

# OUTLINE CONCEPT AND TENTATIVE STRUCTURE FOR THE TECHNOLOGY PLATFORM ZERO EMISSION FOSSIL FUEL POWER PLANTS.

## 1. BACKGROUND AND CONCEPT FOR A POSSIBLE TECHNOLOGY PLATFORM FOR ZERO EMISSION FOSSIL FUEL POWER PLANTS.

The European Commission is facilitating the establishment of a Technology Platform<sup>1</sup> for Zero Emission Fossil Fuel Power Plants aimed at identifying and removing the obstacles to the creation of highly efficient power plants with near-zero emissions which will drastically reduce the environmental impact of fossil fuel use, particularly coal. This will include CO<sub>2</sub> capture and storage, as well as clean conversion technologies leading to substantial improvements in plant efficiency, reliability and costs.

The Technology Platform will build on ongoing and new projects, in the Commission's Framework Programme and in Member States and might also include a number of panels and initiative groups necessary to optimise its functioning and achieve the Technology Platform's overall goals. These activities will be complemented by new initiatives for public-private partnerships and linked to industry projects, when appropriate.

The establishment of the Technology Platform for the Zero Emission Fossil Fuel Power Plants will contribute to the goal set for 2010 at the European Council in Lisbon in March 2000. The Platform will also contribute to the European strategy for increasing R&D investment in the Member States to 3% of GDP by 2010, as stated at the Barcelona Council and in the Commission's Communication on "*Investing in research – an action plan for Europe*"<sup>2</sup>. It will also be a key element in developing the specific *European Research Area* in this field, which is a major EU research policy objective.

In addition to the European research policy, a wide range of European policies will have to be taken into account in developing the Technology Platform – most notably energy policy, as well as environment, information society and enterprise policy. Similarly, the Technology Platform will be expected to provide recommendations for policy development. Whilst the interactions with different EU policies will vary according to the challenges to be addressed, effective mechanisms will need to be developed to ensure adequate co-ordination between the relevant stakeholders. The Commission will undertake the initial establishment of appropriate networks to facilitate this interaction.

The concept outlined below and the tentative structure of the Platform provides the initial steps towards the appointment of an Advisory Council, which should review this concept and provide guidance on how to initiate and push forward the structure, decision procedures and work programme.

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<sup>1</sup> See the site <http://www.cordis.lu/technology-platforms> for further information on Technology Platforms

## 2. INITIAL SCOPE AND GUIDING PRINCIPLES OF A POTENTIAL TECHNOLOGY PLATFORM FOR ZERO EMISSION FOSSIL FUEL POWER PLANTS

### 2.1. Initial Objectives

The main goal of the Technology Platform for Zero Emission Fossil Fuel Power Plants could be:

*To drastically reduce the environmental impact of fossil fuel use, particularly coal, aiming at highly efficient power generation plants with near zero emissions. This will include CO<sub>2</sub> capture and storage, as well as clean conversion technologies leading to substantial improvements in plant efficiency, reliability and costs.*

### 2.2. Scope of activities and deliverables

In order to contribute to the formulation and implementation of an integrated strategy for Zero Emission Fossil Fuel Power Plants, the Technology Platform would assist in taking forward the coherent and integrated development and implementation of a series of programmes, projects and initiatives.

Following lessons learned in other Platforms, the first major deliverable of this Technology Platform in the short to medium term would include advice on a **Strategic Research Agenda** to define performance targets, priorities, timelines and budgets for industry-and publicly-funded research and development, including measures for enhancing co-ordination, networking and clustering of the R&D capacity in Europe, and ways for leveraging public and private investment in R&D at the European, national, regional and local levels. Other deliverables will be determined by the Advisory Council, when formed

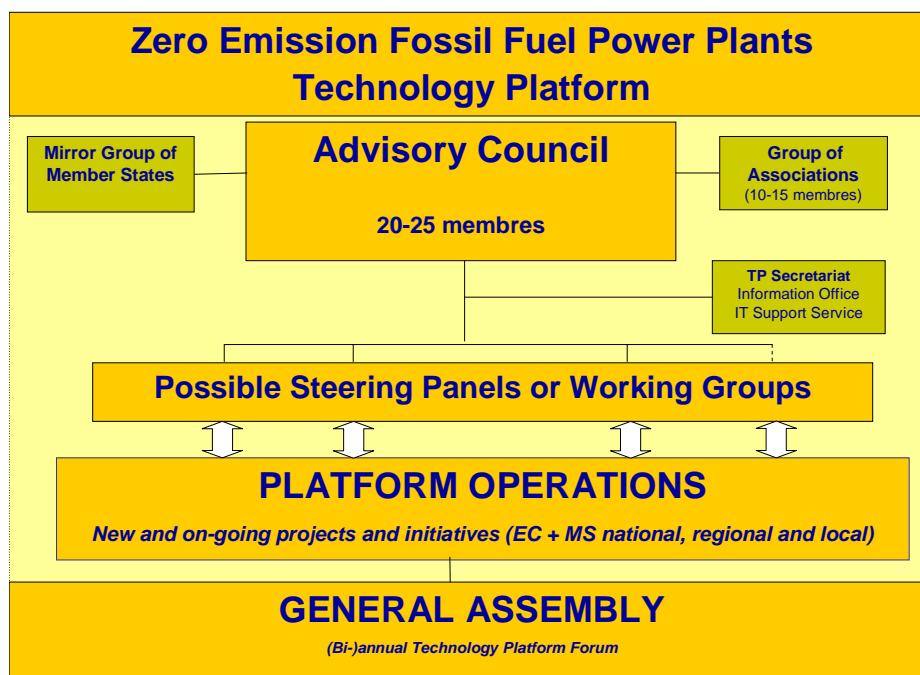
## 3. THE STRUCTURE AND OPERATION OF A POTENTIAL ZERO EMISSION FOSSIL FUEL POWER PLANTS.

The European Commission will have a direct interface with the Technology Platform and will participate in it as appropriate to preserve the interests of the European Union; but the Technology Platform should be an autonomous body, independent of the European Commission or any other body. It should develop its own methods of working and establish interfaces with other appropriate institutions, bodies and initiatives.

An illustrative diagram of a possible structure of the Technology Platform is presented below. The final structure and possible terms of reference should be defined by the **Advisory Council** (see below), which should provide guidance on how to initiate and push forward the structure, procedures and work programme.

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<sup>2</sup> COM (2003) 226 of 04.06.2003



### 3.1. Potential Participants in this Technology Platform

The Platform should be open and accessible, allowing the participation of all active stakeholders. The structure should reflect the diverse and complementary activities which will be undertaken by the Platform, and be such as to ensure that initiatives are taken forward in an active and dynamic manner.

Participants in the Platform should represent a balance of expert knowledge and stakeholder interests and would typically include, for example, energy companies (Oil, Coal, Gas) and utilities, equipment manufacturers, users and consumers, financial institutions, service providers, technical and socio-economic research providers, regulators as well as other public authorities, non-governmental organisations and representatives of civil society.

### 3.2. Possible support mechanisms for the Technology Platform

The bodies described below could provide possible elements of the Technology Platform.

**3.2.1. Advisory Council (AC).** Comprising approximately 20-25 members, the Advisory Council would provide guidance, stimulate initiatives and monitor progress. It would provide governance and input from the different stakeholders in the fossil fuel sector, and oversee the establishment of specific “steering panels” and “working groups” as well as the production of deliverables. The chairmanship, vice-chairmanship and membership would rotate on a regular basis, to renew and help maintain momentum. The composition of the AC is crucial to the success of the Technology Platform and needs to be carefully worked out, in terms of commitment to the process, transparency and balance between regions and sectors. The AC should, among other tasks, define the Terms of Reference for the AC, and define the bodies and structure of the Platform. The association to the AC of high-level EC officials would be desirable, particularly in the initial stages.

**3.2.2. Mirror Group of Member States (MG).** Actively involving the MSs and Associated Candidate Countries in the Technology Platform is essential to generate the leverage associated with drawing national, regional and local research programmes, projects and initiatives into the Technology Platform. Given the size and balance envisaged for the AC, it would not be appropriate or efficient for MS representatives to meet in the AC. The MG would be designed to fully involve the MSs in the Technology Platform, without creating inefficiencies at either the AC or MG levels. Of course, there must be a close interaction between the two bodies as well as with the other working groups. The chairman of the MG would for example be a member of the AC. The precise role and functioning of the MG will be determined in discussion with the MSs. The participation of FP6 Associated States would also need to be ensured.

**3.2.3. Group of Trade Associations (GTA).** The GTA has a key role to play, particularly with regard to the interests of stakeholders and there must be a close interaction between the GTA and the AC as well as with the other possible working groups. The chairman of the GTA would be for example a member of the AC; he/she would be elected among the GTA members, who should be high level representatives of the relevant associations (e.g. secretary general or office manager). The precise role and functioning of the GTA will be determined in discussion with the AC. A typical size for the GTA would be 10-15 members, striking a balance between spread and efficiency.

**3.2.4. Technology Platform Secretariat (TPS).** The TPS would provide organisational support to the AC, possible Steering Panels or Working Groups and General Assembly. It would also provide an Information Centre and IT support service. The secretariat would ideally be funded jointly by the stakeholders. In the interim period Commission staff may provide secretariat support to kick-start the Technology Platform, within available resource constraints.

**3.2.5. Steering Panels (SP) and Working Groups (WG).** These groups would take responsibility for the next phase of the work recommended by the AC – e.g. drafting the Strategic Research Agenda, etc. Establishing these panels would be an immediate priority for the AC, to which they would report. The chairmen of these SPs would be drawn from the membership of the AC and should be recognised “movers” or “champions”. In a second stage, following the establishment of the AC and SPs, working groups could be formed and dissolved as necessary to address specific topics of interest identified by the AC, particularly in relation to the recommendations a vision report to be developed by the AC. They would report to the AC and their composition, structure and functioning would be determined by the AC.

**3.2.6. The Technology Platform Operations (PO).** The “beating heart” of the Technology Platform are the projects, initiatives, networks and structures that are actively working in the field of zero emission fossil fuel power plants. A mechanism needs to be created to fully integrate them into the Technology Platform.

**3.2.7. General Assembly (GA).** The GA would be a bi-annual (or annual) forum for all participants in the Technology Platform, to ensure shared broad communication, ownership and a common vision. It would help ensure that projects and initiatives exchange information and results and are steered in the right direction to contribute to achieving the overall Technology Platform vision. It will also help the Technology Platform to monitor its own progress. The GA would be organised in a conference and workshop format, with plenty of opportunities for networking and information exchange; virtual events and internet-based collaborative activities could be used to supplement the regular physical events.

#### 4. TENTATIVE TIMETABLE

The following chart shows the initial plans for launching and starting the Technology Platform for Zero Emission Fossil Fuel Power Plants during the first year. The fulfillment of this timetable is crucial to the success of the Technology Platform.

	2005				2006	
Consultation with main industrial initiators and major actors	→→→ →→→					
Advisory Council and Terms of Reference.	→ →	→→ →→				
Creation of MG and GTA.		→→ →→	→ →			
Joint Vision		→ →	→→→ →→→	→→ →→		
Launch the Technology Platform				→→ →→		
Strategy Research Agenda			→→→ →→→	→→→ →→→	→ →	
1 <sup>st</sup> General Assembly					→→→ →→→	
Implementation	→→→ →→→	→→→ →→→	→→→ →→→	→→→ →→→	→→→ →→→	→→→ →→→