Mr. José Manuel Barroso President of the European Commission Rue de la Loi 200 1000 Brussels

December 16, 2013

Re: EU Fuel Quality Directive and unconventional fossil fuels

Dear President Barroso,

We are scientists involved in many different areas of climate science. We write to you to recommend that EU policies recognise and account for higher emissions from production of unconventional fossil fuels. Such policies will encourage investments in low-carbon fuels and technologies consistent with the world's limited carbon budget and will encourage companies and states to leave the most carbon-intensive fossil fuels in the ground.

We live in an era during which it has become clear that we cannot burn all of the fossil fuels without causing dangerous climate change, as the latest Intergovernmental Panel on Climate Change has made clear. Instead, we must leave a substantial amount of the fossil fuels in the ground and move to cleaner sources of energy. Policy-makers now have a paramount responsibility to ensure that happens. Your decisions today will affect the kind of planet future generations will inherit.

We understand the Commission is currently considering a new proposal on the implementation of the 2009 EU Fuel Quality Directive (FQD). This law set an emissions reduction target and gave the European Commission a legislative mandate to develop a methodology to account for greenhouse gas (GHG) emissions from the production of fossil fuels. Fossil fuels currently represent 95% of the EU's fuel consumption.

The Commission's 2011 proposal to implement the requirements for fossil fuels used a scientifically sound approach to label the significant variations in the GHG intensity of different fossil fuel "feedstocks", including higher values for fuels such as coal-to-liquid, tar sands, oil shale and gas-to-liquid. Since the FQD requires companies to report on the GHG emissions of the fuels that they place on the European market, using these different emission values, the FQD will for the first time hold the oil industry accountable for the carbon emitted during production of the fuels they sell on the European market. This accountability will send a much needed signal to oil suppliers to invest in cleaner fuels. We therefore urge you to continue with the implementation based on this scientific approach.

We are at a time in history when it is still possible to minimise the effects of climate change by making fossil fuels pay their full costs to society and thus accelerate a shift to cleaner energy. The consequences of your decision on the FQD as one part of Europe's climate actions will reach far beyond Europe's borders. We urge you to uphold the scientifically sound proposal in order to ensure Europe's climate legislation is fully implemented and that Europe maintains its leadership on climate action.

Yours sincerely,

Peter Smith Professor of Soils & Global Change University of Aberdeen

James E Hansen

Professor - Director, Program on Climate Science, Awareness and Solutions The Earth Institute, Columbia University

Dr. Ernst-Detlef Schulze Emeritus Professor Max-Planck-Institute for Biogeochemistry

Keith A. Smith Professor - School of GeoSciences University of Edinburgh

Mark Jaccard Professor, Resource and Environmental Management Simon Fraser University

Paul R. Ehrlich Professor - President, Center for Conservation Biology Stanford University

Ove Hoegh-Guldberg Professor - Director, Global Change Institute The University of Queensland

Johannes Orphal Professor - Director of Institute for Meteorology and Climate Research Karlsruhe Institute of Technology

Paul Crutzen
Professor for Atmospheric Chemistry
Max-Planck-Institute for Chemistry

Wolfgang Cramer Scientific Director Mediterranean Institute for marine and terrestrial Biodiversity and Ecology

Markus Reichstein Director

Max-Planck-Institute for Biogeochemistry

Dr Robert H Thomas Glaciologist - SIGMA Space Inc, NASA Wallops Flight Facility Wallops Island, USA

Timo Vesala Professor of Meteorology, Department of Physics University of Helsinki

Dr. Gilles Lemaire Directeur de Recherche Honoraire INRA

Lise Van Susteren Advisory Board, Harvard School of Public Health Harvard University

Dr. Thomas Foken Professor - Department of Micrometeorology University of Bayreuth

Dr. Marcus Lindner Head of Programme, Sustainability and Climate Change European Forest Institute (EFI)

Simon Donner Associate Professor, Department of Geography University of British Columbia

Dr. Bert Gielen Department of Biology University of Antwerpen

Bruce Arthur Osborne Associate Professor - School Of Biology & Environment Science University College Dublin

Danny Harvey Professor - Department of Geography University of Toronto

Bob Rees

Professor of Agriculture and Climate Change - Head of the Carbon Management Centre

SRUC

Dr. Nina Buchmann Professor - Institute of Agricultural Sciences ETH Zurich

Wilfred Candler

Former Professor of Agricultural Economics and Farm Management Massey University

Damon Matthews

Associate Professor, Geography, Planning and Environment Concordia University

Rona Thompson

PhD Senior Research Scientist NILU (Norwegian Institute for Air Research)

Federico Magnani

PhD, Professor - Forest Ecology Lab, Dept. Agricultural Sciences University of Bologna

Andreas Ibrom

Senior Scientist - Department of Chemical and Biochemical Engineering Center for Ecosystems and Environmental Sustainability (ECO) Technical University of Denmark (DTU)

Dr. Lutz Merbold

Institute for Agricultural Sciences (IAS), Grassland Sciences Group ETH Zurich

Anders Lindroth

Professor - Department of Earth and Ecosystem Sciences Lund University

Lorenzo Ciccarese

Senior Researcher - Nature Conservation Department ISPRA – Italy's National Institute for Environmental Protection and Research

Kirsten Zickfeld Assistant Professor Climatology Simon Fraser University

Lars Kaleschke

Professor at the Institute of Oceanography, Climate Campus University of Hamburg

John B. Moncrieff Professor - School of GeoSciences The University of Edinburgh

Dr. Katja Klumpp Grassland Ecosystem Research INRA

Ivan Janssens Professor - Department of Biology University of Antwerp

Dr. ir. Hans Verbeeck Assistant professor, Laboratory of Plant Ecology, Faculty of Bioscience Engineering Ghent University

Mette S. Carter Senior scientist - Department of Chemical and Biochemical Engineering Technical University of Denmark

Dr. Alex Coad Senior Research Fellow - Science and Technology Policy Research Unit (SPRU) University of Sussex

Dr. Bruce Ball Soils Specialist, SAC Crop and Soil Systems Research Group SRUC

Dr. Dave S. Reay Reader in Carbon Management University of Edinburgh

Dr. Ingeborg Levin Institut für Umweltphysik Heidelberg University

Harry McCaughey Professor of Climatology, Department of Geography Queen's University

Dr. Georg von Wühlisch

Federal Research Institute for Rural Areas, Forestry, and Fisheries Thünen Institute for Forest Genetics

Franco Miglietta Research Director Consiglio Nazionale delle Ricerche (CNR)

Nicolas Delpierre Assistant professor in Plant Ecophysiology Laboratoire Ecologie, Systématique, Evolution Université Paris-Sud 11

Dr. Michael Bahn Associate Professor, Institute of Ecology University of Innsbruck

Hans Langeveld Director Biomass Research

Grégoire T. Freschet Chargé de Recherche, Centre d'Ecologie Fonctionnelle et Evolutive CNRS

Richard Joffre
Directeur Adjoint, Centre d'Ecologie Fonctionnelle et Evolutive
CNRS

Dr. Tamir Klein Institute of Botany University of Basel

Sebastiaan Luyssaert

PhD, ERC grant holder, Laboratoire des Sciences du Climat et de l'Environnement IPSL, CEA, CNRS, UVSQ

Marijn van der Velde Research Scholar - Ecosystems Services and Management International Institute for Applied Systems Analysis