



CSLF PIRT Meeting

Christopher Consoli

Rome, Italy

16-19 April 2013



CSLF PIRT Meeting: Rome 2013

Summary outcomes from Perth PIRT Meeting

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PIRT Meeting Perth, Australia

Summary of Consensus Reached

- Two Projects approved
 - South West CO₂ Geosequestration Hub Project
 - Western Australia
 - CarbonNet Project
 - Victoria, Australia

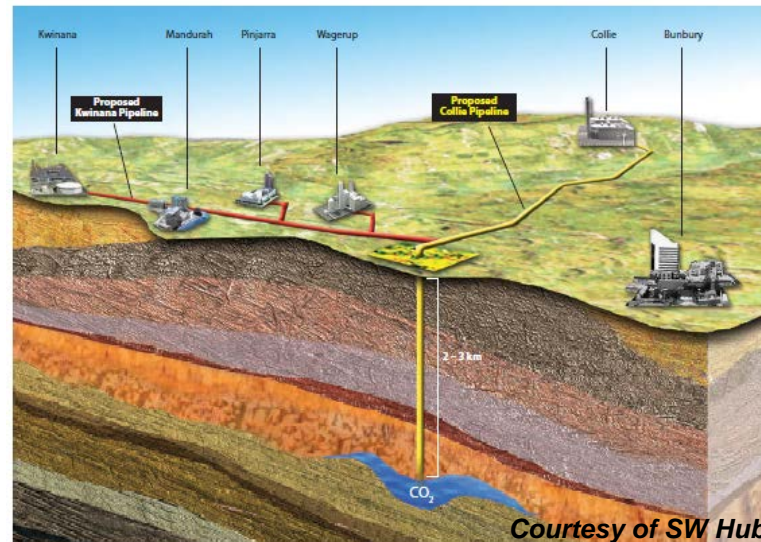


Figure 2 – A conceptual diagram of the South West Hub.



PIRT Meeting Perth, Australia

Summary of Consensus Reached

- PIRT recommends that the Technical Group adopt the simplified Gaps Checklist
- CSLF “Projects” website with interactive map now live



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Review of CSLF Project Submission Form

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Review of Submission Form (1)

Submission Form purpose

- General information about Project
- Categorization of Project
- ***Decision making for PIRT recommendation to TG***

Background: relatively unchanged since 2006

- Level of details variable from 4-22 pages + Larger documents due to checklist
- **Updated Project Submission Checklist**
 - adopted Perth 2012



Review of Submission Form (2)

Recommendation of the PIRT Bergen,

- Simplify form
- Utilize information provided

Proposed Project Submission Form

- CSLF focus on large-scale CCUS Projects
- Information must be relevant to all stakeholders
- Several legacy categories
- Remove duplication



Proposed Submission Form (1)

New Checklist

- Categorization
 - Building a matrix for projects and CCS technologies
 - 33 categories
- Simplified but effective
 - Designates a Project's identity and their focus
 - Easily utilized by PIRT, Task Forces and Working Groups

Aim: good level of granularity allow dissemination of data to all stakeholders



Proposed Submission Form (2)

Project Elements

The project sponsor is currently being requested to check all that apply from a list of possible project features, many of them redundant with items in the Gaps Analysis Checklist.

- **Suggest that this section be eliminated.**

Please check all that apply.

- Pre-combustion CO₂ Capture _____
- Post-combustion CO₂ Capture _____
- Oxyfuel Combustion _____
- CO₂ Capture by Other Means (please describe): _____
- CO₂ Transport _____
- CO₂ Storage with Enhanced Oil Recovery _____
- CO₂ Storage with Enhanced Coal Bed Methane Recovery _____
- CO₂ Storage with Enhanced Natural Gas Recovery _____
- CO₂ Storage with No Resource Recovery _____
- CO₂ Measurement, Monitoring, and Verification of Storage (MMV) _____
- Identification of Potential CO₂ Storage Sites _____
- Identification of Target CO₂ Sources _____
- Economic Evaluation _____
- Environmental Evaluation _____
- Risk Assessment (HSE) _____
- Risk Assessment (Financial) _____
- Other (please describe): _____



Proposed Submission Form (3)

Information Availability

The project sponsor is currently being requested to:

“Please also provide information about the relevance of the project to the overall aims of the CSLF and to carbon capture and storage technology in general.”

- Suggest that this sentence be eliminated.



Proposed Submission Form (4)

Information Availability

- The project sponsor is currently being requested to provide answers to three questions pertaining to information availability from the project.
 - Suggest that these three questions be revised.

Please also provide answers to the following questions:

Is the project management willing to share non-proprietary project information with other CSLF Members? _____

Will the expected information from the project be sufficient to allow others to make informed estimates of the technology's potential technical performance, costs, and benefits for any future applications? _____

Will English-language project summaries be available for posting at the CSLF website?

(Please also provide details on how, and how often, these summaries and other project information will be made available.)



Proposed Submission Form (5)

Relevance to CSLF Gaps Analysis

- Suggest that this section be eliminated

Project Nominators

- Suggest that this section be revised
 - Add “*Email notification to the CSLF Secretariat (cslfsecretariat@hq.doe.gov) is an acceptable alternative to a signature.*”



Proposed Submission Form (6)

CSLF Gaps Analysis Checklist

Items in the Gaps Analysis Checklist are not gaps.

- Suggest that this be re-titled as “CSLF Project Elements Checklist”.



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Discussion of Knowledge-Sharing from CSLF-Recognized Projects

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Knowledge-Sharing

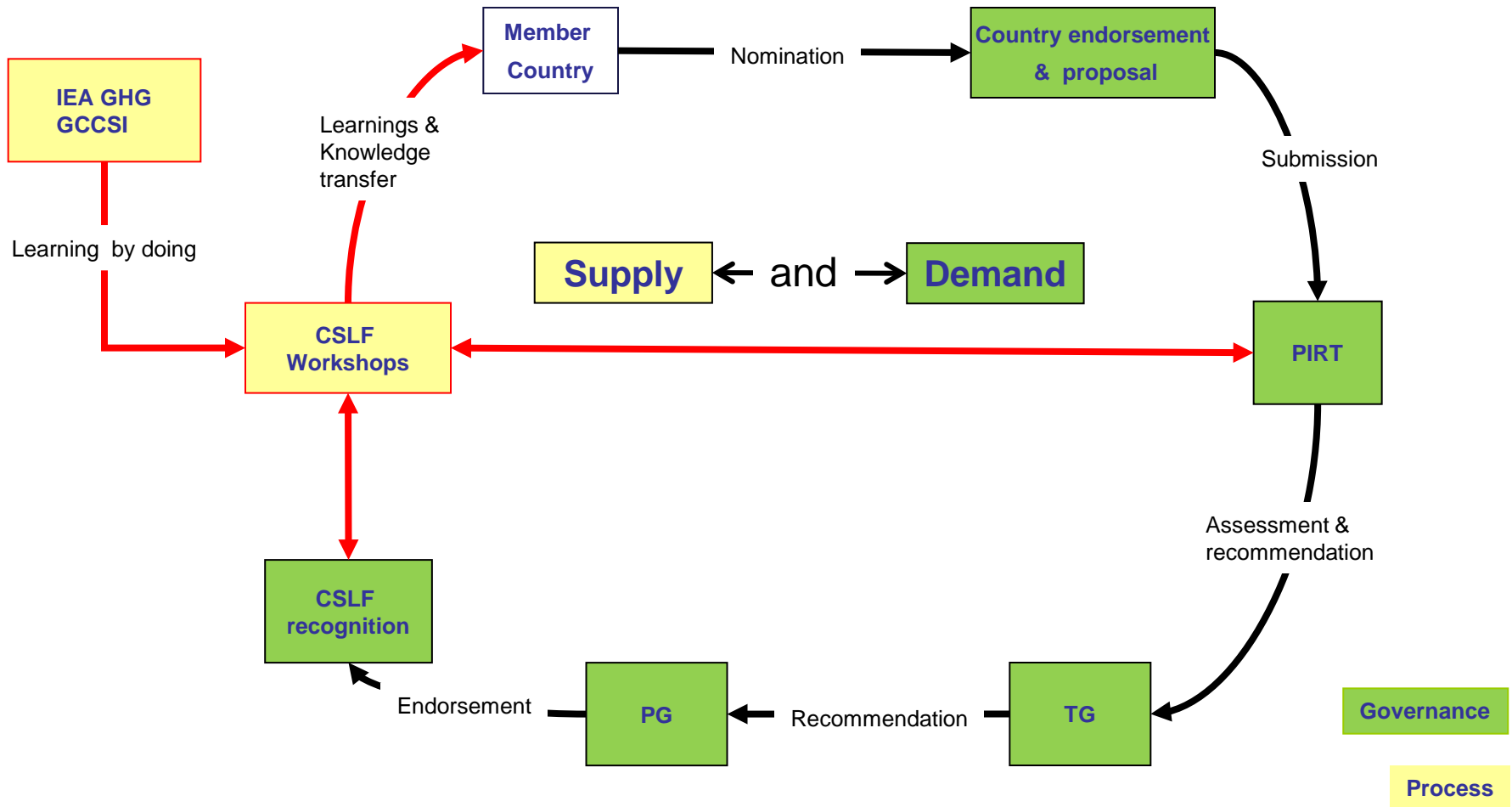
PIRT Mandate

- Appropriate mechanisms for the recognition, assessment and **dissemination of projects and their results** (Terms of Reference)
- **Workshops**
 - Important process in the knowledge sharing cycle
 - Regular feature of CSLF meetings

Could we do this better?



Knowledge-Sharing: Workshops



Adopted: CSLF PIRT Meeting, 03 March 2011, Al Khobar, Saudi Arabia



Knowledge-Sharing: Knowledge Hub (2)

- Knowledge hub
 - Website-co-branded, single platform
 - Co-operation with GCCSI approved (Beijing, 2011)

Active and Completed CSLF Recognized Projects

(click on a link for more information):

○ Active Projects | ● Completed Projects





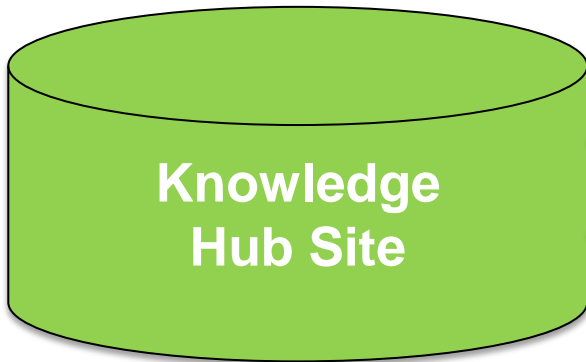
Knowledge Hub = Knowledge Transfer

- The Global CCS Institute has offered to assist the CSLF in its online knowledge sharing approach
- For the CSLF, this will:
 - Improve our ability to disseminate information
 - Link our information into the Institute's knowledge hub
 - Improve our web presence
 - Reduce our operational costs and risks
- The Institute will **not require any fees** for this assistance as it sees it as core to its mission of knowledge sharing



Knowledge Hub- Architecture

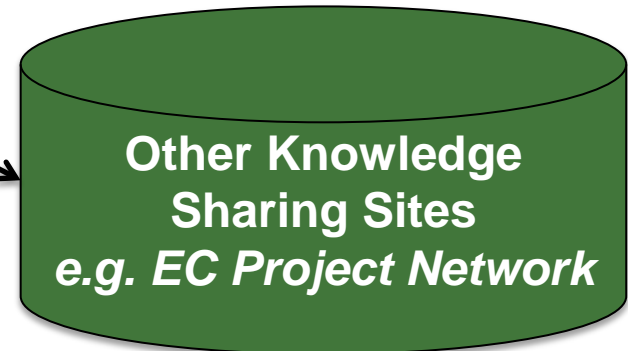
The “go to place” for information on CCS technologies and knowledge sharing



A distinct visual identity for the CSLF, integrated to the hub



Global knowledge sharing platform through complete connectivity





Knowledge Hub- Dissemination




Content converted to web-ready formats

CSLF projects clearly identified



Reports can be translated to multiple languages

Translations

-  Summary report in Chinese (全球碳捕集与封存现状 - 总结报告: 2012)
-  Summary report in Japanese (世界のCCSの動向: 2012年)
-  Summary report in Korean (요약 보고서 - 세계 CCS 동향: 2012)

Topics: [Demonstration Projects](#) [Capture](#) [Storage](#) [Transport](#)



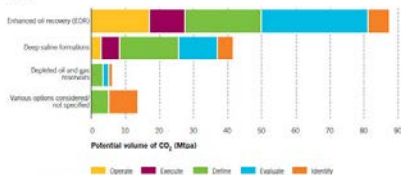
9.1 Introduction

Injecting CO₂ into mature oil fields has been a method used for enhancing oil production for about 40 years. Enhanced oil recovery (EOR) refers to a suite of techniques that can be applied to reservoirs with declining or production to maintain or improve production. Most fields considered for EOR have already undergone primary production – in which the natural reservoir pressure brings the oil to surface – and secondary production methods, usually by injecting water to restore reservoir pressure. Using CO₂ for EOR (CO₂-EOR) has proven successful in rejuvenating oil production in many maturing oil fields and extending their productive lives by decades – the degree of improvement in production is highly dependent on site-specific reservoir characteristics and oil composition, and not all oil fields are amenable to CO₂-EOR.

Of the more than 150 CO₂-EOR projects in operation globally, the considerable majority take place in North America and of these, about half are in a geologic setting known as the Permian Basin in West Texas. There are other commercial CO₂-EOR operations ongoing in Canada, Turkey, and Hungary, and pilot projects scattered even further afield. The historical development of CO₂-EOR has largely been constrained by the availability of inexpensive CO₂ in the US, large naturally occurring accumulations of CO₂ (N-CO₂) are found in geologic reservoirs such as Midway Dome, Doo Canyon Deep, and Sheep Mountain in Colorado and Bravo Dome in New Mexico, sources from which the CO₂ can be produced relatively inexpensively. CO₂ produced by human activities, such as those associated with extraction or burning of fossil fuels or other industrial process, is considered anthropogenic CO₂ (A-CO₂) and is also used for CO₂-EOR. Because A-CO₂ must be separated or captured using physical and chemical processes it is generally more expensive and historically less available than N-CO₂. A-CO₂, however, is now becoming increasingly recognized as an economically viable option as more operators globally are interested in CO₂-EOR and geologic (N-CO₂) sources are not always accessible. In North America more than 6500 km of pipelines transport CO₂ for use in CO₂-EOR operations to produce around 300,000 bbl of oil per day. The expected supply of CO₂ in 2012 for EOR in North America is 66 blpa of which over 25 per cent is A-CO₂. More anthropogenic CO₂ is injected by operating CO₂-EOR projects than by any other storage option for CCS (Figure 65).

This chapter presents the role CO₂-EOR may play in CCS (along with some of the technical and legal aspects of CO₂-EOR relative to carbon storage) and describes the economic, commercial, and regulatory landscape influencing these operations.

FIGURE 65 Potential volume of CO₂ stored by storage type options and Asset Lifecycle stage



Topics: [Enhanced oil recovery \(EOR\)](#)

9.1 CO₂ enhanced oil recovery as CCS up 9.2 Potential role of CO₂-EOR in CCS

About this publication

The Global Status of CCS: 2012



Authors: Global CCS Institute
Published: 10 Oct 2012

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Download

[Download the document \(518 PDP\)](#)



Knowledge Hub- Project Interaction

CSLF-members only platform

- A model to be able to share individual “insights” for CSLF member countries and Projects
- Linking to an online handbook for Project updates
- An private discussion forum for members of CSLF working groups
- Classification of CSLF content to improve information find-ability



Knowledge Hub- Next Steps

1. Agreement from the PIRT to go forward with this model
2. GCCSI to provide a high level web design for approval
3. Further thinking required regarding the list CSLF project data (map view) as the Institute follows a different approach in relation to:
 - Data capture from projects
 - Criteria for project listing
 - Data quality
 - Listing of completed / cancelled projects
4. Classification of “key content” to be prioritized for translation / conversion into other formats
5. Migration of content to the new platform



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Future Roles for PIRT in Technical Group Action Plan and Discussion of PIRT Terms of Reference

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PIRT Terms of Reference

Current Document

- Last revised in March 2010

Review

- Good governance
- Strengthen Terms of Reference

New Terms of Reference

- Potential for revision if required



PIRT Terms of Reference: Background

1. Help CSLF achieve its goals
2. Gaps and priorities identified in the CSLF Technology Roadmap
 - Fourth TRM upcoming
3. Appropriate mechanisms for the recognition, assessment and dissemination of projects and their results

Active and Completed CSLF Recognized Projects
(click on a link for more information):
● Active Projects | ● Completed Projects





PIRT Terms of Reference: Members

- A core group comprising Members of the Technical Group, or as nominated by a CSLF Member country
 - Recommendations should be reached by consensus of a core group
- An ad-hoc group of Stakeholders comprising representatives from CSLF recognized projects



PIRT Terms of Reference: Functions

1. Assess and recommend Projects to TG
2. Identify new Projects
3. Framework for periodically reporting on Projects
4. Review CSLF Project portfolio
 - Identify synergies, complementarities, and gaps
5. Revisions of TRM
6. Foster collaboration for Projects
7. Organize periodic events to facilitate the exchange of experience and views



Future Roles for PIRT: Vision

1. Collection and collation of the best data available
2. Dissemination of this data as widely as possible

Knowledge transfer (ToR)



Accelerate deployment of CCS (CSLF)



Future Roles for PIRT

- CSLF Member Country Reports (Edmonton, 2011)
 - Need a new platform for reporting
- Workshops
 - Modify ToR to reflect importance of workshops
 - Need Workshop Technical report
- CCS Knowledge Hub
 - Single platform for knowledge transfer
 - Project interaction



Australian Government

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Applying geoscience to Australia's most important challenges