

Needs for Carbon Sequestration in Japan

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(Res. Inst. Innovative Tech. for the Earth)

What is the basis of CSLF?

- Actual reliance on the World on fossil fuels
- Stakeholders are diversified and have important roles: industry, NGO's, non-Annex-1 countries, scientific communities..
- Still we should establish the Climate policy.

Revisit Ocean Storage

- Potential: 2000 GtonC for atm. 550ppm CO₂ earth in comparison with fossil fuel reserve of 5000 GtonC
 - the CO₂ capture & storage scenario is sustainable even in the context of variable and uncertain climate in the future
- Public acceptance: day-to-day issues are not only the key, but overall accountability is essential.

The other CSLF collaboration of Japan

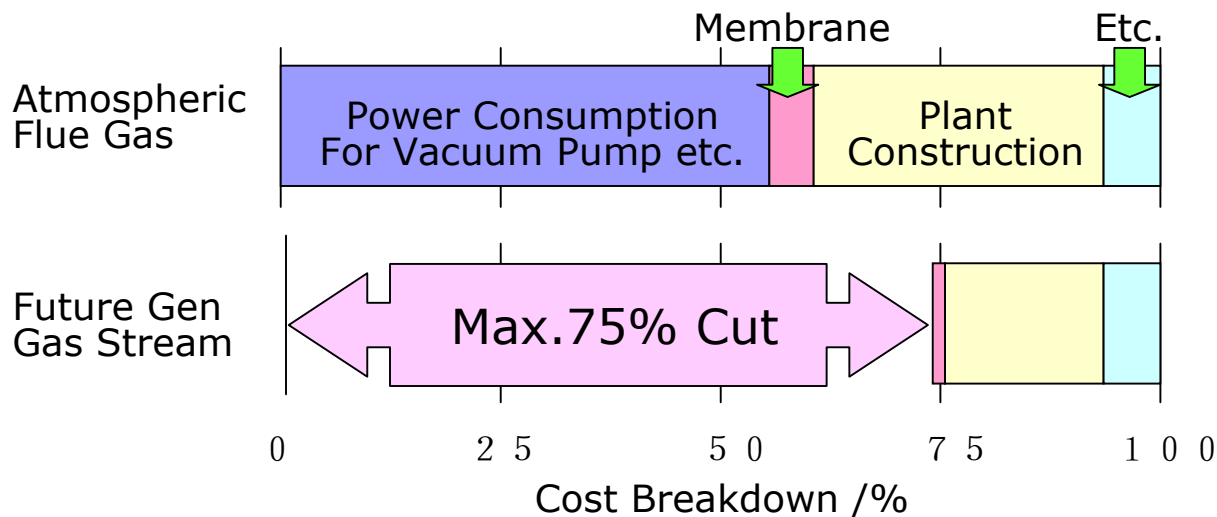
- Renovation in capture technology
- East Asian context: big economy of China needs the actual potential estimate of geologic CO₂ storage
- Japan islands are formed by the accretion of land masses on the Pacific plate; we have many test sites of new formation for CO₂ storage, the test case might be the collaboration with Italy on CO₂ injection into the geothermal field.

Japan's Proposal For CSLF Projects(1):

Subject: CO₂ Separation From Pressurized Gas Stream

➡ Development of Membrane Technology For Efficient CO₂ Separation For Storage

Cost Estimate For Pressurized Gas Stream



Current Relevant Collaboration

Molecular Gate Membrane: RITE(Jpn.) and NETL(USA)

Japan's Proposal For CSLF Projects(2):

Subject: Ocean CO₂ Perturbation Experiment

➤ Environmental assessment is the key to the acceptance of the ocean sequestration technology :

Answer to
the ultimate consequence of CO₂ ocean sequestration
including the offshore aquifer storage of CO₂

Current Status:

Talk between RITE(Jpn.) and
Monterey Bay Aquarium Res. Inst.(US)
started

Japan's Proposal For CSLF Projects (3) :

Subject: Evaluation on Potential of CO₂ Geologic Sequestration in East Asia

- Category: depleted oil & gas reservoir aquifer (in-land, offshore) the other formations
- Methodology: literature survey data, using the criteria concordant with the preceding study on potential evaluation near Japan Islands area (RITE, 1996)

Current Status:

Talk between RITE(Jpn.) and Inst. Rock & Soil Mechanics (China) started

Japan's Proposal For CSLF Projects(4):

Subject: Feasibility study on CO₂ Sequestration in Geothermal Fields

Background: Baseline data exists in the industry of geothermal energy development; whereas some fields are not suitable for the power generation.

 International Coordination of efforts on FS are required to identify the knowledge gap

Funding :

Japan: NEDO is supporting RITE and others from 2002

Italy: decided to start?

the other countries ?: US, Russia, China