

## AN ANALYSIS AND COMPARISON OF THE CLIMATE POLICY AND EMISSION TRADING IN EUROPEAN COUNTRIES

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### Overview

The EU Emissions Trading Systems (ETS) is the first international trading system for CO<sub>2</sub>-emissions in the world and applies to the 28 EU member states plus Norway, Iceland and Lichtenstein. The EU ETS covers over 11,000 energy-intensive installations (power stations and other industrial installations in the system) in 31 countries, including airlines, which are collectively responsible for close to half of the EU's emissions of CO<sub>2</sub> and 45% of its total greenhouse gas emissions [1, 2]. Launched in 2005, the EU ETS has covered two phases over three of EU ETS. The EU ETS is now in its third phase, running from 2013 to 2021. The aim of this paper is the verification by several multi database indexes in order to provide a benchmark for the cap-and-trade mechanism if the EU is on a cost effective track leading Europe to the EU domestic greenhouse emissions by 40% below the 1990 level until 2030, with the objective to cut emissions by at least 80% until 2050. This paper develops a comparative analysis of the climate policy and emission trading for the European countries (EU27) based on the information related to emissions that are published by national and international public databases. Furthermore, the analysis comprises the climate policy scenario implemented in Europe by directives and regulations.

### Method

The benchmark analysis and comparison comprises the following multi database indexes: Dow Jones Sustainability Index, Environmental Performance Index, Efficiency Indicators, European Environmental Agency Indicators, and the information of the public registers of the National Allocation Plans (NAP) about the emissions of the countries of the EU between the years 2005 to 2013. Furthermore, the results based on these indexes are associated with the climate policy implementation in Europe, and the national climate policy of each country developed by the NAPs and approached by allocation allowances. In Europe, the EU ETS is open to new adoptions and changes because the climate policy scenario across many, varied nations have been developed and implemented. The benchmark analysis of the different database indexes enables an assessment of the implemented regulations and standards in Europe and allows a comparative analysis in order to provide guidance to the continuous improvement process in emission trading and the implementation of the EU ETS regulations for the next decades.

### Results

The reduction and elimination of emissions such as ozone, nitrogen dioxide and particular matter (PM) remain the main focus of emissions policy in EU. The data reveals that the emissions are considerable reduced in EU last years. The results advance our understanding of long-term impacts of different energy policy options designed to reduce energy consumption and CO<sub>2</sub> emissions for EU27, and generate insight of EU ETS policy implications to remain in general an environmentally, socially, and economically sustainable development. Additionally, the findings show that the indexes are not always comparable between them due to the different data.

### Conclusions

The application of the different databases allows the cross-comparison of results. Also, the multi database analysis provides an effective and transparent comparison. In future results (such as the third phase), the EU ETSE may include this type of multi review evaluation in order to assess the actual results. Specific standards and regulations may be supported by standardized indicators in order to provide a coherent benchmarking of emissions.

### References

- [1] MEMO/08/35, Brussels, 23 January 2008. Questions and Answers on the Commission's proposal to revise the EU Emissions Trading System 2008.
- [2] Directive 2009/29/EC of the European Union and of the Council of 23 April 2009 amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the community, 2009.