ammonia production and leverages common infrastructure for international exports with a focus on Asia and Europe. The Parties target first production by 2030 and a phased build-out of production capacity with multiple production units. In the final build-out stage the project is envisaged to produce up to 10 million tons of clean ammonia per year. The land required for the project is under discussion with the Port of Corpus Christi Authority. The partners are bringing together complementary expertise to develop the project.

This JSA complements other preliminary efforts to develop large-scale clean ammonia projects including the South Texas region.

### **Notes to editors**

- RWE is one of the world's leading companies in the field of renewable energy with a strong footprint in the US and is currently driving forward more than 30 green hydrogen projects in its core markets. RWE is committed to developing a globally diversified portfolio of projects and offtake agreements for clean hydrogen and its derivatives, such as ammonia. In this context RWE has announced its plan to build an import terminal for ammonia in Brunsbüttel (Germany) by 2026. In its REPowerEU plan, the EU has set a target of producing 10 million tons of renewable hydrogen domestically and importing 10 million tons of renewable hydrogen by 2030, of which 4 million tons is expected to be hydrogen-as-ammonia. This equates to approximately 20 million tons of ammonia.

- LOTTE CHEMICAL is Korea's leading chemical company, contributing to the healthy and rich life of humankind through creative challenges and innovation. LOTTE CHEMICAL aims to invest 6 trillion won (\$4.3 billion) by 2030 to produce 1.2 million tons of clean hydrogen a year, and hopes to make annual revenue of 5 trillion won (\$3.6 billion) from its hydrogen and ammonia business. South Korea's 10<sup>th</sup> Basic Plan for long-term electricity supply and demand, released in January 2023, announced plans to introduce ammonia and hydrogen as a new energy source. According to the Plan, portion of the Low-carbon power generation will be increased to 2.1% of total electricity. LOTTE CHEMICAL will leverage its vast business network, investment capacity and experience in global project operations to establish a hydrogen energy ecosystem, spanning production to distribution and sales, and lead the market.
- MC started its ammonia trading business from late 1960's and is currently an indirect shareholder of PT Panca Amara Utama (PAU) which is responsible for a plant that produces 700,000 tons/year of ammonia in Indonesia. Japan's Ministry of Economy, Trade and Industry convened a public-private council to promote the introduction of fuel ammonia, and in February 2020 the council announced the roadmap for use of ammonia to power thermal power plants. Assumption is that Japan's annual imports of ammonia will reach 3 million tons by 2030 and 30 million tons by 2050. MC aspires to introduce fuel ammonia in Japan by utilizing such knowledge in the field of ammonia and experience of setting up global energy supply chains, hence MC is looking into such clean energy opportunities globally.
- Ammonia (NH<sub>3</sub>) is a compound of nitrogen and hydrogen and is currently used as a raw material for fertilisers, plastics and chemicals. There are growing expectations that ammonia will become a next-generation clean energy source, as ammonia does not emit carbon dioxide when burned. As ammonia requires significantly less cooling for liquefaction than hydrogen, it is also considered to be the most economical carrier for the transport of hydrogen molecules by ship. Blue ammonia is typically referred to as ammonia that is derived from hydrogen that is produced via natural gas feedstock and combining technologies such as carbon capture & storage to ensure the ammonia is low carbon. Green ammonia is typically referred to as ammonia that is derived from hydrogen that is produced via water electrolysis based on renewable energy.

## Company Outlines

### **RWE Supply & Trading GmbH**

- Year of Establishment: 2000
- Headquarters: RWE Platz 6, 45141 Essen
- Representative: Andree Stracke, Chief Executive Officer
- Main Operations: RWE Supply & Trading is the interface between RWE and the energy markets around the world. Approximately 1,600 employees from over 50 different countries trade (renewable) electricity, (green) gas, commodities and CO2 emission allowances. Accurate market analysis and a high degree of customer centricity enable them to create innovative energy supply solutions as well as risk management concepts for industrial operations. The trading entity also ensures the commercial optimisation of RWE's power plant dispatch and markets electricity from renewables.

### **LOTTE CHEMICAL Corporation**

- Year of Establishment: 1976
- Headquarters: 14F-16F, LOTTE World Tower, 300 Olympic-ro, Songpa-gu, Seoul
- Representative: Shin Dong-bin, Chairman and Chief Executive Officer
- Main Operations: LOTTE CHEMICAL Corporation is Korea's leading chemical company, contributing to the healthy and rich life of humankind through creative challenges and innovation.
- Our extensive range of products from polymer to megatrend product groups is widely used in household goods that we frequently encounter in our everyday lives, as well as cutting-edge new materials. Lotte Chemical, the chemical unit of South Korean retail giant Lotte Group, aims to achieve 50 trillion won (\$36 billion) in sales in 2030, with about 30 trillion won (\$22 billion) to be generated from high value-added specialty products and eco-friendly materials.

### **Mitsubishi Corporation**

- Year of Establishment: 1954
- Headquarters: 2-3-1 Marunouchi, Chiyoda-ku, Tokyo
- Representative: Katsuya Nakanishi, President and Chief Executive Officer
- Main Operations: A global integrated business enterprise that develops and operates businesses across virtually every industry including natural gas, industrial materials, petroleum & chemicals solution, mineral resources, industrial infrastructure, automotive & mobility, food industry, consumer industry, power solution and urban development.