

Projects Nominated for CSLF Recognition



Carbon Sequestration Leadership Forum

Second CSLF Ministerial Meeting

Melbourne, Australia

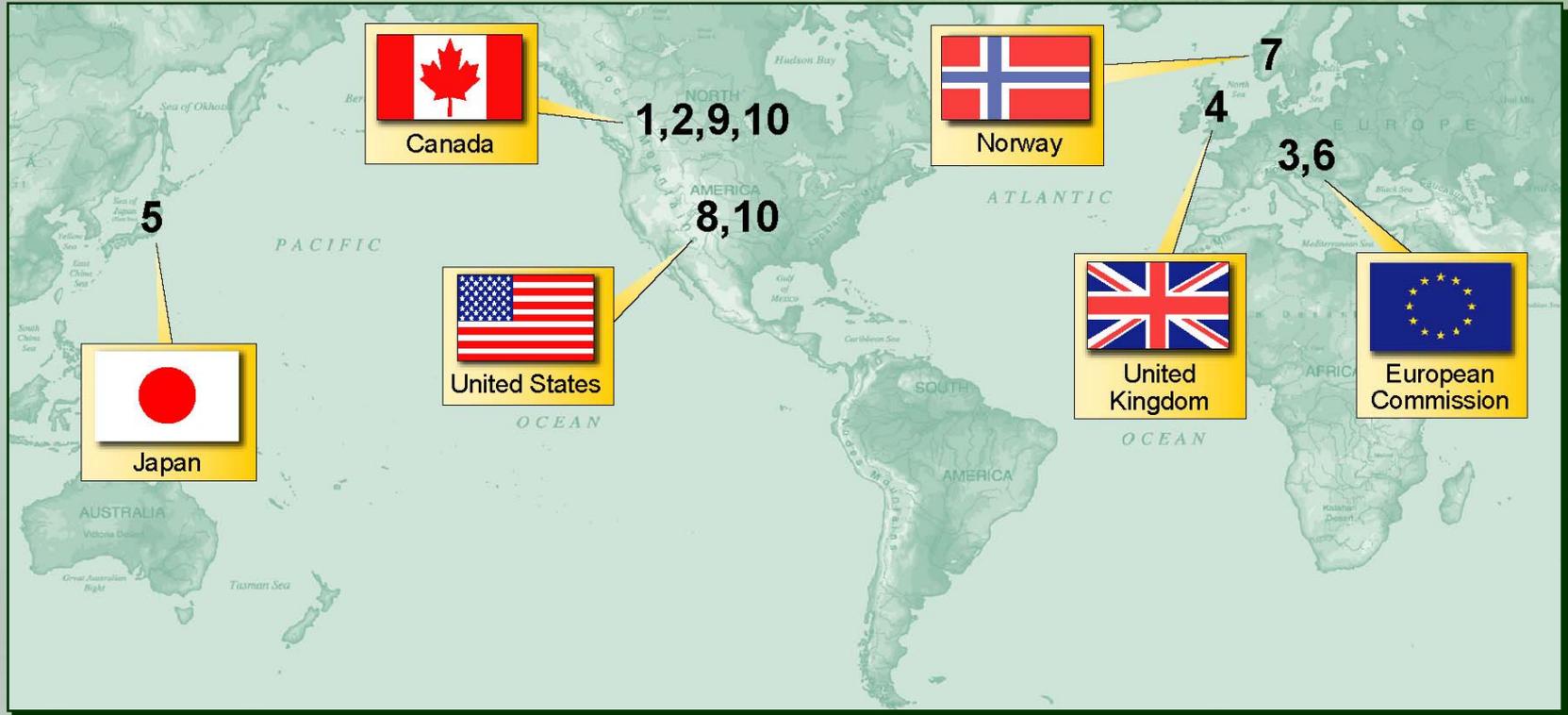
September 13–15, 2004

Chronology of Proposed Projects



- 13 projects presented for CSLF recognition at January 2004 Rome Meeting
- 10 projects submitted for evaluation by interim task force
- Technical Group task force screened projects against project recommendation guidelines
- Technical Group reviewed projects and recommended approval
- Policy Group reviewed projects and recommended approval of projects for CSLF recognition at Melbourne

Lead Members for Nominated Projects



- 1 – ARC Enhanced Coal-Bed Methane Recovery Project (Canada)
- 2 – CANMET Energy Technology Centre (CETC) R&D Oxyfuel Combustion for CO₂ Capture (Canada)
- 3 – CASTOR (European Commission)
- 4 – CO₂ Capture Project (CCP) – Phase 2 (United Kingdom)

- 5 – CO₂ Separation from Pressurized Gas Stream (Japan)
- 6 – CO₂SINK (European Commission)
- 7 – CO₂STORE (Norway)
- 8 – Frio Project (United States)
- 9 – ITC CO₂ Capture with Chemical Solvents (Canada)
- 10 – Weyburn II CO₂ Storage Project (United States & Canada)

ARC Enhanced Coal-Bed Methane Recovery Project



- Nominators: Canada (Lead), United States, and United Kingdom
- Pilot-scale project (3 test wells)
- Located in Alberta, Canada
- Evaluate CO₂ injection into deep coal beds for sequestration and liberation and capture of coal-bed methane
- Goal: Demonstrate overall feasibility of coal-bed methane production from simultaneous CO₂ sequestration in deep unmineable coal seams



CANMET Energy technology Centre (CETC) R&D Oxyfuel Combustion for CO₂ Capture



- Nominators: Canada (Lead) and United States
- Pilot-scale project (0.3 megawatt-thermal)
- Located near Ottawa, Ontario, Canada
- Demonstrate oxyfuel combustion technology with CO₂ capture
- Goal: Develop energy-efficient integrated multi-pollutant control, waste management, and CO₂ capture technologies for applications and to provide information for large-scale plants



CASTOR



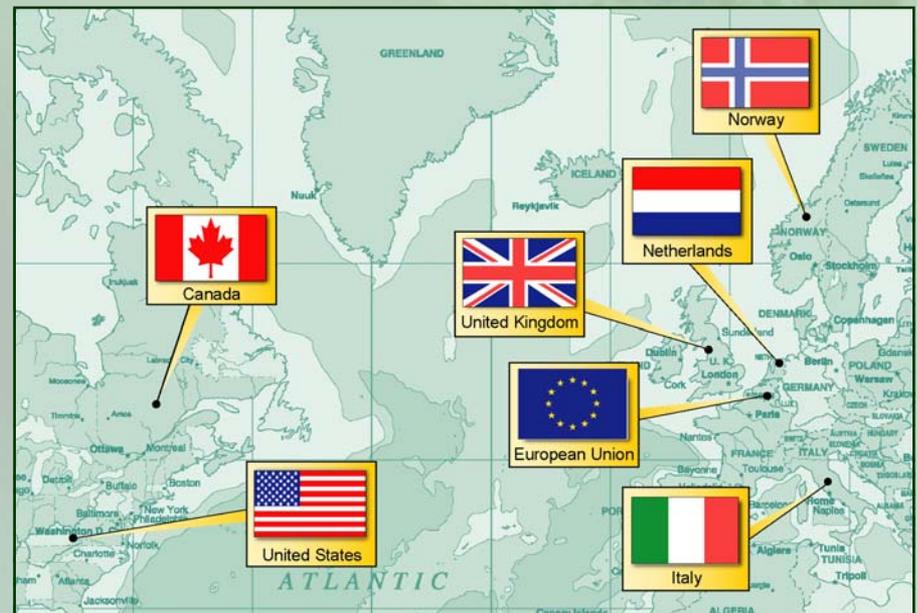
- Nominators: European Commission (Lead) and Norway
- Pilot-scale project
- Four locations: Casablanca (Mediterranean Sea – depleted oil field), Snohvit (Norway – aquifer), Lindach (Austria – depleted gas field), K12b (Netherlands – depleted gas field)
- Separate CO₂ from a post-combustion gas stream and perform risk studies.
- Goal: Achieve a major cost reduction in post-combustion per-ton CO₂ capture cost.



CO₂ Capture Project (CCP) – Phase 2



- Nominators: United Kingdom (Lead), Norway, Italy, and United States
- Pilot-scale project
- Public participation from U.S., the E.C., and Norway in Phase 1 and industry partners from U.K., U.S., Italy, Norway, The Netherlands, and Canada in Phase 2
- Develop new technologies to reduce cost of CO₂ separation, capture, and geological storage
- Goal: Develop breakthrough technologies that will reduce the cost of CO₂ capture and to demonstrate effective geologic storage of CO₂.



CO₂ Separation from Pressurized Gas Stream



- Nominators: Japan (Lead) and United States
- Small-scale project
- Utilize membranes developed in Japan at a location near Pittsburgh, Pennsylvania, United States
- Evaluate processes and economics for CO₂ separation from pressurized gas streams
- Goal: Improve the performance of membranes for CO₂ removal from gas streams under high pressure



CO₂ Sink



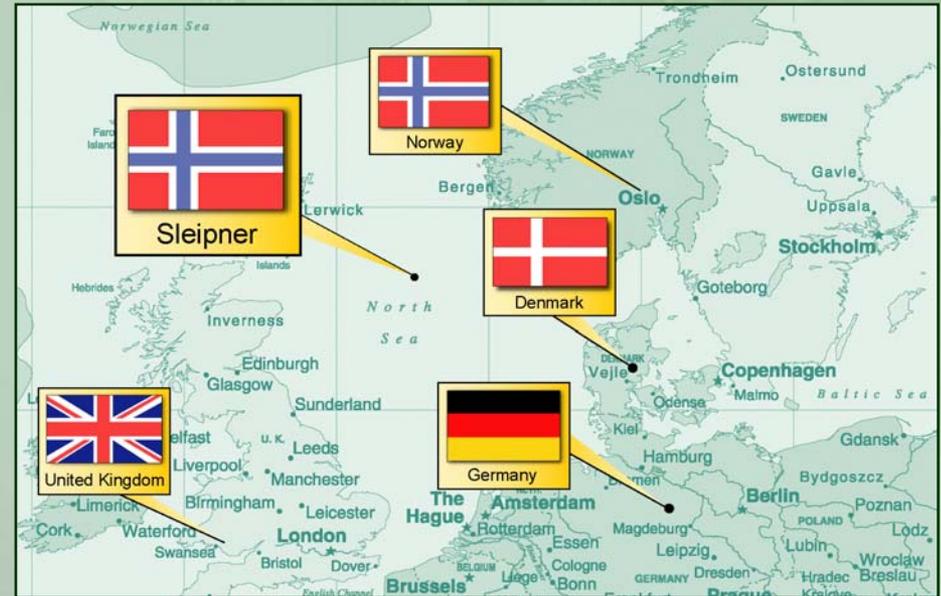
- Nominators: European Commission (Lead) and Germany
- Pilot-scale project
- Located at an existing natural gas storage facility near Berlin, Germany and at an underground formation
- Monitor migration characteristics of stored CO₂
- Goal: Advance understanding of the science and practical processes involved in underground storage of CO₂ and to provide real case experience in developing future regulatory frameworks for geologic storage of CO₂



CO2STORE



- Nominators: Norway (Lead) and European Commission
- Large-scale project; follow-on to Sleipner project
- Preliminary feasibility studies in Wales, Germany, Denmark, and Norway
- Continue to track CO₂ migration and additional studies to gain further knowledge of geochemistry and dissolution processes
- Goal: Develop sound scientific-based methodologies for the assessment, planning, and long-term monitoring of underground CO₂ storage, both onshore and offshore



Frio Project



- Nominators: United States (Lead) and Australia
- Pilot-scale project
- Located near Houston, Texas, United States
- Demonstrate CO₂ sequestration in an on-shore underground formation
- Goal: Verify conceptual models of CO₂ sequestration in such geologic structure, demonstrate no adverse health, safety, or environmental effects will occur, demonstrate field-text monitoring methods, and develop experience for large-scale injection projects



ITC CO₂ Capture with Chemical Solvents



- Nominators: Canada (Lead) and United States
- Pilot-scale project (4 metric tons per day CO₂ capture)
- Located near Regina, Saskatchewan, Canada
- Demonstrate CO₂ capture using chemical solvents
- Goal: Develop improved cost-effective technologies for separation and capture of CO₂ from flue gas



Weyburn II Storage Project



- Nominators: Canada and United States (Leads) and Japan
- Commercial-scale project
- Located near Regina, Saskatchewan, Canada
- Utilize CO₂ from a U.S. coal gasification facility for enhanced oil recovery in a Canadian oil field
- Goal: Determine performance and undertake a thorough risk assessment of CO₂ storage in conjunction with its use in enhanced oil recovery

