INTERNATIONAL

The Price of Carbon 2008-2012: Scenarios for Investment Appraisal

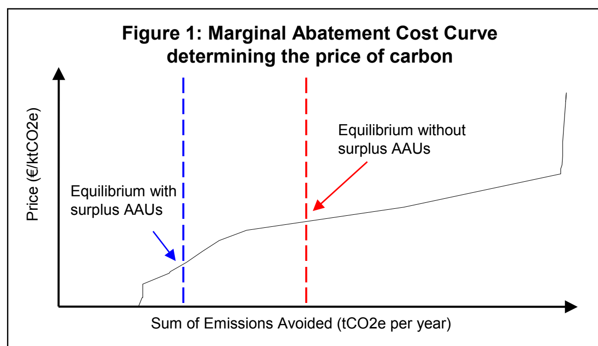
An In-Depth Study of Factors That Will Determine the Price of CO_2

Overview

One of the key risk management challenges faced by financial analysts is understanding the drivers affecting the price of carbon dioxide (CO_2) in the first Kyoto budget period of 2008–2012. Cashflow forecasts in that period are very much material to any planned new investment decisions. Fundamentals analysis of the market, policy, and technology drivers can provide robust estimates for the price of CO_2 and reduce uncertainties for technology appraisal, portfolio review, and corporate investment pathways.

ICF International has developed a comprehensive report based on a fundamental analysis to forecast CO_2 prices under several scenarios. Overall our findings indicate that the two most critical determinants of price are the flow of surplus Assigned Amount Units (AAUs) from economies in transition to meet demand within the European Union (EU) and other countries, and the ability of the power generation sector to reduce carbon dioxide equivalent (CO_2e) emissions. Figure 1 indicates how surplus AAUs dampen the equilibrium price of carbon.

Figure 1: Marginal Abatement Cost Curve determining the price of carbon



Our Approach

ICF's study, ***"The Price of Carbon in 2008-2012: Scenarios for Investment Appraisal,"*** is grounded in leading-edge analysis. We use sector- and country-specific marginal abatement cost curves for all gases and our proprietary tool, the *Integrated Planning Model (IPM®)*, a dynamic, linear, integrated model of the power sector that has supported more than 100 Gigawatts (GW) of power market investments in the last four years alone.

Our Study Provides Detailed Answers to Key Questions

How might monopolistic pricing of AAUs impact CO_2 price?

The role of Russian, Ukrainian, and Polish surplus AAUs is a key determinant of the equilibrium price.

What is the expected impact of the second phase of the European Union (EU) Emissions Trading Scheme (ETS)?

Aviation, chemical, and aluminium have differing roles in expanding supply and demand for allowances.

How does the linking of the EU ETS to other domestic schemes impact overall demand for allowances?

Linking emissions trading schemes will provide substantial opportunities to reduce costs of abatement and reduce the equilibrium price.

What will happen if there is late delivery of Certified Emission Reduction (CER) and Emission Reduction Units (ERU)?

If project-based carbon credits fail to materialise during 2008-2012 there will be significant pressure on demand for allowances.

What if the price of natural gas rises sharply?

The price of carbon will be strongly affected by gas price and the spread between gas and coal prices. We explore the ramifications of a crisis scenario featuring high gas-to-coal spreads.

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