



U.S. DEPARTMENT OF
ENERGY

Asia-Pacific-US Marine CO₂ Shipping Feasibility Study



Drivers for such a study

Purpose: Assess the viability and effectiveness of marine transport of CO₂ internationally to the U.S.

Japan/Asia-Pacific

- May not have sufficient carbon storage resources locally to meet long term goals
- Recently selected seven role model CCS projects aiming for business scale-up and cost reduction by 2030 (i.e., Figure 1)
- Two of the announced projects include potential scope to export CO₂ to countries rich in storage resources (Oceania CCS & Offshore Malay CCS)

Alaska

- Extensive history in offshore and onshore development of oil and gas infrastructure including waterborne carrier exports
- State has various geologic opportunities to be potentially developed for storage near existing infrastructure but lacks significant regional emissions
- University of Alaska Fairbanks recently selected for CarbonSAFE Phase II and will investigate the feasibility of developing a commercial-scale CO₂ geologic storage complex
 - Alaska CCUS Workgroup: Accelerating commercial carbon capture, use, and storage projects within the state

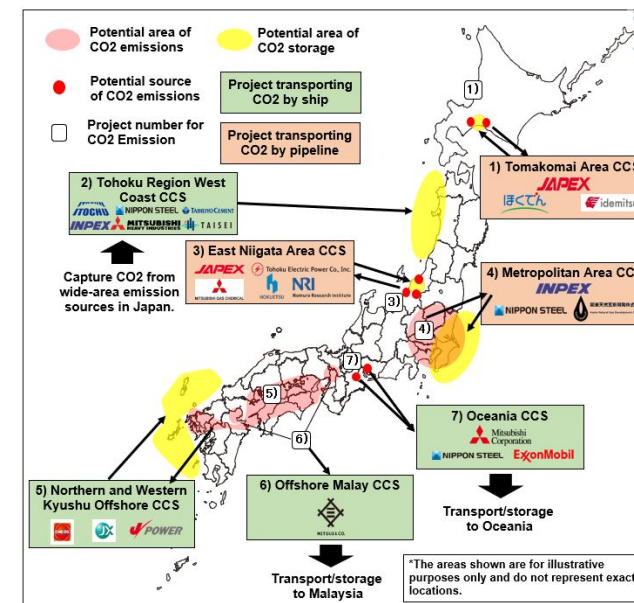


Figure 1: Summary of Announced CCS Projects in Japan
Source: 6/13/2023 - Japan Ministry of Economy, Trade and Industry

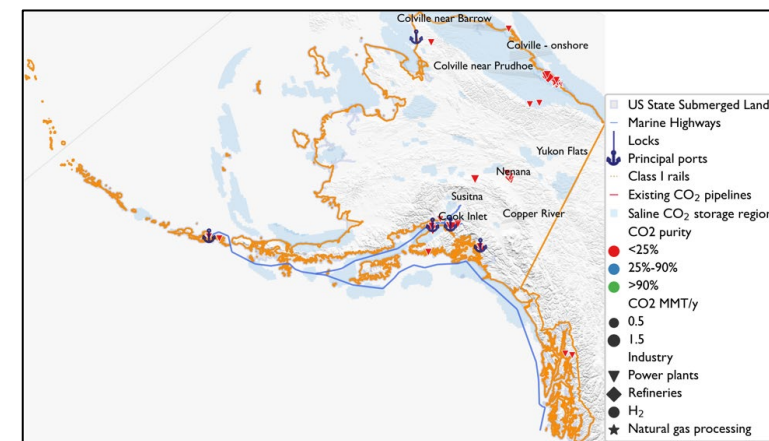


Figure 2: Summary of AK Emitters, Transport Infrastructure, & Saline Storage Resources
Source: FECM analysis

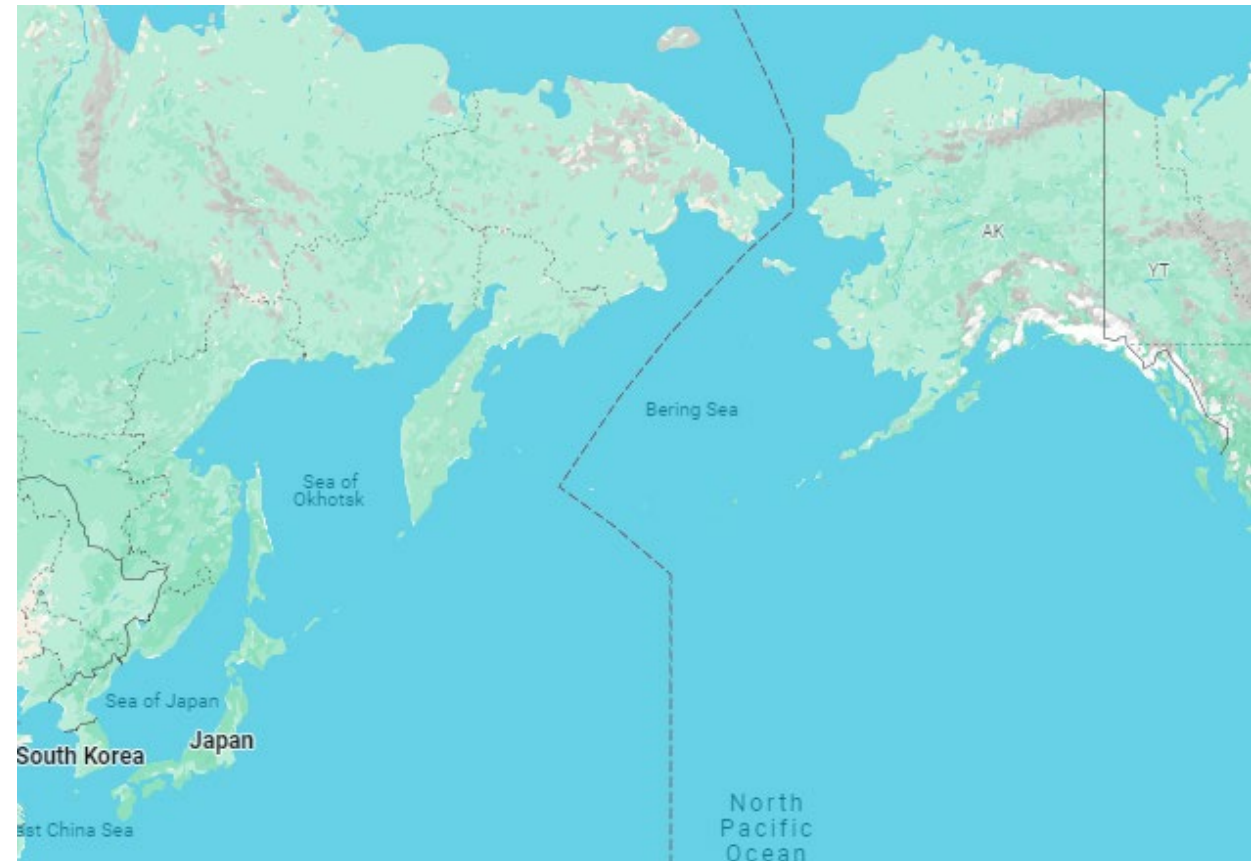
Study Objective

The study will evaluate the technical and economic feasibility of shipping CO₂ from Asia-Pacific Region to the state of Alaska and determine potential opportunities and barriers for at scale development (e.g., technical, regulatory, economic, etc.).

Phase 1: Feasibility Screening Assessment

- Literature review, analog projects, and industry data to assess feasibility
- Order of magnitude ranges on costs for development and CO₂ pricing required to justify development
- Identify potential national, international, and state level barriers to deployment

Phase 1: To inform future phases



Questions?