

Project no.:
308809

Project acronym:
IMPACTS

Project full title:
The impact of the quality of CO₂ on transport and storage behavior

Collaborative large-scale integrating project

FP7 - ENERGY.2012-1-2STAGE

Start date of project: 2013-01-01
Duration: 3 years

D 4.2.1 WEBSITE

Due delivery date: 2013-03-31
Actual delivery date: 2013-06-30

Organisation name of lead participant for this deliverable:
SINTEF ER

Project co-funded by the European Commission within the Seventh Framework Programme (2012-2015)		
Dissemination Level		
PU	Public	x
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential , only for members of the consortium (including the Commission Services)	

Deliverable number:	D 4.2.1
Deliverable name:	WEBSITEF
Work package:	WP 4.2 Project Dissemination
Lead participant:	SINTEF ER

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Abstract
<p>As a part of the running dissemination activities a website for the IMPACTS project has been established. The objective of the website is to be a channel of information to the public domain and where all project information and results that can be made public can be found. The web-address is http://www.sintef.no/IMPACTS. Information about the project like objectives, project overview, activities and partners is given. The website will be continuously updated with project news and project reports and publications with dissemination level public.</p>

IMPACTS WEBSITE

In Annex 1, in the WP 4.2 work package description, the following description is given of task 4.2.2 Website development (SINTEF ER):

A website will be created containing unrestricted information about the IMPACTS project, its progress and results. The website will be continuously updated and linked to existing relevant information networks.

In addition, the section B3.2.1 Dissemination of project results describes the following:

Website: A website will be created containing unrestricted information about the IMPACTS project, its progress and results. The website will be continuously updated and linked to existing relevant information networks.

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The web-address is <http://www.sintef.no/IMPACTS>.

Information about the project like objectives, project overview, activities and partners is given. The website will be continuously updated with project news and project reports and publications with dissemination level public.

The website was launched at 22 January 2013. Some example pages from the website are shown in the figures below.

Figure 1: The homepage of the IMPACTS project as per June 2013.

IMPACTS

The impact of the quality of CO₂ on transport and storage behaviour




Why IMPACTS?

Objectives

The project

Projects with links to IMPACTS

News and events

Partners

Key figures

Contacts

About IMPACTS

IMPACTS is a collaborative project co-funded by the European Commission under the 7th Framework Programme.

The idea of IMPACTS is to close identified knowledge gaps related to transport and storage of CO₂-rich mixtures from various CO₂ sources to enable realisation of safer and more cost-efficient solutions for CCS. IMPACTS is addressing the impact of impurities in captured CO₂, from power plants and other CO₂-intensive industries, on CO₂ transport and storage. This encompasses fluid properties, phase behavior and chemical reactions in the infrastructure complex and at the storage sites. Results from IMPACTS will help to ensure safe and reliable design, construction and operation of CO₂ pipelines and injection equipment, and safe long-term geological storage of CO₂.



1st Newsletter, July 2013

Dear reader,

Below you'll find the first edition of the IMPACTS newsletter. The newsletter informs partners and stakeholders on the developments in the EU FP7 IMPACTS project.

This edition covers the first period in the project: January through June 2013.

In this newsletter you will find an introduction to the project, news & meetings, current activities and, last but not least, publications.

The newsletter is sent to all partners in the project and interested parties outside the project.

You can navigate through this document by clicking on the elements of the content list below.

Contents of this newsletter

- Introduction of the IMPACTS project
- News & Meetings
- Current activities
- Publications available

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The project started on 1 January 2013 and has a duration of three years. It has 12 research performing partners and 5 funding partners. The budget is € 5 573 556, with contribution from EU at € 4 000 764.

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Acknowledgement: The research leading to these results has received funding from the European Community's Seventh Framework Programme (FP7-ENERGY-20121-1-2STAGE) under grant agreement n° 308809 (The IMPACTS project). The authors acknowledge the project partners and the following funding partners for their contributions: Statoil Petroleum AS, Lundin Norway AS, Gas Natural Fenosa, MAN Diesel & Turbo SE and Vattenfall AB.

Figure 2: Explains "Why IMPACTS".

You are here: [IMPACTS](#) / [Why IMPACTS?](#)

Why IMPACTS?	Why IMPACTS?
Objectives	Carbon Capture and Storage (CCS) is an important element of the SET Plan, including the CCS European Industrial Initiative Plan 2010–2012 (EII) and Roadmap for CCS deployment.
The project	IMPACTS will perform research and development of the impact of impurities in captured CO ₂ , from power plants and other CO ₂ -intensive industries, on CO ₂ transport and storage. This encompasses fluid properties, phase behaviour and chemical reactions in the infrastructure complex and at the storage sites. These issues are paramount for ensuring safe and efficient transport and storage solutions for CCS, since capture of CO ₂ without safe and efficient transport and storage offers no merit.
Projects with links to IMPACTS	IMPACTS aims at generating fundamental knowledge and at transforming this knowledge into innovations, standardization and exploitation of results within CO ₂ transport and storage. A consortium with excellent stakeholders along the innovation chain has been established.
News and events	IMPACTS also responds to the overall objective of the Energy Theme in FP7 by contributing to a more sustainable energy system, less reliance on imported fuels and thus contributing to safety of supply in a carbon restrained worldwhilst increasing European competitiveness. CCS is seen as important to realize these objectives and all the technical elements in the CCS chain.
Partners	
Key figures	
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Concept

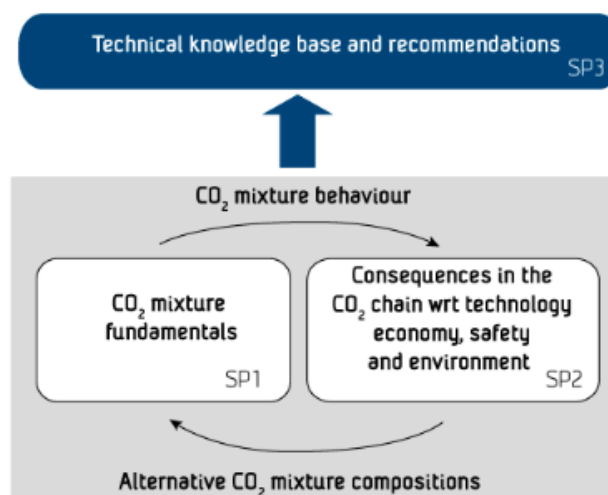
The idea of IMPACTS is to close identified knowledge gaps related to transport and storage of CO₂-rich mixtures from various CO₂ sources to enable realisation of safer and more cost-efficient solutions for CCS.

The main problems of impurities in CO₂ transport and storage are:

- Lack of experimental data and verified property models for mixtures of CO₂ and impurities related to CO₂ capture
- Understanding the effect of impurities on materials, equipment, processes, operation and safety procedures
- Understanding how impurities will affect the storage integrity

CO₂ has been transported for the purpose of enhanced oil or gas recovery for decades, particularly in the USA. Further, several CCS chains are currently in operation and more are planned e.g. Weyburn, Sleipner, Rønde, In-Salah and Snøhvit). Thus, much knowledge exists on the topic of CO₂ transport and storage. Nevertheless, during the last few years, numerous research projects on CCS conducted by research and industry actors and other relevant work (CLSF, DNV, national projects) have concluded that there is a need to build new knowledge on the fundamental properties of CO₂ mixtures with impurities and their impact on the CCS chain integrity and economics. Further, the 2010 CLSF Technology Roadmap sets forth these issues as priority activities to enable deployment of CCS.

The concept of IMPACTS is illustrated in the figure below. In SP1, the fundamental properties of relevant CO₂ mixtures will be investigated to provide new knowledge for CO₂ transport and injection regarding thermo dynamics, fluid dynamics and corrosion. Large scale experiments will produce data on the effect of impurities on CO₂ transport and storage. These results will be used to assess the techno-economic impacts and safety issues on the C2 chain. The technical knowledge base will be developed in SP3.



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Published February 21, 2013

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Figure 3: The Project structure

You are here: IMPACTS / The project

Why IMPACTS?	<h3>The project</h3> <p>The IMPACTS project structure is developed to support the proposed strategy and to ensure achieving the project objectives. IMPACTS comprises three R&D subprojects (SP1–SP3) and 11 subordinated work packages (WP's). In addition, IMPACTS includes a sub project dedicated to overall project co-ordination, operational management including legal, financial and administrative issues, and dissemination (SP4).</p> <p>This IMPACTS objectives will be achieved by following the IMPACTS project concept:</p> <ol style="list-style-type: none"> 1. Quantifying the fundamental properties and behaviour of relevant CO₂ mixtures (SP1) 2. Revealing the impacts of relevant impurities in the CO₂ stream on the design and operation of the transport and storage infrastructure considering integrity of the whole chain (SP2) 3. Providing recommendations for optimized CO₂ quality (SP3) 4. Disseminating the results and making a plan for exploitation (SP4, SP3)
Objectives	
▼ The project	
Fundamental properties of CO ₂ mixtures - SP1	
Techno-economic assessment of CO ₂ chains - SP2	
Synthesis and recommendations - SP3	
IMPACTS project management and dissemination - SP4	
Projects with links to IMPACTS	
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Fundamental properties of CO₂ mixtures SP1

- Typical CO₂ mixtures and framework for characterisation WP1.1
- CO₂ mixtures thermodynamics WP1.2
- Transient fluid dynamics of CO₂ mixtures WP1.3
- Corrosion potentials in CO₂ infrastructure WP1.4
- Chemical and physical effects of impurities on CO₂ storage WP1.5

Techno-economic assessment of CO₂ chains SP2

- Material and operational effects of impurities in CO₂ streams WP2.1
- Techno-economic analyses of impacts of CO₂ quality WP2.2
- Risk assessment WP2.3

Synthesis and recommendations SP3

- Overall assessment of impact of CO₂ quality WP3.1
- Technical knowledge base for CO₂ transport and storage WP3.2
- Implementation of results WP3.3

IMPACTS project management dissemination and facilitation of international cooperation SP4

IMPACTS work breakdown structure and information flow



Mona J. Melnvik (IMPACTS Coordinator) and Svend Tollak Munkejord demonstrating the CO₂ mixture phase equilibrium cell at SINTEF Energy Research. (Photo: Thor Nielsen/SINTEF)

Figure 4: The NEWS page.

You are here: [IMPACTS / News and events](#)

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- [TCCS-7, IMPACTS was represented with both a poster and a presentation by Astrid Lillestråle.](#)

Left: Mona J. Melnvik, Astrid Lillestråle and Nils A. Røkke - Right: Astrid Lillestråle

- [TCCS-7 4 - 6 June 2013 - conference website](#)
- [Workshop and Executive Board meeting 4 June 2013](#)
- [Kick-off meeting 22 January 2013](#)

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Published August 12, 2013

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