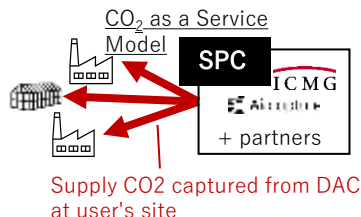


## Purpose of the Project

**【Project Summary】** In collaboration with Aircapture (AC), we investigated the business potential of "CO<sub>2</sub> as a Service (CaaS)," a new business model that sells CO<sub>2</sub> captured from the atmosphere using AC's Direct Air Capture technology under a long-term supply contract.

**【Challenges / Needs】** 1) There is a societal and economic demand for the new CO<sub>2</sub> supply chain to replace the traditional fossil fuel-derived CO<sub>2</sub> supply which is experiencing price increases and supply reductions.  
2) Constructing a mechanism to reduce initial costs is essential to facilitate DAC installation.

**【Expected Results and Uniqueness of the Service】**  
The new CaaS model will contribute to the achievement of domestic carbon neutral goals by 1) enabling a decentralized supply of clean and stable CO<sub>2</sub> that is not affected by procurement risks or energy costs, and 2) allowing companies of various sizes to utilize DAC-derived CO<sub>2</sub> by removing the unit installation cost.



## Details of Demonstration

**【Collaboration】** We signed an MOU with Aircapture (AC), a US-based startup specializing in DAC development and manufacturing, to jointly explore methods for introducing their technology into Japan.

## 【Schedule &amp; Details】

Date	Details of Study
2024/6-7	<ul style="list-style-type: none"> <li>▶ Alignment on the project plan</li> <li>▶ Adjustment of research items</li> </ul>
2024/8-10	<ul style="list-style-type: none"> <li>▶ Market research &amp; technical assessment               <ul style="list-style-type: none"> <li>- Verification of AC's resources and technology</li> <li>- Technology adaptation for Japan market</li> <li>- Market trend analysis</li> <li>- Interviews with potential customers</li> </ul> </li> </ul>
2024/9-12	<ul style="list-style-type: none"> <li>▶ Business model examination               <ul style="list-style-type: none"> <li>- Building a business scheme</li> <li>- Interviews with business partners</li> </ul> </li> <li>▶ Simulation of profitability</li> <li>- Defining revenue structure &amp; contract terms</li> </ul>
2025/1	▶ Analysis and compilation of results



# ICMG Co., Ltd.

Feasibility study on CO<sub>2</sub> as a Service in Japan using Aircapture DAC technology

## Project Outcome

### ■ Potential Market for DAC CO<sub>2</sub>

The Japanese market for DAC-derived CO<sub>2</sub> is expected to experience significant growth. High demand is anticipated, particularly in industries with strong needs for CO<sub>2</sub> emissions reduction, as well as industries that place a premium on the added value of DAC-derived CO<sub>2</sub>, such as concrete and chemical manufacturers.

### ■ Technology Adaptation to Japan

Japan's unique climate and regulations require AC to customize DAC units. For example, the capture capacity may decrease under Japan's high-humidity conditions. It is necessary to select equipment with sufficient capacity and develop materials suitable for the Japanese environment.

### ■ Profitability

Based on a simulation using CO<sub>2</sub> sales figures calculated from potential customers' demands and AC's cost data, the current model would result in losses.

### ■ Implementation Structure

The CaaS business entity will require significant financial resources to own equipment and provide long-term CO<sub>2</sub> supply guarantees. Collaboration with major corporations is essential, and discussions are currently underway with financial institutions, etc. regarding specific partnerships.

## Challenges and Solutions

### ■ Cost Reduction

Profitability is attainable by reducing DAC equipment costs. We will continue negotiations with AC to lower equipment costs, while making efforts to reduce running costs through technical improvements and the establishment of domestic production sites.

### ■ Expansion of Government Support Programs

Various support programs such as subsidies and carbon credit systems are essential to alleviate cost burdens and accelerate the adoption of DAC technology across a wide range of sectors.

## Future Plans

We will proceed with signing collaboration agreements with partners, and sales contracts with customers to launch CaaS. Simultaneously, we will advocate the importance and challenges of DAC to the central and local governments and encourage their policy support. To reduce costs, we will advance technological improvements while promoting collaboration with domestic manufacturing partners, aiming to establish a DAC manufacturing base in Japan.