Carbon Sequestration leadership forum

18 March 2013 Prepared by CSLF Secretariat www.c/lforum.org



Proposed Updates to CSLF Project Submission Form

The CSLF Project Submission Form was developed in 2007 as a means of obtaining relevant information from sponsors of projects being nominated for CSLF recognition. The focus of the CSLF has now moved toward large-scale CCUS projects and in that regard, some of the information requests in the Project Submission Form are in need of updating. The Secretariat therefore suggests that the following sections of the Project Submission Form be revised:

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.

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.

• 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.

RELEVANCE TO CSLF GAPS ANALYSIS

• <u>Suggest that this section be eliminated</u>. (Note: Gaps Analysis Checklist is an attachment to the Project Submission Form.)

PROJECT NOMINATORS

• <u>Suggest that this section be revised</u> to add a new sentence just before the signature block: "Email notification to the CSLF Secretariat (cslfsecretariat@hq.doe.gov) is an acceptable alternative to a signature."

CSLF GAPS ANALYSIS CHECKLIST

Many of the items in the Gaps Analysis Checklist are not gaps.
 Suggest that this be re-titled as "CSLF Project Elements Checklist".

A copy of the Project Submission Form is attached, with above-referenced sections highlighted in yellow.

OCTOBER 2013 UPDATE:

Changes approved at the April 2013 PIRT meeting are shown in red.

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Revision date: November 2012

Other (please describe):

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CSLF PROJECT SUBMISSION FORM

PROJECT TITLE:
PROJECT LOCATION: Please provide the city (or nearest town), the state/province/region, and the country.
PROJECT GOAL: Please provide a simple and to-the-point explanation in one or two sentences that can be easily understood be someone with no prior knowledge of the project.
PROJECT OBJECTIVES AND ANTICIPATED OUTCOMES: Please provide a breakdown of the Project Goal into the constituent steps comprising the whole. Use bullet points to separate the steps and indicate key anticipated outcomes. Indicate what the project does to facilitat CCS deployment.
PROJECT DESCRIPTION AND RELEVANCE (non-technical): Please provide a concise synopsis of the project (who, what, why, where and how) with easily understandab descriptions of the associated science, technology, and goals. This should include an indication of areas of industrial application and relevance. Target audience: policy makers, press, non-scientific community.
PROJECT DESCRIPTION (technical): Please provide a more detailed technical description of the project with all significant information. Target audience: engineers and scientists.
PROJECT ELEMENTS: Please check all that apply. Pre-combustion CO ₂ Capture Post-combustion CO ₂ Capture Oxyfuel Combustion CO ₂ Capture by Other Means (please describe): CO ₂ Transport CO ₂ Storage with Enhanced Oil Recovery CO ₂ Storage with Enhanced Coal Bed Methane Recovery CO ₂ Storage with Enhanced Natural Gas Recovery CO ₂ Storage with No Resource Recovery CO ₂ Measurement, Monitoring, and Verification of Storage (MMV) Identification of Potential CO ₂ Storage Sites Identification of Target CO ₂ Sources Economic Evaluation Environmental Evaluation Risk Assessment (HSE) Pick Assessment (Financial)

PROJECT TIMELINE:

Please provide the project start date, any milestone events (listed chronologically), and the end date. Use most realistic timeline available. Use official (contract signing, etc.) start date. End date should reflect contractual timeline if possible. Use bullet points.

Has th	e also provide answers to the following questions: ne project already progressed through the early phases of planning, such as (but not exclusively) nenting the project scope, outputs and outcomes?
	ne project management identified the magnitude of resource requirements sufficient to achieve the milestones of the project?
Has th	ne project management identified funding sources for the project?
Please provide outcomes that v	ON AVAILABILITY: a description of the types of information that will made available from the project and the would be achieved by the project. Please also provide information about the relevance of the verall aims of the CSLF and to carbon capture and storage technology in general.
	e also provide answers to the following questions: project management willing to share non-proprietary project information with other CSLF pers?
	the expected information from the project be sufficient to allow others to make informed estimates technology's potential technical performance, costs, and benefits for any future applications?
<mark>(Pleas</mark>	Inglish-language project summaries be available for posting at the CSLF website? we also provide details on how, and how often, these summaries and other project information will de available.)
	E TO CSLF GAPS ANALYSIS: ems that apply in the Attachment.
coordinator. If	ONTACTS: name and contact information (including telephone and e-mail) for the project manager or relevant, please also provide name and contact information (including telephone and e-mail) for will handle any requests for site visits.
	e also provide an answer to the following question: restrictions, issues, or costs will be assumed by any visitors to the project site?
Please provide	JECT PARTICIPANTS: a listing of all entities who are participating in this project. If available, please also include a ructure diagram or otherwise indicate the role of each participating entity.

PROJECT WEBSITES:

Please provide the web address of the main project website, if one exists. If available, please also provide the web addresses of other project-related websites such as workshops, project presentations, etc.

PROJECT NOMINATORS:

In order to formalize and document the relationship with the CSLF, the project representative and at least two
CSLF Members nominating the project must sign the Project Submission Form specifying that relationship
before the project can be considered. Alternatively, project representatives and nominators can email the CSLF
Secretariat (cslfsecretariat@hq.doe.gov) as an alternative to signatures on the Form.

Project Representative (Affiliation)	
CSLF Delegate	CSLF Delegate
(CSLF Member)	(CSLF Member)

CSLF Gaps Analysis Project Elements Checklist

(Please check all of the following technology areas that your project will address.)

GENERAL

Project Scale	
Feasibility	
R&D	
Pilot	
Demonstration	
Commercial	

CAPTURE TECHNOLOGIES

Capture Type		
Pre-combustion capture		
Post-combustion capture		
Oxyfuel combustion		
Industrial applications		
Technology		
Advance the capture technology		
Advance plant design for capture efficiency (eg. boiler, turbine design)		
Improved fuel handling and air separation processes technology		
Improved combustion and flue gas science		
Advance purification and compression technology		
Polygeneration optimization		

TRANSPORT

General	
Tanker Transport	
Pipeline Transport	
Ship transport	
Specifications for impurities from various processes	
Regulations, standards and safety protocols, including response and remediation	

STORAGE AND MONITORING

Storage Complex Type	
Saline formations	
Unconventional reservoirs (e.g basalt, shale)	
Unmineable coal formations	
EOR and/or EGR	
Depleted oil and gas fields	
Storage complex characterization	
CO ₂ -water-rock (or coal) interactions	
Impact of the quality of CO ₂ on storage	
Improved modelling of complex	
Effects of CO ₂ rock/water interactions and induced changes in temperature, pressure and stress on	
permeability, injectivity, migration, trapping and capacity.	
Pressure management (e.g. production of formation water)	
Monitoring the storage complex including risk assessment	
Development of new or improved CO ₂ monitoring technologies	
Improve baseline monitoring and distinguish between natural and anthropogenic CO ₂	
Development of risk minimization/mitigation methods and strategies, including leakage	
Improve well integrity, well abandonment practices, and/or remediation of existing wells	