



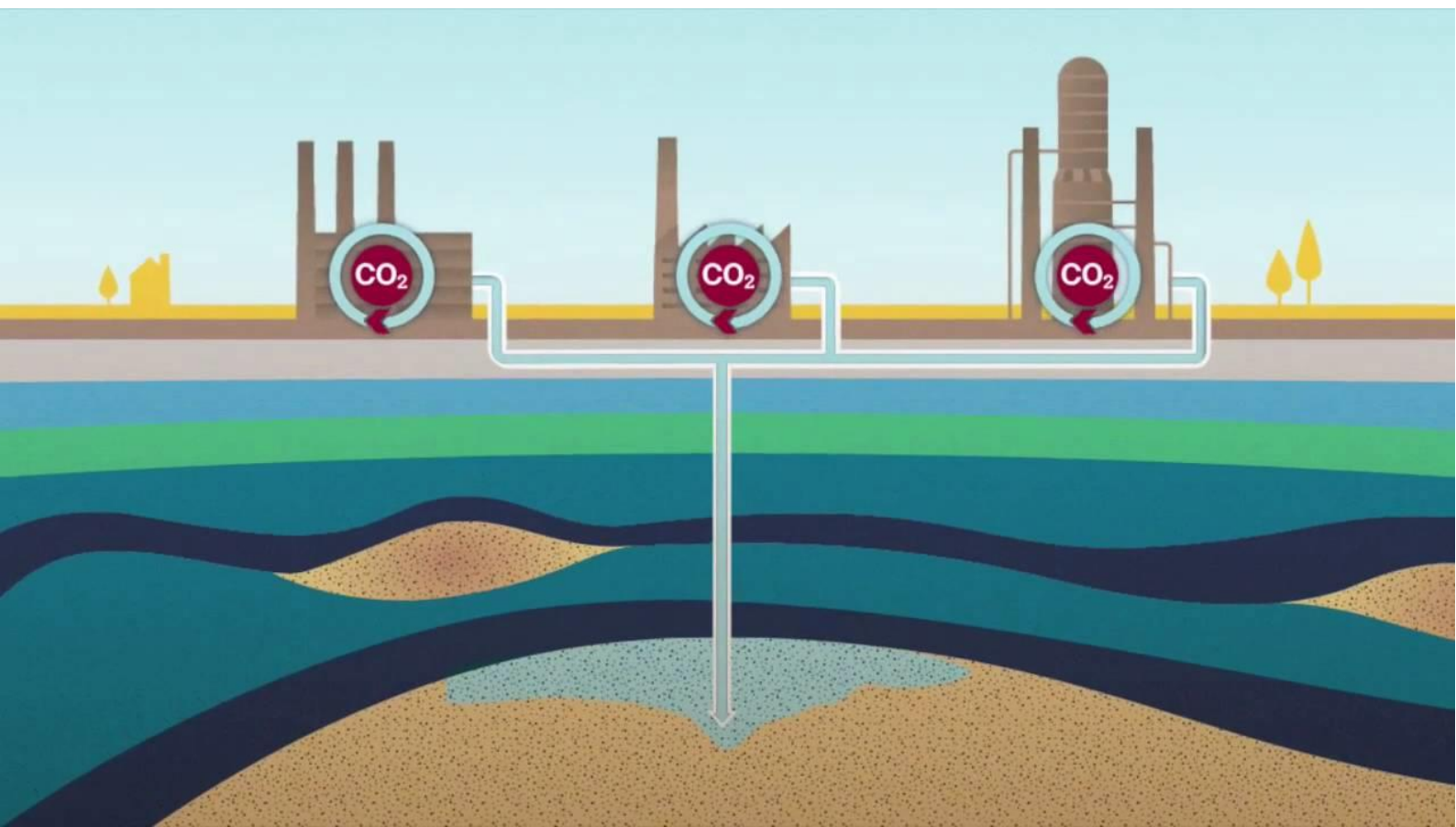
Kick-starting CCS in Europe

A 5 Point Action Plan

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Participants

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- Chris Davies, Former MEP and CCS Rapporteur



CCS is key to Europe's Energy Union Strategy

- **CCS is necessary for Europe's competitive decarbonisation.** The IEA have noted that CCS will need to contribute to 1/6th of the CO₂ emissions reductions required by 2050. CCS is an essential technology for the mitigation of CO₂ emissions from large-scale fossil fuel for power generation and from energy-intensive industry. For some energy-intensive industries CCS is simply the only decarbonisation option.
- **CCS creates jobs in Europe.** ZEP's modelling shows that 330,000 jobs could be created and secured in fuel supply, CCS equipment manufacture, plant operation and CO₂ storage facility operation¹. CCS infrastructure can also be used by energy-intensive industries, which currently employ 1.3 million people in Europe.
- **CCS will be crucial to reconciling EU energy security with climate objectives**, in a situation where coal and lignite constitute more than 80% of the EU's fossil fuel reserves².
- **Without CCS, Europe will face higher long term costs**, the IEA in its scenarios calculated that the costs of climate change mitigation will be 40% higher without CCS. In Europe without CCS, the cost of decarbonising the European power sector will be 20 – 50% higher by 2050; this represents some €2 – 4 trillion³. This means that CO₂ reduction targets cannot be met cost-effectively without CCS.

CCS State of Play - Globally & in Europe

- **CCS on a global scale is making fast progress – 2015/16 will be a year of CCS action and Europe must not lose its competitive edge.** Canada launched the World's first commercial coal fired CCS project at Boundary Dam in October 2014, the Abu Dhabi CCS Project will be commissioned in Q1 2016, more plants are expected to become operational in the USA, where ~20.3MT of CO₂ is stored annually through EOR operations and further Chinese announcements on CCS projects are anticipated.
- **Globally there are 22 large-scale CCS projects in operation or construction**, and there are a further 14 large-scale CCS projects in advanced planning, including nine in the power sector, with further final investment decisions due in 2015⁴.
- **European projects are in a critical state.** In Europe a number of projects are heading towards a final investment decision, e.g. ROAD, Don Valley, White Rose and Peterhead. A positive EU signal to these projects will improve the investment environment.
- **CCS is endorsed by all three EU institutions.** The European Council in its 2030 Conclusions explicitly mentions the importance of CCS as a low carbon innovative technology, the European Commission in its Energy Union Strategy lists CCS as critical to reaching our 2050 climate objective cost effectively, and the Parliament's its report on the European Energy Security Strategy reiterated the importance of improving conditions for the deployment of CCS.
- **Securing Member State support to develop CCS on a large scale.** There are key CCS champions such as the UK, the Netherlands, France, Norway, and there is movement on German support. By delivering benefits for EU MSs that undertake CCS development, particularly through emerging industrial clusters, we can build a "*coalition of the willing*".
- **COP21 – re-establishing European climate leadership.** As we head towards an international climate agreement, it is important that the current status of CCS in the convention and protocol are maintained and governments are encouraged to include positive references to CCS in their INDC submissions. We would welcome the Commissioner's involvement in spearheading this movement.

¹ [ZEP Report on Recommendations for transitional measures to drive deployment in Europe](#)

² [ZEP paper on reconciling EU Energy Security with Climate Objectives](#)

³ [ZEP Report on CCS and the electricity market, November 2014](#)

⁴ GCCSI Global Status of CCS report (<http://decarboni.se/sites/default/files/publications/180923/global-status-ccs-2014.pdf>), includes In Salah project (Algeria) where injection is currently suspended.

CCS – The 5 Point Action Plan

1. Establish a European Commission High-Level Group on CCS

- A group of high level experts sharing best practice, working towards the creation of a CCS milestone (for example 220 MT of CO₂ by 2030 = 4% of the 40% GHG target), and finding European solutions (financial and technological) to further deployment and working towards an ambitious COP21, while helping complete the Energy Union Strategy. The group would be comprised of: EU institutions, the EIB, industry, financial institutions, civil society including ETUC, national experts, and representatives from CCS projects globally.

2. Engaging with Member States on CCS

- The 2030 governance process should include credible decarbonisation pathways at Member State level, with a clear 2050 perspective.
- Other instruments include for example, using the National Energy Plan guidance to require Member States to set out realistic carbon reduction plans to 2050; developing EU industrial decarbonisation pathways or developing Commission guidelines on Member States wishing to support CCS, as an effective means of showing a direction of travel.

3. Funding of at least one European infrastructure initiative on CO₂ transport and Storage (T&S)

- Building at least one regional infrastructure initiative will be critical to rolling out CO₂ capture for both power and industry.
- There are clear opportunities under the Connecting Europe Facility (CEF) and European Fund for Strategic Investment (EFSI) to support T&S. There are several regional initiatives on CO₂ networks we can already highlight – i.e. in Scotland (Grangemouth), Northern England (Teesside Collective and Humber Region), Rotterdam, Antwerp, North Rhine Westphalia and Norway. In addition these funds can seed the creation of the CO₂ System Operators modelled on ENTSO. We would call on the Commission to focus on early delivery of regional initiatives that qualify for CEF/EFSI funding.
- The Horizon 2020 Gateway project will also lay out which hubs of T&S infrastructure would be necessary across Europe.

4. Reforming ETS & creating an innovation/modernisation fund to ensure continued support in CCS projects

- The ETS should remain the central tool of EU climate policy, providing a predictable, meaningful and robust carbon price and a long-term driver for CCS.
- Ensure CCS receives a fair opportunity in NER400 – both for industrial and power application – with a focus on deliverable projects, e.g. cluster projects in countries with supportive CCS policies.
- Put in place transitional support measures for CCS by the 2020s such as NER400, Feed in Premia, CCS Certificates, if carefully designed, or other instruments to provide an appropriate level of financial support.
- Demonstration projects under the Innovation Fund should target innovative technologies and business models, as well as projects contributing to the complete CCS value chain, which are key for the decarbonisation of the power generation sector and heavy industries. For example, the Fund(s) should allow the purchase of CO₂ from the Demos for use in characterising Storage.

5. Delivering key European projects

- There are several European projects (ROAD, Don Valley, White Rose, Peterhead) currently in a critical state. Retaining current EPR/NER grants and access to the European Fund for Strategic Investments will be key to their realisation.

About us

[The Bellona Foundation](#) is an independent non-profit organization that aims to meet and fight the climate challenges, through identifying and implementing sustainable environmental solutions. We work towards reaching a greater ecological understanding, protection of nature, the environment and health. Bellona is engaged in a broad spectrum of current national and international environmental questions and issues around the world. Bellona has championed CCS as a vital piece of the climate solution for more than two decades.

The [Global CCS Institute](#) is an international membership organisation. Our mission is to accelerate the development, demonstration and deployment of carbon capture and storage (CCS), a vital technology to tackle climate change and provide energy security. Working with and on behalf of our Members, we drive the adoption of CCS as quickly and cost effectively as possible by sharing expertise, building capacity and providing advice and support so that this vital technology can play its part in reducing greenhouse gas emissions. Our diverse international membership consists of governments, global corporations, small companies, research bodies and non-government organisations, committed to CCS as an integral part of a low-carbon future.

[ZEP](#), founded in 2005, the European Technology Platform for Zero Emission Fossil Fuel Power Plants (ZEP) is a unique coalition of petroleum companies, equipment suppliers, scientists, academics and environmental NGOs united in their support for CO₂ Capture and Storage (CCS) as a key technology for combating climate change. ZEP serves as advisor to the European Commission on the research, demonstration and deployment of CCS.

[Chris Davies](#), Former MEP and CCS Rapporteur. Chris Davies was a UK member of the European Parliament 1999-2014, serving as rapporteur for the CCS Directive in 2008-9 and for the Parliament's implementation report on CCS in 2013-14. He introduced and promoted the idea for a funding mechanism that became known as the NER300.