



INTERNATIONAL COUNCIL
FOR CAPITAL FORMATION

NICHOLAS STERN REVIEW OF THE ECONOMICS OF CLIMATE CHANGE

The impacts of climate change on growth and economic development

A submission by International Council for Capital Formation (ICCF) to the Oxonia
Discussion Paper

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1.0 INTRODUCTION

1.1 Comprehensive economic modeling is essential to the world's understanding of climate change and the development of optimum, realistic solutions to address the issue. The Stern Review has rightly asserted that the problems associated with climate change are global in their causes and consequences and that the associated economic challenges are complex. It is for these reasons that the International Council for Capital Formation¹ (ICCF) wishes to highlight the economic imperative of designing broad policies on a shared, global scale. Only by including analysis of the macroeconomic impacts of policies such as the Kyoto Protocol, can the best policy solutions - on a national and international level - be identified and developed.

1.2 The ICCF has focused on addressing the following key questions raised by the Discussion Paper for the Stern Review (published on 31st January 2006):

- How quickly current patterns of energy production and use can or should be shifted, and whether this can be done in a way that strengthens, rather than weakens, economic growth.
- How can policymakers create sufficiently clear and credible signals and the institutions to support them?
- How might these policies interact with existing incentives embedded in complex markets, particularly those for fossil fuels and electricity generation and supply?
- What are the market barriers and failures that may prevent the development and deployment of new and existing low carbon technologies, and what are the appropriate policy instruments to overcome these?
- More generally, how can the world act in a coherent and collaborative way to tackle a problem that is global in its origins and effects?

1.3 During the last four years the ICCF has researched and developed robust evidence, some of which it also presented to the House of Lords' Select Committee on Economic Affairs in February 2005. This evidence is based on detailed comparisons that have been made between the various economic assessments used

¹ The website for the International Council for Capital Formation (ICCF) can be found at www.iccfglobal.org

by the UK government, the European Commission, the Intergovernmental Panel on Climate Change (IPCC) and, by stark contrast, the United States government.

In November 2005, the ICCF has published a series of in-depth studies, analysing the broader economic repercussions of adopting Kyoto for the UK, Germany, Italy and Spain and specifically its impact for each nation on:

- Carbon dioxide emissions
- Energy consumption
- Energy prices
- Gross domestic product (GDP)
- Employment levels

1.4 This evidence and analysis shows that attempts to constrain European greenhouse gas emissions (GHGs) at the rate required by Kyoto will have large economic costs, which have been severely underestimated by European and UK policymakers to date. These economic impacts could drastically cripple these developed economies over the next decade and further beyond. Further, pursuing policy that undermines growth actually limits the ability of both developed and developing countries to engage protective, environmental and technology development measures.

1.5 The ICCF is an established think tank focusing on developing sound research and workable solutions to global problems affecting the environment, energy, tax policy, intellectual property rights and private pension plans for retirement security and trade.

1.6 The ICCF circulates its publications, commentary, and ideas around the globe to reach public officials on both sides of the Atlantic as well as in the Pacific Rim. The ICCF Board of Directors includes business leaders and opinion makers from around the globe.

1.7 The founding board of ICCF Trustee members include: Mr. Rudi Bogni, Sir Richard Greenbury, Mr. Robert L. Hamburger, Dr. Friedrich Hoess, Dr. Vincenz Lichtenstein, Sir Ralph Robbins, Hon. George P. Schulz, Mr. Peter Spira, Hon. Robert S. Strauss, Sir Kenneth Warren and Hon. John C. Whitehead.

2.0 ICCF RESEARCH

2.1 The ICCF analysis, which was prepared by Global Insight Inc. an international economic modelling firm, assumes that an economy-wide emission trading system is established and that the cost of emission allowances under Kyoto would be passed along to consumers in the form of higher energy prices and ultimately high prices for all goods and services. Consumers' purchasing power would be reduced by the higher cost of using energy, reducing real disposable income.

2.2 The main findings of the studies are detailed below:

- Output and employment losses would be expected because:
 - energy-using equipment and vehicles would be made prematurely obsolete
 - consumers would be rattled by rapid increases in living costs

- financial ministers concerned over possible inflation would most likely need to target more slack in the economy to deflate non-energy prices and thus stabilize the overall price environment.
- Consumption and residential fixed investment would be the hardest hit components of real GDP because of the direct loss in real disposable income.
- The economy's potential to produce would fall below Base Case levels initially with the cut back in energy usage, since energy is a key factor of production. Stronger investment would be required over the longer-term to build capital as a substitute for this lost factor. The decline in consumption and residential fixed investment relative to Base Case levels, however, would have a depressing impact on business fixed investment in the near-term.
- Labour productivity would decline because the other factors of production would be less efficient. Only as investment grows and the capital stock is expanded would productivity begin to improve.
- Post 2012, the impact on economic performance would begin to lessen if the target emission level under the Kyoto Protocol were maintained. The extreme change in the energy prices experienced during the years between 2008 and 2012 would not be repeated. While the percentage change in prices relative to the baseline would increase somewhat, the year-over-year change in prices would be reduced. However, achieving targets that are even more aggressive, would take ever larger carbon fees, and would continue to take a significant toll on economic performance. For example, if countries were to adopt a post 2012 target of a 60 percent reduction in CO2 by 2050, Italian industry would pay 54 percent more for natural gas in 2020 and UK industry would pay 57 percent more (Figure 1).

Figure 1 – Electricity and gas prices

	ELECTRICITY		NATURAL GAS	
	2010	2020	2010	2020
Italy	13%	14%	44%	54%
UK	35%	34%	46%	57%
Spain	23%	27%	42%	51%
Germany	31%	32%	30%	39%

2010: KYOTO TARGET

2020: 60% below 2000 levels by 2050

Figure 2 – GDP

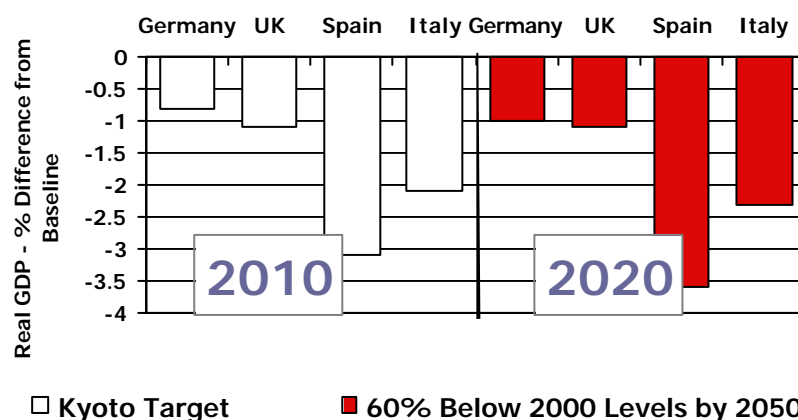
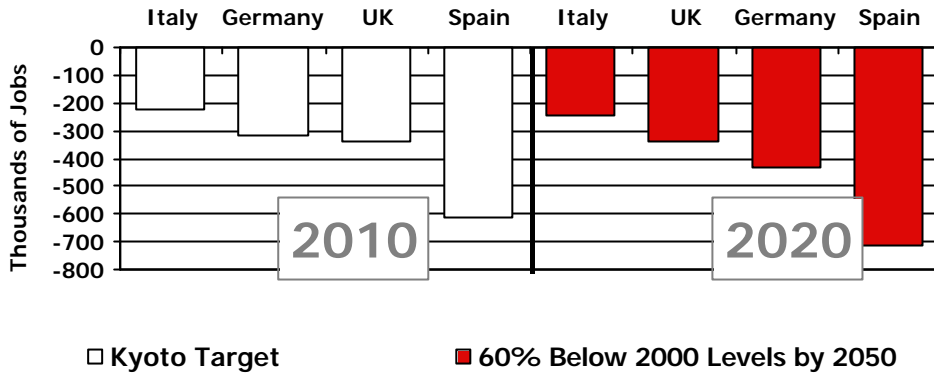


Figure 3 – Employment



3.0 RESPONSE TO OXONIA DISCUSSION PAPER

3.1 The Emission Trading System (ETS) put in place in 2005 in the European Union is a sectoral system that relies on a cap and trade system. The ETS requires approximately 12,000 large industrial emitters and utilities to reduce CO₂ emissions (or purchase the right to emit CO₂) in accordance with their country’s Kyoto Protocol targets.

3.2 The approach to emissions reductions embodied in the EU’s sectoral approach has however failed to make much of a dent in EU emission growth, but has the potential to make a significant impact on the economies of countries trying to meet their targets. The latest data from the European Environmental Agency shows that the “EU 15” are expected to be 4 percent above their emissions target in 2010 instead of 8 percent below 1990 levels as required under the Kyoto Protocol.

3.3 Furthermore, trying to reduce emissions through a cap and trade system applied at either “upstream” or “downstream” is likely to have serious consequences for the economy, including reduced GDP and increased unemployment rates. For example, various economic models show that the imposition of the Kyoto Protocol would reduce GDP levels in major EU countries by .8 to 3.1% annually by 2010 (see Figure 2 above). While the upstream approach (the current approach used by the EU) is perhaps easier to monitor and enforce because far fewer emitters would be in the system, it suffers from the fact that final consumers won’t see the direct impact of the energy tax (or permit price) on their energy and fuel bills. On the other hand, if a business owner (say a paint manufacturer) who owns equipment which emits CO₂ has to submit an emission allowance for each ton emitted, he will be able to make a careful cost-benefit analysis of when it makes economic sense to replace his capital equipment or make other production related decisions. An obvious question is, if a “downstream” system for reducing CO₂ emissions is impractical (because of millions of small emitting sources), and an “upstream” system results in only attenuated decision making on emissions, how efficient would a cap and trade system be in providing emission decision makers with a realistic incentive to efficiently and significantly reduce emissions?

3.4 There is evidence to suggest that the ETS has already had a significant impact on energy prices in the UK. In July 2005, the environmental research organisation Trucost produced a briefing on the UK National Allocation Plan (NAP). It found that UK Electricity prices have risen by 24% for medium industrial users since the introduction of the NAP. Trucost stated that 50% of this rise is in fact attributable to the EU ETS, with the other 50% due to higher fuel prices and increased demand.

3.5 If the EU wanted to reduce its emissions to the Kyoto Protocol target, it would have to use an economy-wide approach and covering all sectors, including transportation and households. ICCF's recent macroeconomic analyses on Germany, Spain, UK and Italy shows that an economy-wide ETS designed to meet the Kyoto targets would reduce these countries GDP levels and employment significantly in 2010¹.

3.6 In addition, given that developing countries are likely to account for much of the growth in emissions over the coming decades, it is essential that international agreements support action in these countries.

3.7 Involving developing countries like China, India, Indonesia and Brazil is required to achieve meaningful progress in limiting the growth in global emissions. However, in climate policy discussions during and after the negotiations on the Kyoto Protocol, developing countries like China and India made it clear that they would not participate in mandatory programs that would place a cap on their emissions since this would be in direct conflict with their population's growth and the need to improve their citizens' standard of living. The notion that the developing countries would join an EU cap/trade program when they rejected mandatory obligations under the Kyoto Protocol program is simply unrealistic.

3.8 China and India have indicated that they are willing to participate in voluntary technology based efforts to improve their citizens' standard of living, while addressing ground-level pollution issues as well as climate concerns. The recently initiated Asia-Pacific Partnership on Clean Development and Climate is an example of this. Drawing on developing country willingness to participate in multinational joint voluntary programs that focus on improving technology is vital. These agreements can address other issues like ground-level pollution and improved living standards, while also allowing progress on climate issues and as such, may be a much more productive approach than mandatory cap/trade programs.

4. CONTACT DETAILS

4.0 For more information about the ICCF or any of the research, please contact Dr. Margo Thorning, Managing Director of the International Council for Capital Formation at:

Park Leopold
Rue Wiertz 50/28 B-1050 Brussels,
BELGIUM
Telephone: +1 202 468 09 03?
Email: mthorning@iccfglobal.org
Website: www.iccfglobal.org

The ICCF can also be reached in Washington DC at 1750 K Street,NW, Suite 400,Washington D.C. 20006.

¹ see <http://www.iccfglobal.org/pdf/Country-reports-overview.pdf>