

I4CE

INSTITUTE FOR
CLIMATE
ECONOMICS

Une initiative de la Caisse des Dépôts et
de l'Agence Française de Développement

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RESEARCH PROGRAM

How to improve the effectiveness of the EU ETS?

COPEC II - COordination of EU Policies for Energy and CO₂
by 2030

September 2016 – December 2017

CONTEXT

Through the proposed revisions to the Directive of the “European Union Emissions Trading System” (EU ETS) published in July 2015, **the European Commission provides new information on the rules intended to regulate CO₂ emissions for productive sectors (energy and industry) beyond 2020.**

Four elements are now under consideration to revise the EU ETS:

- a stronger emissions reduction target, with a proposed target of 43% by 2030;
- its interactions with EU targets on renewable energy sources (RES) and energy efficiency (EE);
- recalibrating the EU ETS to accommodate a review of the linear factor which would reduce the cap by 2.2% per year and the establishment of a market stability reserve (MSR);
- the continuation of free allowance allocation to sectors at risk of carbon leakage.

Over the course of 2016 and 2017 other directives included in the 2030 energy and climate package will be also reviewed such as the directives on renewable energy and energy efficiency and the effort sharing decision between EU ETS and non-ETS sectors.

Program Objective

Based on the results of the COPEC I program which ran from September 2014 to December 2015, COPEC II aims to **prepare economic policymakers for the revision of the EU ETS in line with the 2030 energy-climate package.** In doing so, COPEC II will explore how energy and climate policies will develop on the course to 2030.

Overall, the program aims to provide a **factual, independent and quantified analysis of the EU ETS** in order to examine conditions for improving both its environmental and economic efficiency.

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Four areas of research

COPEC II will be structured according to the four major issues relating to the implementation of Phase 4 (2021-2030) of the EU ETS:

- **free allowance allocations for industry:** sectoral studies;
- **reducing uncertainty of the carbon price through price guarantee mechanisms such as the introduction** of a floor price or price corridor;
- **interactions between the EU ETS and energy policies** (RES and EE);
- **EU ETS in the Paris Agreement context:** prospects for voluntary cooperation and linking of carbon pricing systems.

METHOD

- **Provide an overview of academic works that elaborate on EU ETS issues to decision makers:** I4CE aims to mobilize the most qualified academic experts to provide relevant analysis on all topics included within the COPEC II research program.
- **Produce new economic and institutional analysis,** based on current and relevant data and I4CE and IFPen expertise.
- **Model different implementation scenarios for the EU ETS in 2030,** by Enerdata, with the support of the POLES model and other tools dedicated to carbon market analysis.



PROGRAM TEAM

I4CE – Institute for Climate Economics

I4CE – Institute for Climate Economics is an initiative of Caisse des Dépôts and Agence Française de Développement. The think tank provides independent expertise and analysis on economic issues linked to climate & energy policies in France and throughout the world. I4CE aims at helping public and private decision-makers to improve the way in which they understand, anticipate, and encourage the use of economic and financial resources to promote the transition to a low-carbon resilient economy. The Industry, Energy and Climate program of I4CE focuses on examining policies that aim to reduce greenhouse gas emissions in the industrial and energy sectors, such as carbon pricing, in Europe and worldwide. I4CE has one decade of expertise in analyzing especially the EU ETS functioning.



Enerdata

Enerdata is an energy intelligence and consulting company. Our experts help you tackle key energy and climate issues and make sound strategic and business decisions. We provide research, solutions, consulting and training to key energy players worldwide: oil and gas companies, electric utilities, equipment manufacturers, public authorities, policy makers, investors and consultancies. Incorporated in 1991, Enerdata leverages its experience and permanently invests in its globally recognized databases and forecasting models. Enerdata is an independent company, with headquarters in France and offices in the UK and Singapore.



IFPEN

IFP Energies Nouvelles is a public-sector research and training center. It has an international scope, covering the fields of energy, transport and the environment. From research to industry, technological innovation is central to all its activities. As part of the public interest mission IFPen focuses on: providing solutions to take up the challenges facing society in terms of energy and the climate, promoting the emergence of a sustainable energy mix; creating wealth and jobs by supporting French and European economic activity, and the competitiveness of related industrial sectors.





Five deliverables

KICK-OFF MEETING: SEPTEMBER 2016

This aim of the kick-off meeting is to define and validate scenarios and assumptions with our partners and sponsors according to the proposed themes. Enerdata will also present its model POLES.

STAKEHOLDER WORKSHOPS FROM SEPTEMBER 2016 TO DECEMBER 2017

These workshops bring together partners, associate experts and sponsors to examine results and discuss various viewpoints.

PUBLICATIONS

- At each workshop attendees can expect:
 - media presentations;
 - working documents, reports and studies presented.
- A publication to be delivered a few weeks after the workshop.
- A final report to be delivered to partners and sponsors in October, 2017. The report will provide an overview of the various work conducted by I4CE – Institute for Climate Economics and Enerdata, as well as those presented at workshops analyzing proposals from the European Commission.

1 Free allowances and sectoral case study

SEPTEMBER 2016

- **Analyzing free allowance allocation in various industrial sectors:** chemical, cement, refining, aluminum, etc... The study will analyze the allocation of free allowances to different sectors according to several scenarios and assumptions on sector economic growth, technological progress and potential of sectoral emission reductions. The case study on the refining sector will be produced in partnership with IFPEN.

2 EU ETS carbon price and carbon price guarantee mechanisms

OCTOBER 2016

- Implementation analysis of price guarantee mechanisms **to establish a fixed carbon price signal in the EU ETS by 2030:** necessary conditions for implementation, coordination with the market stability reserve, implications on states' auction revenues, experiences of other ETS.
- Analyzing **three EU ETS scenarios** using the POLES model: the “reference” scenario using proposals from the EU Commission, a scenario which introduces a “carbon price floor” and a scenario which introduces a carbon price “corridor.”

3 EU ETS interactions with RES support policies

DECEMBER 2016

- Analyzing of the impact of RE deployment on the supply-demand balance of the EU ETS by 2030.
- Analysis of interactions and consequences on the EU ETS (including insight into the aviation ETS) mode of treatment of biomass and biofuels in terms of GHG reductions accounting. The analysis is produced in partnership with the IFPEN.
- Analyzing **scenarios with different levels of support for RES until 2030:** extension, removal, impacts on the achievement of EE/RES/CO₂ objectives.

4 EU ETS interactions with EE policies by considering the decision of the Effort Sharing Directive (ESD)

FEBRUARY 2017

- Analyzing the impact of EE policies on the supply-demand balance of the EU ETS in 2030.
- Scenario analysis of the **economic value of EE policies in 2030:** impacts on the achievement of EE/RES/CO₂ objectives.

5 The EU ETS in a post-COP21 world

APRIL 2017

- Economic and institutional analysis of the potential and interest of linking between the EU ETS and another system.
- Analyzing **two potential linking scenarios for the EU ETS (G20 countries):** impacts on; the carbon price, emissions and reductions (domestic and purchased on the market), carbon intensity, marginal reduction costs, total costs/revenues including purchases/sales on the market.

COMMUNICATION AND PROMOTION OF THE REPORT

At least two events will be organized to highlight the results of the program and to contribute to the European and international debate:

- promotion of results in different networks of actors involved in the implementation of carbon pricing policies: IETA, CPLC, Carbon Expo, etc.;
- a “side-event” at COP22 in Marrakech in November, 2016 and in COP23 in 2017;
- a conference presenting the final report presentation in the winter of 2017 to European Commission and other stakeholders (industrial and European energy companies, Member States).

PROJECT REALISATION

- **Sponsors:** The contribution requested from sponsors is 30,000 euros to fund the program for 18 months.
- **Planning:** The research program will be carried out between September, 2016 and December, 2017.
- **Team:** The team responsible for carrying out the program will bring together skills from the I4CE – Institute for Climate Economics, Enerdata and a network of academic researchers and associate experts. The research effort will include economic analysis and modeling means.

CONTACT

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