



Smart CO₂ Transformation (SCOT) Invitation to Tender

The University of Sheffield wishes to invite tenders for the analysis of the electricity market in European members' states in 2010 and projected to 2030, specifically including the 4 geographical regions represented in SCOT (Belgium, France, Netherlands and UK).

Closing Date: 14th February 2014.

Background of Project

Reducing CO₂, protecting the environment and our resources, while at the same time reducing dependency on raw materials are major societal challenges. In this context, the EU has adopted ambitious goals to reduce greenhouse gas emissions to 80-95% below 1990 levels by 2050. So far, most attention from policy makers and industry has been paid to Carbon Capture and Storage (CCS) which intends to concentrate CO₂ emitted from large industrial sites and stores it into geological sites.

SCOT is the first ever European initiative in the field of CO₂ recycling.

The consortium gathers four regions (Belgium France, Netherlands and UK) which are strongly committed and already well advanced in this emerging area of CO₂ recycling. Through a stronger coordination of their efforts, the SCOT project will enable us to:

- Define a Strategic European Research Agenda aimed at improving the technico-economic performance of emerging CO₂ transformation technologies and at developing new breakthrough solutions and market applications;
- Attract additional EU clusters, regions and investors to participate to multi-disciplinary research programmes and other collaborative actions defined in a Joint Action Plan;
- Propose structural policy measures to favour the transition to a new European society based on the paradigm of "CO₂-as-a-resource", thereby significantly improving the EU's
- Overall competitive position and environmental performance on the international scene.

The University of Sheffield is leading on Work Package 2 Socio-Economic Analysis.

Since the area of CO₂ recycling is at an emerging stage, some specific socio-economic studies at European level will be needed to get more detailed information on the expected availability and price of key inputs (in particular carbon-free electricity), on the market potential of CO₂ recycled products, on the regulatory constraints, etc. These analyses (WP2) will be developed according to the common needs of the SCOT clusters, and will rely on readily available data as much as possible.

Analysis of the European electricity supply and demand market

This tender is issued for the production of a report Analysing the electricity markets in the present day and projected to 2030 in the 4 regions and across European member states. In particular the

report must include:

- An overview of European electricity markets
- Analysis of adverse power flow ratios across European member states
- Analysis of production capacity vs. consumption,
- Proportion of production from the various carbon-free sources (wind, PV, waves, hydraulic, biomass, nuclear, etc.),
- potential production which exceeds demand (during peak production periods from intermittent sources like wind, PV or waves),
- Analysis of renewable capabilities mapped onto geographical locations price (depending on the source and depending on the period of consumption vs. supply peaks), etc.

Performance Measures

Deliverable is a report containing detailed analysis of the European electricity supply and demand market.

This will be submitted in a MS Word document, including all references and data sources. All figures and tables should be embedded in the text and fully referenced. The document and copyright will become the property of the SCOT Consortium.

The content will be used as evidential material which will form a section of the SCOT Joint Action Plan.

Service Timescales

29 th January 2014	Tender document issued
14 th February 2014	Deadline for detailed tender submission
19 th February 2014	Successful tender bid announced
11 th April 2014	Draft report review
1 st May 2014	Submission of final report
15 th May 2014	Official sign off of final report

Resources

Tenders are invited in the region of €20,000 for successful submission of the document.
Tenders will be assessed on their technical merit (60%) and value for money (40%)

Contract Management and Performance

Tenders should include:

- a detailed methodology for data sourcing and analysis
- Gant Chart showing tender timeline
- Financial costing
- Evidence of risk management
- Track record of organisation

Regular reviews and updates will be carried out via video/tele conferencing.

Instructions to Tenderers

Completed Tenders must be received no later than 12noon on Friday 14th February 2014 to the following address:

Miss Katherine Powell
University of Sheffield
Centre for Energy, Environment and Sustainability (CEES)
Interdisciplinary Centre of the Social Sciences (ICOSS)
219 Portobello
Sheffield,
S1 4DP

Any query in connection with the Invitation to Tender package, prior to the "Tender Due Date" should be submitted to Katherine Powell, Project Support Officer at k.j.powell@sheffield.ac.uk (Tel: 0114 222 8368). At the University's discretion the nature of the query and the University's response will be notified to all Tenderers without disclosure of the initiator.