

Advisory Forum meeting 16 June 2011 Minutes of meeting

Contact:

simon.bennett@ec.europa.eu

version 2, 13 July 2011

European CO₂ Capture and Storage (CCS) Demonstration Project Network

Minutes of Meeting Advisory Forum, 16 June 2011

Section 1: Welcome and Introductory Statements

- The meeting was opened by **Heinz Hilbrecht**, Director, DG Energy. He stressed that the CCS Project Network is an important tool for the development of CCS, and therefore DG Energy places a good deal of value on its success in helping to facilitate European demonstration projects. Having a reliable understanding of the potential role of CCS is important to a number of European energy initiatives, including the Roadmap 2050, the European Infrastructure Package and the Strategic Energy Technologies Plan. Mr Hilbrecht referred to the excellent levels of engagement of projects at CCS Project Network meetings, for example the meeting the previous week in Ponferrada, Spain.
- The EC considers the Advisory Forum to be an essential part of the Network's structure. It will ensure that the Network can deliver the right kinds of information to match the needs of the whole CCS community. Each of the stakeholder groups present, said Mr Hilbrecht, has expertise from which Europe's first-mover CCS projects can benefit, and each should be a recipient of the knowledge generated by these first-mover projects to help accelerate the development of CCS in Europe and worldwide.
- The Zero Emissions Platform (ZEP) as Co-Chair of the Advisory Forum, was thanked for its help with organising the meeting and ensuring strong participation. The participation of the CCS Project Network Steering Committee, the Global CCS Institute (GCCSI), the IEA, Member State (MS) and all other participants was warmly welcomed.
- After the discussion questions were introduced by Mr Hilbrecht, the two Co-Chairs gave their introductory statements.
- Graeme Sweeney (Shell, and Chairman of ZEP) reminded the meeting that the most important objective of the Network is project delivery and that knowledge sharing, because it can support efficient and timely project implementation, is now 'mission critical'. He commented that the initial phase of the Network has been positive and has taken on board the proposals of stakeholders, such as ZEP, for knowledge sharing. He proposed that now is the time to broaden the horizons of the Network, which is likely to enlarge to include more members in coming years. He urged the Advisory Forum to conclude with a set of a few recommendations for the Steering Committee of the Network to implement.
- **Jan Panek** (Head of Unit, DG Energy), stated that the Network is a body that reinforces the individual efforts of projects and that the Advisory Forum is an opportunity for stakeholders to say, no matter how informally, what the Network should be delivering. In terms of delivery, he restated the EC's objective for the Network, which is that it is able to translate the experiences of projects into advice



Advisory Forum meeting 16 June 2011 Minutes of meeting

Contact:

simon.bennett@ec.europa.eu

version 2, 13 July 2011

for undecided project proponents as well as useful expertise for NGOs and other stakeholders such as researchers and policymakers.

- He reviewed the recommendations of the Advisory Forum 2010, which were made available in advance of the meeting along with the actions taken by the Network to address them. He highlighted the meetings in Brindisi (with US Regional Partnership storage project promoters), in Lacq (with storage and oxyfuel experts from pilot projects) and in Rotterdam (with the public and stakeholders) as examples of how the Network had responded to some of last year's recommendations.
- He stressed the need for the Advisory Forum's conclusions to be a compact list of well-justified calls and demands.
- **Simon Bennett** (DG Energy) gave a brief overview of the purpose of the Network. He then discussed the knowledge dissemination meeting that had been held on 10 May in Rotterdam in conjunction with the GCCSI's member's meeting¹. After noting that the meeting had seen the launch of the Network's three thematic reports on permitting, risk management and public engagement², and that 225 people had been in attendance, he provided the following feedback as received from delegates:
 - o Collaborating with another event made it convenient and well-attended
 - The project case studies made it different from the usual conferences on the 'circuit'
 - o The networking opportunities were great
 - o There was enough detail for the audience to understand the challenges and what is being done to tackle them in Europe

These comments have been taken on board for the planning for next year's dissemination activities. In addition, the ideas of maximising participation from local communities and ensuring good media coverage are accepted. In response, **Bob Pegler** (GCCSI) remarked that the back-to-back events had worked well, especially with both meetings structured around project experiences. He also proposed that GCCSI could hold a workshop on CO2 behaviour in saline groundwater back-to-back with the next Network meeting in September to allow the current work of the Network on storage to be disseminated and discussed amongst a wider group of experts.

• Jan Panek concluded the introductory session by asking the participants for feedback on the dissemination activities undertaken so far by the Network. Without additional specific interventions from participants, the consensus in the room was that the event in Rotterdam had been successful and that the work of the Network in 2010/11 had generally addressed the recommendations of last year's Advisory Forum.

Section 2: The evolving outlook for CCS

- Graeme Sweeney introduced the first discussion topic:
 - What has changed in the outlook for CCS over the past year and how can the CCS Project Network respond to these changes?

¹ http://ccsnetwork.eu/index.php?p=demonstrationProjectNetwork2011

² http://ccsnetwork.eu/index.php?p=publications#Network%20Document



Advisory Forum meeting 16 June 2011 Minutes of meeting

Contact:

simon.bennett@ec.europa.eu

version 2, 13 July 2011

His overall impression is that whereas last year the glass was half empty, this year it is half full. The demonstration programmes across Europe is proceeding, but the current numbers of projects reaching Final Investment Decisions for the period 2015-2017 are on the edge of what would be sufficient for deployment of CCS after 2020. Of the 10-12 demonstration projects that ZEP's analysis recommended in 2008, 4-6 are currently proceeding on the necessary timescale. He congratulated the European Commission (EC) on putting in place funding and knowledge sharing via the Network, but stressed that to deliver demonstration projects there is still much to do to cover the funding gaps. With regard to public awareness and acceptance he reminded the participants that onshore storage has reduced costs compared to offshore storage, and there is a danger, following political decisions in DE and NL, that onshore storage will not be available for CCS in MS that have need of it for geographical reasons and due to their reliance on fossil fuels.

- **Jacques Kiewiet** (Air Liquide project) asked how Graeme's conclusion about the 4-6 projects was reached. **Graeme Sweeney** responded that this is how he viewed the likelihood of the projects closing all the necessary gaps in financing, permitting and reservoir management. **Jacques Kiewiet** asked how that number can be increased. **Graeme Sweeney** put the question to the audience and stressed the importance of a second wave of projects becoming operational in Europe by 2020.
- **Bob Pegler** gave his opinion that it would be difficult to imagine many more than 8-12 projects operational globally in the 2015-17 timeframe, and that the key challenge to increase knowledge about CCS operation is to connect up projects in a global sense.
- Hans Knippels (Rotterdam Climate Initiative, NL representative) said that he considers the major development of the last year to be the ability of a lack of public support to stop projects such as Barendrecht. Niels Peter Christensen (Vattenfall) suggested that this may have forced nearly all of the cited 4-6 projects to be those using offshore storage solutions. Graeme Sweeney said that he considers at least one of the executable projects to be onshore.
- **David Love** (Alstom, Drax project) said that he considers the outlook to be les pessimistic but that a key obstacle is obtaining money in the near term to complete FEED studies. He would appreciate a knowledge sharing exercise on this subject and enquired about the availability of unspent EEPR funds for this. **Kai Tullius** (DG Energy) confirmed that money is not available as only projects evaluated and awarded co-financing by the end of 2010 are eligible for stimulus money. He proceeded to remind delegates that the ultimate goal is CCS deployment. Fewer operational demonstration projects may not of itself be problematic if we are still able to learn enough from them to achieve the real policy goal of viable CCS after 2020. But, he asked, could it be enough and what do we need to learn?
- Graeme Sweeney suggested that a smaller set of projects is unlikely to cover the full range of technology combinations and that, in addition to pressing on with regulation and funding for CCS, the stakeholder community needs to be able to leverage global experience. Pietro Barbucci (Enel, supported this opinion and added that while global experiences could be used to make commercial choices, a smaller number of projects in Europe would affect confidence in CCS in Europe and this should be avoided if possible.



Advisory Forum meeting 16 June 2011 Minutes of meeting

Contact:

simon.bennett@ec.europa.eu

version 2, 13 July 2011

- Jacques Kiewiet raised the issue of CO2 infrastructure and the importance of building infrastructure in the main industrial basins that is fit for future growth of CCS. The number of demonstration projects is important, he said, because it corresponds to the number of seeds for infrastructure. Graeme Sweeney agreed, and added that offshore storage will require more resources for infrastructure development. Bob Pegler made the point that the transition from demonstration to commercialisation is likely to be quite a long one, and that infrastructure development is one of the key bridging activities.
- **Lionel Perrette** (Ministry of Ecology, Energy, Sustainable Development and the Sea, France) stressed that it will be important to use knowledge sharing to increase the number of projects that are reaching maturity across Europe. He asked whether projects that have applied for NER 300 funding can join the Network and asked whether the Network could support discussion forums for competent authorities.
- Simon Bennett stressed that the Network is open to membership for all projects meeting the qualification criteria³; it is not related to EU funding schemes. Bringing non-member projects into the discussions on relevant topics is recommended practice for the Network. He highlighted three existing bodies that connect competent authorities to a greater or lesser extent: the Information Exchange Group convened under the CCS Directive; the network of environmental regulators' CCS group; and the Network of CCS Regions. Internationally, the IEA, CSLF and CEM bring together national authorities to discuss CCS. The challenge, he stated is to use the forums that are most relevant to project delivery and optimise their interaction with the Network to create a 2-way flow of information on project permitting and regulation.
- Steinar Thon (DNV) gave a presentation of the status of the Network members and their progress since the last Advisory Forum. All projects have made progress with obtaining permits and storage site exploration. A number of pilot plants are now operational, providing vital information for the final demonstration plant designs⁴.

Section 3: Knowledge sharing in a global context

• Graeme Sweeney presented a ZEP view on the desirability of, and the identified needs of, a global knowledge sharing framework to connect the 'leading edge' projects (20 of which can be identified around the globe today. One rationale is that those deciding on whether they consider CCS to be a commercial proposition in 2020 will ask if it is a *globally* deployable technology. Therefore, CCS cannot be considered on a region-by-region basis. The ZEP view is that any projects with whom the Network members might interact internationally should be able to commit to a minimum level of knowledge sharing equivalent to that of the Network, and that this would be best ensured by funding governments in the US, Canada and Australia. He listed the current knowledge sharing initiatives for CCS demonstration projects in other parts of the world and internationally (e.g. GCCSI) and noted that these do not currently meet the Network's standard. He gave recognition to the fact that most projects do not have the resources to engage in

³http://ccsnetwork.eu/uploads/publications/european_ccs_project_network_qualification_criteria_final_20100531.pdf

⁴ Presentations uploaded to http://www.ccsnetwork.eu/index.php?p=networkAdvisoryForum2011.



Advisory Forum meeting 16 June 2011 Minutes of meeting

Contact:

simon.bennett@ec.europa.eu

version 2, 13 July 2011

extensive and ambitious knowledge sharing initiatives and may require some additional funds if there would be, as he thinks, a consequent good outcome for the technology and the global citizenry. A key part of a successful knowledge sharing initiative involving the major leading edge projects worldwide would be: infrequent face-to-face meetings; professional facilitation (not one of the existing actors in the space on their own, however); inclusion of governments, with a possible initiating role played by the EC.

- Jan Panek introduced the second discussion topic:
 - o How can the benefits of international knowledge sharing be realised most effectively?
- Francois Giger (EdF, ZEP Task Force Policy & Regulation) reflected that the problem of low public awareness and acceptance is a problem in Europe, which is a densely populated continent. These types of problems are not conducive to knowledge sharing between regions of the world as the problems are specific to Europe. Jan Panek agreed that there are topics on which knowledge sharing is more local and that the Network should not be loaded with activities outside its key area of focus (large-scale CCS demonstration). He referred to the positive meeting that was held with US project participants in Brindisi, regretting the lack, so far, of reciprocal invitations for the Network to attend North American events, especially if there is a greater interest in Europe on the subject of EOR.
- Continuing the discussion, **Philip Ringrose** (Statoil) gave his opinion that the US Regional Partnerships are unclear about the best way to interact with projects in Europe but are keen to do so. This is an obvious opportunity for the Network to take a lead. He said that the best way to do this would be to focus on bottlenecks and identify projects that have specific relevant experience, for instance a project in Illinois which has the full support of the local community despite the fact that it is directly above the storage site. **Jan Panek** expressed surprise that US projects do not have a good understanding of the activities in Europe, considering the extensive contact and invitations that has been made between the EC and the US DOE. Nevertheless he supported the idea of incorporating in the Network's outreach a project-project approach, going beyond the contacts between administrations on both sides of the Atlantic.
- Luke Warren (CCSA) said that the past year has taught us more about the key outcomes for CCS looking ahead. For this reason he recommended more focus on CCS in industrial sectors and non-coal fired power generation, which will both need CCS to be available to reduce their emissions around 2030. Collaboration with these types of projects in Europe and worldwide, and tailoring of messages to suit this audience are recommended.
- Tone Skogen (Ministry of Petroleum, Norway) asked what role governments might play in such a framework. She noted that a small number of governments have been collaborating on CCS as frontrunners for a number of years and they have similar goals to those of the industry. The cooperations that exist between governments could be leveraged to support projects and share knowledge to overcome bottlenecks, but new networks of governments are probably not required.
- **Bob Pegler** described the GCCSI's approach as that of encouraging a network of networks, between which it could provide the 'global glue'. He commented that



Advisory Forum meeting 16 June 2011 Minutes of meeting

Contact:

simon.bennett@ec.europa.eu

version 2, 13 July 2011

the success of the Network has been the provision by the EC of the resource to coordinate and support knowledge sharing.

- **Graeme Sweeney** suggested that a 'network of networks' might be too grand an ambition at present, especially if there were only a limited number of projects that needed to be involved. He proposed starting with a small number of projects, a modest resource to fund the facilitation, and the tacit support of governments rather than seeking a G20-level initiative.
- Jan Panek raised the question of how emergent economies such as China and India could be engaged and whether the IEA's initiatives with these countries would benefit from interaction with the Network. Wolfgang Heidug (IEA) mentioned the specific outreach programme that the IEA has towards non-OECD countries and added Indonesia and Brazil to the list of important non-OECD countries. He also mentioned a forthcoming IEA Working Group on Fossil Fuels meeting in September in Beijing, which will involve approximately 6 demonstration projects from Europe, China and the US⁵. He said he would consider further the possible links with the Network.

Section 4: Recommendations for knowledge sharing with CCS stakeholders

- **Jan Panek** introduced two presentations from key stakeholder groups: non-member projects at an earlier stage of development; and MS governments.
- Talking from the perspective of a non-member project and one that is based on hydrogen production not power generation, **Jacque Kiewiet** cited the following as potentially valuable areas for knowledge sharing:
 - o The complexity of a project with many partners, each with their own business models
 - o Interface management
 - Public engagement, especially with respect to managing the perception of CCS as a purely coal-fired power clean-up technology
 - o Regulatory framework & Permitting process (e.g. London protocol, liabilities, Industrial Emissions Directive for liquid CO₂)
- Talking from the perspective of a MS that is making public funds available for a CCS demonstration project, **Claudia Tomescu**⁶ (Romanian Institute for Studies and Power Engineering) expressed her hope that the Romanian Getica project will join the Network as they see the value in membership. She said that the Network could help inform meetings that Romania would like to encourage at institutional, educational, corporate, financial and public levels in countries supporting CCS demonstration. The categories of knowledge sharing that she felt would be most useful for knowledge sharing would be: project governance; CO₂ monitoring; ETS monitoring practices; and engineering design standards and guidelines.
- **Martina Doppelhammer** (DG CLIMA) warned the audience not to provide and discuss details of NER 300 proposals during the competitive process.

_

⁵ This is part of the IEA's knowledge sharing initiative for which 6 large-scale projects such as Porto Tolle and Mongstad are currently signing a confidentiality agreement with the IEA and which has so far held a couple of meetings in 2011.

⁶ Standing in for Cristiana Ion (Romanian Ministry of Economics)



Advisory Forum meeting 16 June 2011 Minutes of meeting

Contact:

simon.bennett@ec.europa.eu

version 2, 13 July 2011

- Graeme Sweeney introduced the second discussion topic:
 - o What recommendations should be made to the CCS Project Network Steering Committee for work in the coming 12-18 months?
- **Andreas Ehinger** (IFP Energies Nouvelles, CCS EERA) raised the issue of providing feedback from the Network projects to the R&D community.
- **Kris Piessens** (CGS Europe, Geological Survey of Belgium) agreed, and stressed the need to link the demonstration projects and the research projects on CCS in Europe.
- Ann Boon (Australian Department of Resources, Energy and Tourism) reminded the delegates that the Clean Energy Ministerial recommendations in 2011 included strong references to the importance of knowledge sharing and ratification of the London Protocol. There is a genuine need for governments to deliver on this to ensure that projects proceed, and the Network could make a contribution to the rationale for governmental action.
- Luke Warren raised two topics that that the Steering Committee could consider for sharing experiences and approaches in different MS. He gave his opinion that both MS funding of projects and management of storage liabilities, including the fully understanding the risk profile, are important subjects for work in the next 12 months.
- **Bob Pegler** and **Dominique Copin** (**Total**) highlighted the importance of further work on storage, citing the efforts required to acquire robust data on storage site characterisation and capacities. Better cooperation between the parties involved in delivering this work in Europe, and worldwide, is required.
- Louise Barr (UK Department for Energy and Climate Change) stated that knowledge sharing is an integral part of the UK CCS demonstration programme and will be integral to CCS. She asked whether the Knowledge Sharing Protocol and Qualification Criteria should be reviewed to reflect the changing CCS landscape, for example with the emergence of NER 300 candidate projects. This review might also consider whether other stakeholders, such as financiers and regulators, might usefully be represented in the Network. Simon Bennett stated that the Network was not established to be an all-encompassing discussion forum for CCS stakeholders, but a targeted action for learning from and supporting early-mover demonstration projects. A key strength of the Network to date has been its focused nature and manageable number of participants. Nevertheless, he recognised the importance of bringing stakeholder groups such as non-member projects, financiers and regulators into discussions wherever relevant and possible. Kristoffer Hetland (Statoil, ZEP Task Force Policy & Regulation) suggested that specific thematic workshops with broad participation could address this.
- Michel Gibbons (2Co Energy, Don Valley project) made the point that expansion of the Network or changes to the protocol or secretariat would change the nature of the meetings of the Network. The Network has so far been a success because the members wish to accelerate their projects themselves. Changing the qualification criteria or increasing the frequency of resource-intensive knowledge sharing activities could reduce the capacities of the projects to move ahead. Jan Panek agreed that the Network should not be burdened with discussion of issues that it either does not have a unique insight into, or which do not directly relate to progression of CCS demonstration. Following a recommendation from Luke



Advisory Forum meeting 16 June 2011 Minutes of meeting

Contact:

simon.bennett@ec.europa.eu

version 2, 13 July 2011

Warren to look at smart approaches to CO2 infrastructure roll-out, he cited CO₂ infrastructure as an area where the Network is unlikely to have a unique insight.

- **Derek Taylor** (GCCSI) commented that the research community could be very responsive to any needs for technical or social investigation that are identified by the Network. He said that it is important that the Network makes it known to the research community that the research community is able to interact with the Network in this way. **Andreas Ehinger** requested that findings are reported in a sufficiently precise way for the research community to make use of them. **Jan Panek** suggested that each of the Network's thematic reports might in future include a section that lists in a precise way the recommendations for detailed study on the theme in question.
- **Graeme Sweeney** wrapped up the discussion by highlighting a number of key themes that had emerged. He pointed to the potential importance of the Network's activities for the de-risking of the storage elements of the CCS chain, and for bringing together the international players in CCS demonstration.

Section 5: Conclusions and recommendations

Simon Bennett presented a series of conclusions that the EC drew from the meeting for the agreement of participants. There was broad agreement, with some small adjustments to several points of detail.

Conclusions and recommendations:

- The recommendations of last year's Advisory Forum were satisfactorily implemented, but this is not enough to secure successful projects and this is the first priority of the Network.
- Make a **contribution to the knowledge base** on the following relevant issues during the next year, either through thematic reports or targeted workshops/working groups involving relevant external partners:
 - Public engagement, including managing public perception for non-coal fired power projects (industrial and gas projects)
 - o Project financing and alternate sources of funding, if the Network has something unique to contribute
 - o Cross-border CO₂ transport and CO₂ infrastructure, if the Network has something unique to contribute
- Specific focus on **storage regulation and de-risking** via targeted workshops/working groups involving relevant external partners, and complementing the existing storage theme within the Network:
 - Monitoring of CO₂, and design standards and best practices and guidelines
 - o Baseline surveys
 - o Proving of reservoirs, including site selection, injectivity and capacity
 - o Behaviour of injected CO₂
- Deliver the **international engagement objective** of the Network (to increase the European knowledge base on CCS demonstration, to generate confidence for CCS, and to inform commercial choices in Europe and worldwide):



Advisory Forum meeting 16 June 2011 Minutes of meeting

Contact:

simon.bennett@ec.europa.eu

version 2, 13 July 2011

- o Focus on specific bottlenecks: e.g. technical, public perception, EOR
- o Create links with specific projects that have relevant experience in these areas
- Target any public outputs towards specific regions/sectors where CCS needs to be deployed in a global context
- Work to consolidate activities by other international bodies (GCCSI, IEA, CSLF, NSBTF) to kick off a conversation between the ~20 major demos globally and their governments
 - EC, GCCSI and ZEP to set up a working group to explore options
- o SC to consider the resources necessary for extending knowledge sharing outside Europe
- Improve the interaction with identified stakeholder groups:
 - o The research community
 - Incorporate research needs/recommendations into Network outputs, and continue interaction with the EII
 - o Improve interaction with projects that are not yet members
 - Especially via thematic workshops
 - O Commence discussions with existing groupings of bodies that will be crucial to project implementation, e.g. competent authorities, civil society bodies, to explore whether the level of knowledge sharing between relevant stakeholders at a regional/local is sufficient
 - IEG, environmental regulators network and Network of CCS Regions
 - As part of the ongoing review process, consider the adequacy of the Knowledge Sharing Protocol and Membership Criteria to meet all of the recommendations of the Advisory Forum

The recommendations will be taken up by the Steering Committee of the CCS Project Network at their next meeting in the afternoon of 16 June 2011 and a provisional plan for addressing them should be reported before the next Network sharing event on 28/29 September 2011. It is expected that the recommendations will be adopted wherever feasible and practicable.



Advisory Forum meeting 16 June 2011 Minutes of meeting Contact:

simon.bennett@ec.europa.eu

Participant List

Stakeholder Group	Surname	First name	Representing	Organisation
Project (non-member)	Anderson	Kirsty	Longannet Project	Scottish Power
Project (non-member)	Baglin	Nicolas	ULCOS Project	ArcelorMittal
Project (member)	Barbucci	Pietro	Porto Tolle Project	Enel
Member State	Barr	Louise	UK	Office of Carbon Capture and Storage
EC	Bennett	Simon	EC	DG Energy, European Commission
Utility	Bergmann	Heinz	ZEP Advisory Council	RWE
EC	Blake	Lara	EC	DG Energy, European Commission
Non-EU government	Boon	Ann	Australia	Department of Resources, Energy and Tourism
Project (member)	Caramuscio	Pompilio	Porto Tolle Project	Enel
ZEP (technology)	Christensen	Niels Peter	ZEP Task Force Technology	Vattenfall
Project (non-member)	Copin	Dominique	Lacq Project	Total
EC	Doppelhammer	Martina	EC	DG CLIMA, European Commission
ZEP (communications)	Drosin	Eric	ZEP Task Force Public Communication	ZEP
R&D	Ehinger	Andreas	CCS EERA	IFP Energies Nouvelles
Project (member)	Fernandez	Ramon	Compostilla Project, Project Network Steering Committee	Endesa
Project (member)	Gibbons	Michael	Don Valley Project	2Co Energy
ZEP (policy)	Giger	Francois	ZEP Task Force Policy & Regulation	EDF
Project (non-member)	Hanstock	David	Lynemouth and Eston Grange Projects	Progressive Energy
International Organisation	Heidug	Wolfgang	International Energy Agency	IEA
Project (member)	Henry	Xavier	ROAD Rotterdam Project	Maasvlakte JV
EC	Hernandez Martinez	Jose	EC	DG Energy, European Commission
ZEP (policy)	Hetland	Kristofer	ZEP Task Force Policy & Regulation	Statoil
EC	Hilbrecht	Heinz	EC	Director, DG Energy, European Commission
NGO	Hoff	Eivind	ZEP Advisory Council	Bellona



Contact:

simon.bennett@ec.europa.eu

Advisory Forum meeting 16 June 2011 Minutes of meeting

R&D	Kalaydjian	Francois	ZEP Advisory Council	IFP Energies Nouvelles
Project (non-member)	Kiewiet	Jacques	Air Liquide Project	Air Liquide
N/A	Knippels	Hans	Network of CCS Regions	Rotterdam Climate Initiative
EC	Kougionas	Vassilios	EC	DG RTD, European Commission
EC	Kruizinga	Eelco	CCS Project Network	Det Norske Veritas
Equipment supplier; ZEP (demonstration)	Kurcz-Jenn	Martyna	ZEP Task Force Demonstration & Implementation	Alstom Power
R&D	Lombardi	Salvatore	CO2GeoNet	Università degli Studi di Roma "La Sapienza"
Project (non-member)	Love	David	Drax Sulby Project	Drax
Project (member)	Lüdge	Sascha	Jaenschwalde Project	Vattenfall
Project (member)	Madrid	Martin	Compostilla Project, Project Network Steering Committee	Endesa
Non-EU government	Murphy	Bruce	Australia	Department of Resources, Energy and Tourism
EC	Panek	Jan	EC	DG Energy, European Commission
International Organisation	Pegler	Bob	Global CCS Institute	GCCSI
Member State	Perrette	Lionel	France	Ministry of Ecology, Energy, Sustainable Development and the Sea
EC	Petrov	Peter	EC	DG RTD, European Commission
R&D	Piessens	Kris	CGS Europe	Geological Survey of Belgium
Project (non-member)	Ringrose	Philip	Sleipner/Snohvit Project	Statoil
Project (member)	Schoenmakers	Hans	ROAD Rotterdam Project, Project Network Steering Committee	Maasvlakte JV
EC	Schuppers	Jeroen	EC	DG RTD, European Commission
Member State	Skogen	Tone	ZEP Government Group / Norway	Ministry of Petroleum and Energy
Oil & Gas	Sweeney	Graeme	ZEP Advisory Council, Chairman	Shell
International Organisation	Taylor	Derek	International Organisation	GCCSI
EC	Thon	Steinar	CCS Project Network	Det Norske Veritas
Project (non-member)	Tomescu	Claudia	Getica Project	Institute for Studies and Power Engineering
EC	Tullius	Kai	EC	DG Energy, European Commission
EC	Tzimas	Evangelos	EC	Joint Research Centre



Advisory Forum meeting 16 June 2011 Minutes of meeting

Contact:

simon.bennett@ec.europa.eu

R&D	van der Gijp	Sven	R&D	CO2NET
Industry Organisation	Warren	Luke	Industry Organisation	CCSA
Project (member)	Wdowiak	Marek	Belchatow Project	PGE
Member State	Wróblewska	Elżbieta	Poland	Ministry of Economy



Contact:

simon.bennett@ec.europa.eu

Advisory Forum meeting 16 June 2011 Minutes of meeting

Agenda

European CO₂ Capture and Storage (CCS) Demonstration Project Network

2nd Advisory Forum, 16 June 2011, 08:30-13:45

Centre Borschette Room 0.C, Rue Froissart 36, Brussels

Agenda and pre-read annexes

Time	Subject	Presenter			
08:30	Arrival and coffee				
09:00	Welcome from the European Commission	H. Hilbrecht , Director, DG Energy			
09:15	Introduction to the agenda and review of the 2010 Advisory Forum recommendations by the Chairs	J. Panek, Head of Unit, DG Energy; G. Sweeney, Chairman, ZEP			
09:35	Feedback from Rotterdam 2011 knowledge dissemination event and outlook for the Network	S. Bennett, DG Energy			
09:50	<u>Discussion point 1</u> : What has changed in the outlook for CCS over the past year and how can the CCS Project Network respond to these changes?	Discussion led by G. Sweeney			
10:20	Coffee				
10:40	Overview of CCS Project Network activities in the past year; Update on status of projects	S. Thon, DNV			
11:00	Towards a global model for knowledge sharing	Zero Emissions Platform			
11:20	Discussion point 2: How can the benefits of international knowledge sharing be realised most effectively?	Discussion led by J. Panek			
11:50	Expectations of non-member CCS projects and Member State governments for the contribution of the CCS Project Network	J. Kiewiet, AirLiquide; C. Tomescu, Romania			
12:20	Lunch				
13:10	<u>Discussion point 3:</u> What recommendations should be made to the CCS Project Network Steering Committee for work in the coming 12-18 months?	Discussion led by G. Sweeney			
13:30	Conclusions from the Chair and recording of recommendations	Chair and Co-Chair			