

STRUCTURE OF THE REPORT

This report focuses on the competition between gas and coal in the EU electricity mix. It looks at recent developments and analyses the key drivers shaping the future dynamics of this competition.

The report includes six main parts:

A brief introduction recalls major developments in global energy markets and the evolution of EU energy and climate policy since 2008 with a focus on electricity markets.

The first chapter provides detailed information on the evolution of the EU electricity market. The first sections (Sections 1.1 to 1.3) provide background information on the EU electricity market, the evolution of power generation supply and demand, power capacity and wholesale electricity prices. Sections 1.4 and 1.5 analyse the main factors explaining the lack of competitiveness of gas relative to coal and assess the operational impact on gas-fired power plants. Section 1.6 focuses on regulatory aspects that will impact the future use of coal by European utilities. It first looks at European regulations on emissions of pollutants (LCPD and IED) and their impact on the ageing coal fleet. It also reviews the current coal capacity addition boom and future prospects. An Annex reviews national policies restricting the use of coal, or at the opposite, securing domestic coal supplies. Energy policies of Germany, Poland and the UK, the three largest EU coal consuming countries, are studied. Section 1.7 looks at environmental and technical aspects and investigates the ability of gas and coal power plants to accommodate the new needs of the EU electricity market. It reviews the increased efficiencies and flexibility of new thermal power plants and also gives an assessment of the development of CCS in the EU. Section 1.8 analyses the financial impact of the crisis in the EU power market on power utilities. Section 1.9 highlights the security of electricity supply issue and looks at approaches taken by several governments to address the issue.

Gas, coal and CO₂ prices play a key role in the competition between gas and coal in the power sector. The second, third and fourth chapters are devoted to an analysis of gas, coal and CO₂ markets and prices. The objective is to look at key factors and trends that will influence their prices.

Chapter 2 reviews recent development in gas pricing and analyses how new gas supplies (shale gas production in the EU and new LNG supplies) may impact gas pricing and future gas prices. An Annex gives detailed information on the European gas market.

Chapter 3 focuses on steam coal trade and prices in Europe. Due to the importance of global (and Chinese) trends on European import steam coal prices, it first reviews trends in global supply and demand. Then, it analyses future trends in global steam coal trade and prices. An Annex gives detailed information on coal demand and supply in the EU.

Chapter 4 analyses the EU ETS market and the evolution of CO₂ prices. It reviews the current flaws in the EU ETS and measures proposed by the European Commission to reform the scheme. It discusses possible outcome of these reforms and impact on gas and coal competition.

The final chapter compares the projections for gas and coal demand in the EU electricity sector carried out by the most renowned international and European institutions. **It draws conclusions on the contest between gas and coal at short and medium/long term and highlights necessary conditions for gas to renew with growth in the power sector.**