

# SET Plan Issues Paper No.9

## Renewing efforts to demonstrate CCS in the EU and developing sustainable solutions for CCU

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A EURELECTRIC response paper

April 2016

***EURELECTRIC is the voice of the electricity industry in Europe.***

*We speak for more than 3,500 companies in power generation, distribution, and supply.*

***We Stand For:***

***Carbon-neutral electricity by 2050***

We have committed to making Europe's electricity cleaner. To deliver, we need to make use of **all low-carbon technologies**: more renewables, but also clean coal and gas, and nuclear. Efficient electric technologies in **transport and buildings**, combined with the development of smart grids and a major push in **energy efficiency** play a key role in reducing fossil fuel consumption and making our electricity more sustainable.

***Competitive electricity for our customers***

We support well-functioning, distortion-free **energy and carbon markets** as the best way to produce electricity and reduce emissions cost-efficiently. Integrated EU-wide electricity and gas markets are also crucial to offer our customers the **full benefits of liberalisation**: they ensure the best use of generation resources, improve **security of supply**, allow full EU-wide competition, and increase **customer choice**.

***Continent-wide electricity through a coherent European approach***

Europe's energy and climate challenges can only be solved by **European – or even global – policies**, not incoherent national measures. Such policies should complement, not contradict each other: coherent and integrated approaches reduce costs. This will encourage **effective investment** to ensure a sustainable and reliable electricity supply for Europe's businesses and consumers.

***EURELECTRIC. Electricity for Europe.***

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## KEY MESSAGES

- EURELECTRIC welcomes the Issues Paper No.9 on carbon capture and storage (CCS) in accordance with the SET Plan priorities that has been issued by the Commission. The main messages presented in the paper are very much in line with EURELECTRIC's views on the importance of CCS development in the EU<sup>1</sup>.
- CCS is a key enabler of a carbon-neutral power sector. Moreover, without CCS, the cost of decarbonising the EU economy and the power sector will be far higher. This is a particular concern at a time of increasing global competition and worries about the competitiveness of the European economy. CCS can also play a major role in maintaining a diversified and secure energy mix.
- Given the economic circumstances, CCS technology will take longer to commercialise than initially hoped, but EURELECTRIC remains convinced that, along with other low carbon technologies and energy efficiency, CCS could have an important part to play in meeting Europe's climate goals.
- The construction of large-scale CCS demonstration projects in Europe should be a priority within the EU's climate and energy policy framework, as should strengthening the EU Emissions Trading System (EU ETS) to provide a longer term incentive for CCS deployment in the EU.
- CCS will need public support during the demonstration and early deployment phase. EU institutions and national governments should work together to develop incentive mechanisms for CCS demonstration. In this context EURELECTRIC agrees with the need to deploy a variety of funding opportunities for early demonstration CCS projects (such as the Innovation Fund, Connecting Europe Facility, Modernisation Fund, Horizon 2020, etc.) as well as the possibility of such projects to qualify as the Projects of Common Interest.

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<sup>1</sup> EURELECTRIC response paper to Commission consultation on the CCS Directive, 2014

## Introduction

Carbon capture and storage (CCS) could play a major role in helping to meet the EU's climate and energy targets, for 2030 as well as its 2050 decarbonisation objectives, both in the power and energy-intensive sectors. CCS technology could potentially allow Europe to retain the cost and flexibility advantages of fossil fuels, while also placing energy provision on a more sustainable footing. All serious analyses, including EURELECTRIC's, reveal that the cost of decarbonising the EU economy and the power sector without CCS will be far higher. In fact, without CCS demonstration projects in Europe, it could prove very difficult, or even impossible, for the EU to achieve its agreed climate targets at an acceptable cost. This is of particular concern at a time of increasing industrial competition from other trading blocs and worries about the cost-competitiveness of European energy supplies.

CCS has potential additional benefits in terms of ensuring a diverse fuel mix and promoting markets for European technology. Whatever the technology options pursued in Europe, very large amounts of coal and other fossil fuels will continue to be burned, particularly by the fast-growing Asian economies. CCS can help to decarbonise not only the power generation sector but also a number of energy-intensive industries where there are few other options for decarbonisation. **The Commission's Issues Paper No.9 recognises that in order to achieve the greenhouse gas emission reductions needed for keeping the global temperature rise this century well below 2 degrees Celsius as agreed at COP21 in Paris, CCS will need to be deployed from around 2030 onwards also in the fossil fuel power sector.**

When the CCS Directive was adopted in 2009 the European Council had set an objective for 12 commercial-scale demonstration projects to be in operation by 2015. However, this objective has not been achieved due to a combination of factors, including the economic downturn and thus falling energy demand, the knock-on effects on the carbon market and lack of public funding. **In EURELECTRIC's view, EU policy and measures to promote CCS should now focus on enabling demonstration of CCS and the reform of EU ETS.** The respective Issues Paper No.9 sets a good basis for the development of further activities within the research and innovation agenda and the SET Plan process, which focus on actions involving CCS.

## Funding for CCS demonstration and reform of EU ETS to be prioritised as measures to drive CCS in Europe

EURELECTRIC sees the EU ETS as the cornerstone of Europe's climate change policy. The ETS has a pan-European scope and preserves technological neutrality, thereby ensuring competition between rival low-carbon solutions and cost-effectiveness. The sole purpose of CCS is to reduce atmospheric emissions of CO<sub>2</sub>, so the technology is dependent on a strong carbon price to become commercially viable.

However, even though the process to reform the EU ETS is ongoing, this reform alone will not ensure the commercial viability of demonstrators and the early deployment of CCS. EURELECTRIC believes that the EU ETS is the most appropriate instrument for driving investments in mature low carbon technologies, but not demonstration projects and innovation. As a solution EURELECTRIC supports the adoption of an 'ETS plus' approach, i.e. EU ETS together with complementary innovation policies, where the Energy Union Strategy and the SET Plan play a major role. Public funding is needed to enable the demonstration of technologies, such as CCS, which are not yet proven at the commercial scale. CCS technology not only requires major investment but also has high operational costs. For the first commercial scale projects that cover the full CCS chain, operating aid is therefore likely to be necessary as well as capital support. Ideally the programme enabling CCS demonstration should cover a broad spectrum of technologies, as it is not yet clear which options will be the most cost-effective.

CCS can also be applied to power generation or industrial applications using bioenergy. Bio-CCS can in fact generate negative GHG emissions.

EURELECTRIC welcomes the statement in the Issues Paper that funding from a variety of EU programmes should be maximized, e.g. the Innovation Fund, Modernisation Fund, Connecting Europe Facility and Horizon 2020. EURELECTRIC also welcomes the broad-based objectives and targets set for CCS.

EURELECTRIC believes that the Member States should implement measures which facilitate rather than block the development of CCS. They should also, in conjunction with the Commission, address public acceptance issues by promoting an open and fact-based debate on the benefits and risks of CCS. **In this respect EURELECTRIC welcomes the Commission's approach to deliver commercial-scale demonstration of the full CCS chain through research and innovation, maximising the use of the EU funds, but also maximising the efforts at the national level.**

EURELECTRIC pursues in all its activities the application of the following sustainable development values:

Economic Development

▶ Growth, added-value, efficiency

Environmental Leadership

▶ Commitment, innovation, pro-activeness

Social Responsibility

▶ Transparency, ethics, accountability



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