



**EUTurbines' input on:**

## ***SET-Plan ISSUES PAPER No. 9***

### **Renewing efforts to demonstrate carbon capture and storage (CCS) in the EU and developing sustainable solutions for carbon capture and use (CCU)**

EUTurbines, the European Association of Gas and Steam Turbine Manufacturers, welcomes the Commission's initiative to refocus and prioritise the actions and activities within the updated SET-Plan and appreciates the opportunity to participate in the consultation to this "issues paper".

Turbines are key components of many types of thermal power generation, providing secure, sustainable and affordable energy now and in the future energy mix. To continue using this well developed and efficient technology in the long-term requires a solution to decarbonise fossil-fuel based power generation – for coal-fired power plants based on steam turbine technology as well as for modern gas-fired power plants combining gas as well as steam turbines. It should also be noted that turbine technology also plays a role in compressing and transporting CO<sub>2</sub> for storage and use.

#### **Key Objectives and Targets**

CCS can provide an important contribution to CO<sub>2</sub> reduction in power generation, provided that it receives the right support to be commercially deployed in the upcoming years. While the technology components for capturing and transporting CO<sub>2</sub> are known, the full integration of this technology in thermal power plants still requires considerable research and innovation efforts. However, due to a lack of political and public acceptance, CCS until now has not developed into an alternative for decarbonising Europe's power generation. Only if concerns regarding security and economic viability can be overcome, this will change.

In this sense, EUTurbines agrees with the Commission that one of the main technology-related objectives for CCS should be to support its commercial-scale demonstration, demonstrating the safe application and contributing to lowering the costs of this technology. We also understand that further R&I activities in the areas of CO<sub>2</sub> capture, storage and CCU are needed.

The issues paper provides an extensive list of targets to be achieved by 2020. While these targets provide a good overview of the areas that could be developed in the future, the tight deadline ahead and, ultimately, the limited co-funding resources need to be taken into consideration. EUTurbines would, therefore, suggest to **prioritise and focus** on those targets that will deliver the most promising results in the short/medium term first.

Since the targets "on the road to 2030" are mainly addressed to Member States, at this stage, EUTurbines would like to stress the importance of having support at national level.

#### **Key Performance Indicators (KPIs)**

EUTurbines notes that all the proposed KPIs are related to power generation. Indicators for CCS in emission intensive industries as well as CCU should also be included.

In addition, the on-going change in the power generation sector needs to be taken into account. When the EU activities on CCS started, the energy system was dominated by coal-fired baseload power plants. Today, more and more coal-fired power plants are phased out and gas-fired power generation is being used in a cycling mode during peak demand periods. This, as well as the trend to more decentral power generation units, increases the challenge for a cost-effective transport and storage solution and should be mirrored in the KPIs.

EUTurbines would suggest the use of simpler KPIs, such as the number of demonstration plants in operation or the amount of CO<sub>2</sub> avoided as an alternative to the currently proposed indicators.

### **Possible obstacles**

EUTurbines stresses the need to look into the **entire system**: the capture of CO<sub>2</sub> is the first step of the process. Only if the complete system is developed (i.e. ensuring adequate storage capacities and developing the transport infrastructure needed), the deployment of CCS can be successful. Isolated initiatives will not have the desired impact – **coordinated efforts** will be key, including with the Member States support.

Another area that can difficult the implementation of the targets on CCS, as well identified in the issues paper, is the **public awareness and acceptance** of this technology. Additional efforts will be needed in this regard.

While there is no doubt that the results of the demonstration projects will have an impact on the identification of further R&I actions (as mentioned in the Annex of the issues paper), the need to continue developing the CCS technology in the coming years should be kept in mind. We should not wait to see the results of the demonstration projects after 2020 – here, again, coordinated efforts will be key.

### **Partners in the Implementation Plan**

EUTurbines believes that only with the cooperation of all relevant stakeholders, the final targets can be achieved. In the case of industry, all actors involved in the system need to work together to make this happen. In this sense, we look forward to participating in the discussions and development of the implementation plan, which should show the path to reach the proposed targets.

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