

# **The Kyoto-Marrakech System: a Strategic Assessment**

## **Module 2:**

### **Corporate engagement in US, Canada, the EU and Japan and the influence on domestic and international policy**

Kirsty Hamilton<sup>1</sup>, Tom Brewer<sup>2</sup>, Takao Aiba<sup>3</sup>, Taishi Sugiyama<sup>4</sup>, John Drexhage<sup>5</sup>,

---

<sup>1</sup> Independent [kirsty\\_hamilton@hotmail.com](mailto:kirsty_hamilton@hotmail.com)

<sup>2</sup> Georgetown University, McDonough School of Business, Washington DC, USA [brewert@msb.edu](mailto:brewert@msb.edu)

<sup>3</sup> Development Bank of Japan [taaiba@dbj.go.jp](mailto:taaiba@dbj.go.jp)

<sup>4</sup> Central Research Institute of Electric Power Industry, Japan [sugiyama@criepi.denken.or.jp](mailto:sugiyama@criepi.denken.or.jp)

<sup>5</sup> International Institute for Sustainable Development, Canada [jdrexhage@iisd.ca](mailto:jdrexhage@iisd.ca)

**Acknowledgement and disclaimer.** This paper forms module 2 of the project 'A Strategic Assessment of the Kyoto-Marrakech System'. The synthesis report of the project is available as *Strategic Assessment of the Kyoto-Marrakech System: Synthesis Report*, available from the Sustainable Development Programme of the Royal Institute of International Affairs and placed on websites [www.riia.org](http://www.riia.org), [www.iisd.org](http://www.iisd.org), and [www.climate-strategies.org](http://www.climate-strategies.org). This paper is available on the website <http://www.iccept.ic.ac.uk/a5-1.html>

The core research was sponsored by the governments of Sweden, Canada and Switzerland. We are deeply indebted to all the sponsors and reviewers, but the views expressed in this paper represent those of the principal named authors and should not in any way be attributed to the sponsoring governments.

# Contents

Summary .....	4
US.....	4
Canada.....	5
EU.....	5
Japan.....	6
Common business approach to climate policy .....	7
Sustainable Development: a key second Commitment Period issue .....	8
UNITED STATES.....	10
Shifts and Splits in the Coalitions and the Consensus-Building Process.....	10
1. Introduction .....	11
2. Shifts and splits.....	13
3. Business participation in government policymaking.....	15
4. Participation in government and NGO programmes .....	17
5. Engagement of US-based firms on climate issues in the future .....	18
Exhibit 1. US Climate VISION Programme – Highlights.....	22
Exhibit 2. Goals of Industry Associations in US Climate VISION Programme.....	24
Exhibit 3. Firms Participating in Environmental NGO Programs .....	26
CANADA.....	28
EUROPE .....	30
1. Introduction .....	30
2. INTERNATIONAL: Brief history of business intervention to present.....	32
3. EU-US DIFFERENCES: style or substance?.....	37
4. National and Regional Policy: business interventions.....	41
5. Company level: carbon on the balance sheet.....	44
JAPAN .....	47
Alien Born at Home: Kyoto Protocol and Japan .....	47
CASE STUDY, JAPAN: KEIDANREN Voluntary Action Plan on Environment .....	52

## Summary

*This module develops issues related to corporate engagement in the US, Canada, EU and Japan during the Kyoto to Marrakech period, and furnishes an analysis of the current situation in these three geographical blocks as we enter a phase of second Commitment Period negotiations.*

Reviewing corporate engagement at national and international levels is a very broad field, and these four countries or regions present distinct political contexts and histories within the climate change debate, however common themes emerge in each segment. Starting points include the fact that businesses, more particularly, business organisations are one of the key players influencing the public policy process in each country. The principal business interest is national policy given the stronger immediate and material effect on companies; and business has most influence at this level. However the UNFCCC and Kyoto Protocol are seen as a critical framework shaping the longer-term business environment, creating both a market threat to companies with heavy reliance on fossil fuels, and future market opportunities through the commodification of carbon.

Business engagement at the international level has principally been through trade associations and has shifted post-Kyoto from 'big picture' strategic matters on the structure of the Protocol agreement to detailed rules of how carbon markets will function. So far public intervention by the business sector in the Second Commitment Period debate has been at a level of very basic question-raising; most preoccupation at the international level resides with the Kyoto mechanisms. This reflects the tensions between achieving, and being seen to achieve, short-term emissions reductions and the more fundamental transformation of the energy economy away from fossil fuels. This tension is likely to instil blockages into the second Commitment Period debate, particularly where a consensus over the longer-term implications of going beyond Kyoto is required. Additionally business may have an interest in shifting the form of emissions reduction targets towards emissions intensity or even sector specific goals.

### US

At present businesses based in the US face complexity and uncertainty in climate policy. This can be summarised by divergence in approach in several key areas: a hands-off Federal approach to climate policy versus increasing State-level CO<sub>2</sub> policy implementation; the voluntary approach preferred by the Administration compared to a Congress where firmer policy approaches are being increasingly introduced; the national versus international approach, where US multinational companies face a bifurcating system – the Kyoto mechanisms on the one hand, and a national or potential 'hemispheric' approach on the other; finally the open question of US future 're-entry' into the Kyoto system. These

dichotomies are the result of powerful interventions by emissions intensive industry sectors during the last decade, clashing with growing public and political concern about this issue.

This is creating a situation where there are increasing splits between and within sectors vis a vis the hedging strategies they are using to tackle this uncertainty. While there remains an extensive and powerful lobby against any mandatory approach to emissions reduction, there is a gradual acceptance that more mitigation measures are likely, and many companies now have emissions goals of widely varying types and stringency.

## Canada

More closely akin to the overall US business approach on climate change, by and large Canadian businesses have regarded the Kyoto Protocol as a potential threat to their economic growth opportunities. This is the case even for relatively proactive oil companies like Shell and Suncor, as evidenced by their continued plans to make significant investments in Alberta's tar sands. That said, many such firms, including the two mentioned above, are increasingly sensitive to their carbon liability and so are pursuing a number of avenues – offsets, emissions trading, technology, renewables - that will work to protect their exposure in this area.

Nevertheless, some industries are beginning to speak out about lost opportunities for moving Canada's economy in a more climate friendly and sustainable direction, over the long term. Coalitions, such as kyotoSmart, comprised of a range of stakeholders, including the private sector, provinces, labour groups, NGOs, are making their points heard loud and clear and are likely to gain political attention over the next few months. They are, at this point, however, definitely in the minority of Canadian private sector interests.

## EU

The political context within the EU differs from the US in that – amongst other things – a rather more predictable international policy approach exists, coupled with a commitment to act on climate, driven by several heads of government. In addition there is a strong public expectation of business responsibility on climate and other environmental issues. EU business largely accepted that EU ratification of the Protocol was inevitable, and that perception generally continued even following US withdrawal.

European business has a more 'progressive' reputation than its US counterparts. This has been generated through specific, well timed interventions such as Sir John Browne's speech breaking BP from the ranks of the US oil sector in the lead up to Kyoto, an active progressive lobby at the negotiations (sustainable energy businesses, the insurance sector), well-publicised early experimentation

with carbon trading and overseas mitigation efforts, together with engagement in public discussion on climate change.

A real transatlantic difference, going beyond hedging, is less easy to establish. 'Corporate social responsibility' (CSR) and reputational risk management are high on the corporate agenda in the EU for public relations and political reasons, driving strong marketing campaigns. Yet, in general, interest in emerging carbon trading markets, for example, still remains defensive at this stage –self protection against a carbon constrained future, rather than new market opportunity. Lobbying efforts, by traditionally influential business associations, at EU level remain focussed on securing a voluntary or market approach ostensibly to protect 'international competitiveness', although splits did emerge over the carbon trading discussion. The progressive business voice is growing but remains small and fragmented at a national level, and is generally far less influential.

## Japan

The context for the conventional business view of climate policy is a 'widespread consensus' on the existing energy efficiency of the economy, characterised as a wrung out towel, contrasting with the inefficient 'dripping wet towel' of the United States. Technology being put forward within the European Climate Change Programme reports was already outdated within Japan, and industry perceives that it faces considerably higher marginal abatement costs compared to European or US counterparts. Six sectors produce 80% of total energy and industrial emissions, with the electricity sector and major energy user, iron & steel, topping the list. This gives these sectors political weight in this debate, and influence in the position of the main business lobby, Keidanren (now the Japanese Business Federation). Keidanren's Voluntary Action Plan (KVAP) is used for a detailed case study and critique of the industry's negotiated approach.

On the international front, Japanese business felt misled by the targets established in the Kyoto Protocol. Targets, in Japan, were generally used to signal direction rather than establishing mandatory obligations. This together with remaining uncertainties over the 'burden sharing' between government and industry required to meet Japan's Kyoto commitment, have reinforced business resentment surrounding the Protocol. Japanese business is likely to look for a second commitment period approach that recognises sectoral or economic efficiency.

While there appears to be a more aggressive approach to emissions reductions and technological leadership opportunities within the auto-manufacturing sector, this sector accounts for less than 2% of emissions from the 34 major industries. The active business lobby on climate represents a small number of large emissions intensive companies. In common with EU and US, SMEs are not active, and the progressive lobby in favour of reductions is small and weak,

however some hairline fractures have appeared with services company RICOH, for example, joining with a European lead pro-ratification business campaign.

## Common business approach to climate policy

Across all regions there is a common set of policy preferences from the emissions intensive and energy intensive sectors, which generally hold greatest political sway. These are often strenuously argued for, particularly at national level, even in the European Union where there is greater business acceptance of government role in establishing market frameworks.

These preferences can be categorised as: voluntary rather than mandatory, market rather than regulatory, 'inclusive' rather than restrictive vis a vis technology, and in the case of emissions trading: all borders, all activities, full fungibility inclusive of non-Kyoto nations. Indeed there is an international business 'consensus' that these market-orientated approaches will deliver, if 'flexibility' is fully handed over to business. However the discrepancy between emissions profiles and emissions reduction goals suggests that this approach is not yet working, nor is it clear whether it will really foster longer term investment changes in preparation for much deeper cuts in emissions, compared with 'management' of the issue.

Business has split, however, in its preferred level of certainty in the regulatory and policy environment when it comes to future commitments. In its mid-2003 climate briefing papers, the International Chamber of Commerce, notes that some businesses view certainty as 'essential' in allowing business to plan for future constraints, whereas on the other hand, some view that certainty itself does not reduce costs if the policy approach is 'poorly designed', from a business perspective. This divergence suggests that there will be an ongoing tension between resolving policy matters to create clear policy drivers for business decisions in the short term, and pressure on governments to keep decisions open to optimise the result to the satisfaction of the sectors involved – a 'brinkmanship' approach.

## Sustainable Development: a key second Commitment Period issue

Sustainable development has already emerged as a critical political matter in the 2CP debate, its lack of clear, shared definition, has opened it up as a new battleground, as observed in COP8 interventions by the US, OPEC and industry actors.

There are already signs of a consolidating business front embracing the vocabulary of 'sustainable development' and equity in relation to new commitments. This appears to include the view that new commitments, which affect business activities contributing to economic growth – in developed or developing countries - could adversely affect sustainable development. At its worst - the rhetoric of poverty alleviation and sustainable development is used to cleave divisions between north and south: a repackaging of the early 1990s strategy of the US industry lobby aimed at maintaining business as usual activities over progress on new agreements.

At COP8, in an apparent volte-face from its previous stance, the US argued against 'burdensome' new commitments for developing countries, and that its own domestic climate policy should not impact upon its national economy, because: *"Americans will not be the only people in the world to be impacted, as our economy provides opportunities for growth and development globally through trade, economic assistance, and private foreign investment."*<sup>6</sup> Brian Flannery from ExxonMobil reported in COP8 on the outcomes of an IPIECA workshop in Malaysia, noting, "the need to consider climate change in the context of development and poverty alleviation; the CDM as a new pathway to development with multiple objectives..."<sup>7</sup>

While noting these clear warning signs, the development agenda is a critical place in which to bring together economic and poverty alleviation strategies together with those of climate change mitigation and resilience to climate change impacts.

Regionally and nationally: within Europe, the national debates leading to national permit allocation plans for the emissions trading market, will start to crystallise real sectoral strategies and differences. As 'micro carbon' issues start to resolve more clearly - when carbon appears on the corporate balance sheet and carbon assets and liabilities are defined - this will precipitate more sharply differentiated winners and losers in emissions reductions within and between sectors. In addition, as the business impact of climate policies is tested in the real world and real facts emerge on competitiveness impacts of government policy, this should assist in both providing a firmer basis for government policy and provide business with greater clarity.

---

<sup>6</sup> Paula J. Dobriansky, Under Secretary of State for Global Affairs, US, Remarks to the High-Level Segment Roundtable on Climate Change and Sustainable Development, COP-8.

<sup>7</sup> Earth Negotiations Bulletin on the Side, 1 November 2002, [www.iisd.ca](http://www.iisd.ca)



Finally, surprises and risks - such as climate disasters, and litigation interventions have the prospect of rapidly changing the public policy and corporate liability environment.

# **UNITED STATES**

Thomas L. Brewer

## **Shifts and Splits in the Coalitions and the Consensus-Building Process**

### Contents

1. Introduction
2. Shifts and splits
3. Business participation in government policymaking
4. Business participation in government and NGO programmes
5. Engagement of US-based firms on climate issues in the future

### Exhibits

1. US Climate VISION Programme – Highlights
2. Goals of Industry Associations in US Climate VISION Programme
3. Firms Participating in Environmental NGO Programmes

## 1. Introduction

Firms in the US have undertaken some initiatives on climate change issues on their own and independently of government policies and programmes. Although such business activities are not explicitly within the focus of this report -- which is centred on firms' perspectives on government policy issues and participation in US policymaking -- they are nevertheless relevant because they are indicative of the increasing interest and willingness of firms to undertake actions on their own -- for whatever reason -- in the absence of mandatory government regulations. Firms worry about public perceptions of them as industry leaders or laggards on climate change; indeed, rivals may compete to be perceived as industry leaders. For instance, Nike has reduced by 67 percent its use of sulfur hexafluoride, a greenhouse gas that is inserted in air bubbles in their shoes (DiPaoloa and Arris, 2001: 300). General Motors has participated with Nature Conservancy in the purchase of 30,000 acres of rain forest in Brazil to preserve a carbon sink - and potentially gain carbon emission credits. A few days after Ford announced its emission reduction/fuel efficiency plan a couple years ago, General Motors announced that it, too, would improve the fuel efficiency of its SUVs. The Vice Chairman of the Board observed that GM's record on the fuel efficiency of SUVs and light trucks, in fact, had been better than Ford's for many years. He also asserted that GM had 'spent years achieving this leadership position' (DiPaola and Arris, 2001: 298; also see Wall Street Journal Europe, 2001: 21).

### Cross-national differences<sup>8</sup>

Yet, despite such cases of increased activity among US firms, as a group US-based firms tend to lag behind their European and Japanese counterparts in their perspectives on climate change issues, though the cross-national differences in at least some industries may be diminishing over time (Levy and Kolk, 2001; Newell and Levy, 2000).

The only two auto firms currently marketing hybrid fuel automobiles in the US, are both Japanese -- though Ford will introduce one in 2003 and General Motors in 2007 (New York Times in International Herald Tribune, 2003). Despite the fact that DaimlerChrysler is planning to introduce a hybrid pickup truck in 2003, the COO of Chrysler recently observed rather skeptically that 'Everybody is jumping on the hybrid bandwagon and saying this is the most important thing and without it the world's going to end. It reminds me of the hype we had around e-business in the early '90s' (New York Times in International Herald Tribune, 2003). Meanwhile, the Daimler part of DaimlerChrysler has announced its intention to produce *hydrogen fuel cell* automobiles and sell them in the US market within several years (but its shorter-term emphasis may be on diesel engines rather than hybrid fuel vehicles).

---

<sup>8</sup> I am indebted to Kirsty Hamilton for information about several of the cases reflecting cross-national differences and conflicts within multinational firms.

There is evidence that US insurance firms are lagging behind their competitors in other countries in taking climate change seriously. When it signed the United Nations Environmental Programme's Statement of Environmental Commitment by the Insurance Industry, the US-based Employers Reinsurance Company noted: 'As we are *beginning* to appreciate within the [US] reinsurance industry, the effects of climate change can be devastating' (South, 2000: 15; italics added), but it was the only US-based firm to sign the agreement. Further, the observation of a British executive about transatlantic differences is pertinent; he noted that the insurance industry in Europe is 'often ... the only large commercial body able or willing to challenge the propaganda and complacency of US business and the oil lobby' (South, 2000: 16).

### Government regulatory regimes

A common tendency in the US to resist action on climate change issues persists partly because of a strong ideologically-based opposition to government intervention on most issues. However, as expectations become more widespread that there will be some kind of mandatory regulatory regime, the desire to know its nature and particular elements sooner rather than later also increases. There has thus been a shift among US firms away from a focus on ideological issues about possible future government intervention to a focus on more specific, tangible and current issues about government regulations.

Although the specifics of these issues of government regulation are of course new in many respects, the underlying issues for business are familiar. In particular, firms want regulatory certainty and simplicity; but in their view, they face -- or fear they will face -- regulatory uncertainty and complexity.

In fact, the basic features of the regulatory environment for climate change mitigation are changing, and corporate executives in many industries are concerned about what they view already as complexity and uncertainty – at many levels, international, national and sub-national levels. At the *international* level, there is progress towards ratification of the Kyoto Protocol, but without US participation. At the *national* level, there is continued emphasis on voluntary programmes by the US administration, while there is support for mandatory measures in congress and among the public. At the *sub-national* level, the proliferation of programmes by US state and local governments is also increasing the complexities and uncertainties about the future regulatory regime that firms will be facing. (See the companion report on 'US Engagement of Climate Change Issues' for further information on these points.)

### Firms' responses

In the face of these features of the regulatory environment on climate issues, firms' responses to government policies are increasingly driven by desires for

regulatory simplicity and certainty – or, to put it negatively, avoidance of complexity and uncertainty.

As firms respond to these general concerns about the regulatory environment and also to the specifics of individual policy developments and proposals, there are *shifts* in some of their positions and *splits* among them. Solid empirical evidence is rather difficult to obtain on these shifts and splits; but it is nevertheless possible to observe at several levels of analysis – business-wide, industry sectors, and individual firms -- as the next section of the paper reports.

## 2. Shifts and splits

### Conflicts within multinational firms

There have been conflicts about climate policy issues between parent firms and their subsidiaries in multinational firms. A split within Shell between the parent and its US affiliate and a split between Ford of the US and its Swedish affiliate Volvo are illustrative of differences that can emerge among the different national components of a multinational firm. The US affiliate of Royal Dutch Shell withdrew from the Global Climate Coalition (GCC) after its parent. An executive of Volvo announced that it still supported the Kyoto Protocol, while its parent Ford opposed it (Wall Street Journal, 2001: B1).

The Spanish subsidiary of Coca-Cola and the Swedish subsidiary of Honeywell have also adopted positions on the Kyoto Protocol that have been in conflict with their parent firms' positions.

Contrariwise, the US subsidiaries of non-US owned foreign parent corporations have been among the most active participants in the process of creating the California GHG Registry, while US-based firms have tended to be less enthusiastic.

### Industries and industry associations

Of course, in a large and diversified economy there are significant variations in interests and perspectives across industry sectors and sub-sectors – for instance, the energy and insurance industries at opposite ends of a continuum. These differences can be substantially explained in the US – as in other countries – by the significant differences in the relative importance of carbon dioxide mitigation efforts across industries.

Of the numerous industry associations that have taken positions on climate change issues, some have opposed the Kyoto Protocol and other mitigation measures; others have supported the Protocol and mandatory domestic

emissions controls. One major shift occurred during 2002 when the Business Roundtable said that firms should take the problem of climate change seriously and undertake measures to counter it. This was politically significant because the Business Roundtable is widely acknowledged to be an influential representative of the views of leaders of major firms and because it is generally regarded as reflecting 'mainstream' executives' views.

*Ad hoc* industry organizations have taken public positions and periodically undertaken major advertising campaigns on government policy questions. Some have been opposed to mandatory mitigation efforts; a particularly prominent one has been the Global Climate Coalition (GCC). For several years, the GCC has been a major lobbying organization against the Kyoto Protocol, and it has disputed the consensus view of scientists, including the Inter-Governmental Panel on Climate Change. Within key industries, some firms joined the GCC earlier and left later than their rivals; some did not join at all. Within the auto industry, for instance, Ford left the GCC during 2000; then DaimlerChrysler left a month later; and General Motors subsequently left. On the other hand, some auto firms never joined. Within the oil industry, Shell and BP left before Texaco, which was the first US-based firm to leave (DiPaola and Aris, 2001: 255-56, 263-264). The US affiliate of Shell remained a member for a matter of months after the parent firm Royal/Dutch Shell of the UK and Netherlands withdrew.

Other industry associations have also opposed mitigation measures and/or disputed the scientific consensus about global warming. For instance, the United States Council for International Business (USCIB), which represents several hundred large multinational corporations, has opposed the Kyoto Protocol (though support for this position was questioned by some of its members with foreign parents, who in fact support the Kyoto Protocol). Another industry organization, the American Petroleum Institute (2001) challenged the analysis by the US National Academy of Sciences (2001) of the Third Assessment Report of the IPCC (2001).

In July 2000, the US Chamber of Commerce and 25 other industry groups petitioned the US Environmental Protection Agency (EPA) to oppose a proposal under consideration for the EPA to limit carbon dioxide as a greenhouse gas. This industry petition was a response to an earlier petition in October 1999 by business and environmental organizations that the EPA should apply the Clean Air Act to greenhouse gas emissions (DiPaola and Arris, 2001: 290). Subsequently in the summer of 2001, in a different political context, another industry association, the Small Business Survival Committee, lobbied the US government to resist European pressures to adopt controls on greenhouse gas emissions.

On the other hand, there are also many industry associations that support mitigation measures. These include, for instance, the American Council for an Energy Efficient Economy and the US Council for Energy Alternatives.

#### Think tanks

Business perspectives are sometimes expressed -- and exercise influence -- indirectly through 'think tanks'. In this regard, the roles of the Competitive Enterprise Institute and the Cato Institute as 'skeptics' about the problem of climate change and their criticisms of efforts to deal with it are important. For instance, the Cato Institute has opposed Mr. Bush's proposal in his State of the Union speech for a \$1.2 billion federal government programme to support R&D on hydrogen fuel technology for vehicles (Economist, 2003).

On the other hand, of course, such think tanks as Resources for the Future have been actively involved in designing and promoting cap-and-trade systems for climate mitigation.

### 3. Business participation in government policymaking

#### Pluralistic system

In the highly pluralistic US political system, individual firms and industry associations can exercise influence at many points in legislative, administrative and diplomatic decision-making processes. Numerous committees in the Congress and numerous agencies in the national government have authority over various aspects of climate change policy. These include, for instance, expenditures for technology development programmes in the Energy Department and international technology transfer programmes in the State Department, regulatory programmes in the Environmental Protection Agency, and participation in international negotiations by several agencies.

Within the executive branch of the national government, the key decision-makers on climate change issues that business tries to influence can be imagined as a set of concentric circles with the President at the center. The innermost circle of his advisors includes Vice President Richard Cheney, Chief of Staff Andrew Card, and Political Advisor Karl Rove -- all of whom can be presumed to be strongly opposed to any mandatory or otherwise serious climate change mitigation policy. In the current administration, some business groups have relatively easy access to these key government officials. For instance, energy firms have had much access to the Vice President, who was of course an energy firm executive before becoming vice president. (The General Accounting Office, an arm of the Congress, lost its legal case to try to obtain a list of the firms and associations that were involved in the administration's review of energy policy, including climate policy.)

(See the related report, “US Engagement on Climate Change Issues,” for additional information about government programmes and politics at the national level.)

## Federal System

The US political system is not only decentralized at the national level; it is also decentralized across levels of government. Because the US has a federal political system, government climate policy issues have become important at the local and state levels as well as the national level, and business participates in policymaking processes at all levels. Further, business influence in Congress, as in state and local governments, depends on the state and local economic significance of an industry (or individual firm).

(See the related report, “US Engagement on Climate Change Issues,” for additional information about the programmes at the state and local levels.)

There are now numerous state-level programmes to mitigate climate change that are of direct interest to business. In some, as in the California case above, there are new mandatory emissions regulations. In other instances, the programmes involve participation in emissions trading schemes, as in New Hampshire and other Northeastern US states, which have joined with Canadian provinces in a regional scheme.

The on-going case of California’s legislation to reduce carbon dioxide emissions on autos illustrates how business can become involved in the policy process at more than one level of government in a federal system. The case also illustrates how business can target more than one branch of the government for its political activities. Finally, it illustrates how political coalitions involving business can involve diverse participants.

US auto firms and the United Automobile Workers union combined to oppose the proposed legislation when it was in the California state legislature. Once the legislation had been passed and signed by the governor, the auto firms began to lobby the national administration to oppose the California legislation. (The auto firms presumably have easy access to White House Chief of Staff Andrew Card, who was an auto industry lobbyist before joining the current administration.)

The auto firms argue that the state law pre-empts the authority of the national government to make regulations concerning automobile fuel-efficiency standards. At the same time, the state of California and environmental organizations argue that the California law is an attempt to impose more stringent air pollution regulations, a prerogative that it is allowed by national environmental legislation (specifically the Clean Air Act). The matter will be decided at least initially in a US Court of Appeals, and perhaps eventually the national Supreme Court.



## 4. Participation in government and NGO programmes

Information about firms' participation in the climate change mitigation programmes of the national governmental and environmental NGOs indicates shifts and splits in business perspectives. The changing lists of participating firms reflect changes in individual firms' policies about climate change issues. And the fact that some firms within any given industry participate while other firms in the same industry do not participate obviously reflects splits. Although it is beyond the scope and resources of this report to provide comprehensive and systematic time series data for all relevant governmental and NGO programmes, it is possible to provide data on some programmes.

### National government programmes

The US administration made a concerted effort to enlist the participation of industry associations and firms in its new Climate VISION programme, which was announced in February 2003. This is a programme in which industry associations have agreed to encourage their members to undertake actions that would facilitate the achievement of the administration's target of an 18% reduction of GHG emissions 'intensity' by 2012, compared with 2002 levels. Those that signed up include seventeen associations from several sectors, including energy and transportation, plus the Business Roundtable, whose membership includes 150 large firms from many sectors.

*See Exhibit 1 for a list of the individual associations that are participating in the programmes.*

There is much diversity in the nature of the goals that the associations have set, and there is no obligation for individual firms to participate.

*See Exhibit 2 for the details of the targets.*

### Environmental NGO programmes

Some firms have decided to participate in the climate change programs of certain environmental NGOs. Memberships in these NGO programs are important indicators of firms' strategic behavior because they reflect not only symbolic external commitments with implications for government relations but also tangible internal commitments of resources to new programs within firms. The programmes of two high-profile NGOs, Environmental Defense and the Pew Center on Global Climate Change, involve direct corporate participation. They can be briefly described as follows:

*Environmental Defense – Partnership for Climate Action: '...The primary purpose of the Partnership is to champion market-based mechanisms as a means of*

achieving early and credible action on reducing greenhouse gas emissions that is efficient and cost-effective. Each company in the Partnership for Climate Action has already set a firm target for greenhouse gas emissions reductions....' ([www.ed.org](http://www.ed.org) - 3 October 2002).

*Pew Center on Global Climate Change – Business Environmental Leadership Council: '...We accept the views of most scientists that enough is known about the science and environmental impacts of climate change for us to take actions to address its consequences. ...Businesses can and should take concrete steps now in the U.S. and abroad to assess opportunities for emission reductions, establish and meet emission reduction objectives, and invest in new, more efficient products, practices and technologies....'* ([www.pewclimate.org](http://www.pewclimate.org) - 3 October 2002).

*See Exhibit 3 for a list of the individual firms participating in these NGO programmes.*

## 5. Engagement of US-based firms on climate issues in the future

Firms' are increasingly worried about their competitive positions internationally and domestically, and this presents opportunities for engaging them. Furthermore, the isolation of the US administration is a problem for firms because it exacerbates the complexities and uncertainties they face, and this also presents opportunities for engaging them.

Because there is currently no clear national consensus on climate change issues – not among the public, not within the Congress and not among regions of the country – it is unrealistic to expect a consensus to exist soon among diverse business interests. However, this does not mean that it is not possible to widen the range of firms that are engaged on the issue. Indeed, there are many ways to foster the development of a more extensive and more influential pro-mitigation business coalition during the next several years.

More attention could be focused on the evidence that global warming has already occurred and that it is already causing economic damage - - in short, a concentration on climate change more as a *current* problem, not merely a problem of decades or even a century from now. US firms, perhaps more than most, have a short-term focus. This is especially important to the insurance industry – which could become a major force in a climate change mitigation coalition.

More attention could be given to how *firms outside the US* are preparing for a carbon-constrained future.

Emphasis could be given to the point that there are *already technological and market-based solutions* to the problem of climate change that are available now and they will increase in importance in coming years and offer many business opportunities to firms. This is especially important to investment banking and brokerage firms.

More emphasis could be given to the long-term *competitive disadvantages of being a laggard* on climate change issues. Firms that do not begin to adapt now will face a more expensive learning curve later.

There could be more attention given to the possibility of the use of off-setting tariffs or other measures to counter the energy-price advantages of firms with operations in countries that have not agreed to Kyoto Protocol emission limits.

## References and Suggestions for Further Reading

- American Petroleum Institute. 2001. *Comparison of Findings: National Academy of Sciences Report and the Intergovernmental Panel on Climate Change Report*. Washington, DC: American Petroleum Institute.
- Arris, L. (Ed.). 1997. *Global Warming Yearbook*. Arlington, MA: Cutter Information.
- Arris, L. (Ed.). 1998. *Global Warming Yearbook*. Arlington, MA: Cutter Information.
- Arris, L. (Ed.). 2000. *Global Warming Yearbook*. Arlington, MA: Cutter Information.
- Brewer, Thomas L. (2001). Global warming as a business strategy issue, Annual Meeting of the European International Business Academy, Paris, December 2001.
- Brewer, Thomas L. (2003). Multinationals, the environment and the WTO: issues in the environmental goods and services industry and in climate change mitigation, in Sarianna Lundan, Alan Rugman and Alain Verbecke, eds., *Multinationals, the Environment and Global Competition*. Elsevier, forthcoming in 2003.
- Brewer, Thomas L. (in progress). How firms respond to global warming: political economy models of business strategy.
- Cutter Information. 2001. The State of Global Environmental and Social Reporting: The 2001 Benchmark Survey - Prospectus. Arlington, MA: Cutter Information.
- Economist (2003). 'The next Apollo mission?', 1 February: 29.
- DiPaola, M., and Arris, L. (Eds.). 2001. *Global Warming Yearbook: 2001*. Arlington, MA: Cutter Information.
- Global Environmental Change Report. 2001a. Auto giant positions for fuel cell market. 13 (June 22): 7-8.
- Global Environmental Change Report. 2001b. Shell enters US wind market. 13 (August 10): 6-7.
- Levy, D. L., and Egan, D. 1998. Capital contests: National and transnational channels of corporate influence on the climate change negotiations. *Politics and Society*, **26**: 335-359.
- Levy, D. L., and Kolk, A.. 2001. Strategic responses to climate change in the oil industry: Home- country effects or global convergence. Paper prepared for presentation at the annual meeting of the International Studies Association, Chicago.
- Munich Re. 2001. *Annual Report: Natural Catastrophies 2000*. [www.munichre.com](http://www.munichre.com), August 21, 2001.
- Newell, P., and Levy, D. L. 2000. Oceans apart?: Business responses to the environment in Europe and North America. *Environment*, **12**.
- NYT in IHT, New York Times in International Herald Tribune (2003). 'Gas-electric vehicles gaining ground', 29 January: 2. By Danny Hakim.
- O'Neill, K., and Reinhardt, F. 2000. What every executive needs to know about global warming. *Harvard Business Review*, **78**: 128-135.

Reinhardt, F.L. 2000a. *Global Climate Change and BP Amoco*. Harvard Business School Case Study, N9-700-106. Boston, MA: Harvard Business School.

South, S.G. (Ed.). 2000. *Corporate Leadership on Climate Change*. Arlington, MA: Cutter Information.

Wall Street Journal. 2001. Global-warming treaty opens corporate rifts, and activists jump in. August 27: B1.

Wall Street Journal Europe. 2001. Auto makers see green. May 18-19: 21, 26.

## Exhibit 1. US Climate VISION Programme – Highlights

### Industry Sector Associations

Industry associations in four sectors are participating. In addition, the Business Roundtable, which is an 'umbrella' association including firms from many sectors, is participating. They have diverse goals. The sectors and associations are as follows:

#### Energy

Oil and Gas: American Petroleum Institute (API)

Coal: National Mining Association (NMA)

Electricity-Electric Power Industry Climate Initiative (EPICI): 7 organisations:

Edison Electric Institute (EEI)

NEI (Nuclear Energy Institute)

NRECA (National Rural Electric Cooperative Association)

APPA (American Public Power Association)

LPPC (Large Public Power Council)

EPSA (Electric Power Supply Association)

Tennessee Valley Authority (TVA)

#### Manufacturing

Portland Cement Association (PCA)

American Iron and Steel Institute (AISI)

Semiconductor Industry Association (SIA)

Magnesium Coalition and the International Magnesium Association

(MC/IMA)

American Chemical Council (ACC)

Aluminum Association/ Voluntary Aluminum Industry Partnership

(AA/VAIP)

#### Transportation

Alliance of Automobile Manufacturers (AAM)

American Railroad Association (ARR)

#### Forestry

American Forest & Pulp Association (AF&PA)

Business Roundtable Climate RESOLVE Program (“Responsible Environmental Steps, Opportunities to Lead by Voluntary Efforts”)

“Climate RESOLVE’S philosophy is that ‘voluntary actions are the best way to deliver continued economic growth while minimizing the risks of climate change.’”

Member firms that participate will undertake ...

“voluntary actions to reduce the greenhouse gas intensity of the American economy”

“initiatives to reduce, avoid, offset or sequester emissions”

The membership of the Business Roundtable is 150 large firms in many sectors. Each firm will decide whether to participate. The goal is 100% participation.

There are no plans for individual firms to adopt any particular targets, and there are no plans for the Business Roundtable to monitor or report their actual performance.

Source: Derived by the author from US Department of Energy, “Fact Sheet on Sector Strategies,” February 12, 2003. Downloaded from [www.energy.gov/HQPress/releases/03/...](http://www.energy.gov/HQPress/releases/03/...), 16 February 2003.

**Exhibit 2. Goals of Industry Associations in US Climate VISION Programme**

<b>Industry/ Organisation</b>	<b>Members: Percent of Industry</b>	<b>Type of Emissions or Other Focus<sup>a</sup></b>	<b>Reduction Target</b>	<b>Base Year</b>	<b>Target Year</b>
Oil & Gas API	Over 60% of US refining capacity	Aggregate energy efficiency of US refinery operations	10%	2002	2012
Coal NMA	70% of US primary electricity fuels	Coalmine methane, carbon sequestration	10% increase in efficiency in systems in NMA- DOE Allied Partnershi p	Not specifie d [2002?]	2012 – date of 'projected' , reduction s of GHG by 1 mmt annually
Electricity EPIC <sup>b</sup>	100% of US electricity production	'Carbon Impact'	3-5%	2002[?]	2012[?] "this decade"
Cement PCA	More than 95% of US cement production	Carbon dioxide emissions	10% per ton of cement	1990	2020
Steel AISI	Nearly $\frac{3}{4}$ of US steel production capacity	Sector-wide average energy efficiency	10%	1998	2012
Aluminum AA/VAIP	na	PFC emissions	'further reductions'	[2002?]	2005
Magnesium MC/IMA	100% of US primary magnesium production, 80% of US casting and recycling	SF6	Eliminate	----	2010



Semiconductors ASI	Over 70% of sector emissions of HFC, PFC, SF6	HFC, PFC and SF6 emissions	10%	1995	2010
Chemicals ACC	90% of US chemical industry production	Overall GHG intensity	18%	1990	2012
Motor Vehicles AAM	Over 90% of US vehicle sales	GHG emissions from manufacturing facilities	10%	2002	2012
Railroads ARR	na	GHG intensity of Class 1 railroads	18%	2002	2012
Forestry AF&PA	na	GHG intensity	12%	2000	2012

Source: Derived by the author from US Department of Energy, "Fact Sheet on Sector Strategies," February 12, 2003. Downloaded from [www.energy.gov/HQPress/releases/03/...](http://www.energy.gov/HQPress/releases/03/...), 16 February 2003.

<sup>a</sup> Several associations have additional, less specific goals, such as developing management programs to facilitate GHG reductions or participating in US EPA or US DOE partnership programs.

<sup>b</sup> The EPICI consists of seven organizations - EEI, NRECA, APPA, LPPC, EPSA, NEI, TVA – whose commitments vary but are typically general and/or involve increases in use of their particular type of electricity generating capacity, including both nuclear (NEI and TVA) and renewables (APPA, LPPC).

### Exhibit 3. Firms Participating in Environmental NGO Programs

Industry/Firm	Participation in NGO Programs	
	Environmental Defense Program	Pew Center Program
Aerospace Boeing LockheedMartin United Technologies	No No No	Yes Yes Yes
Aluminum Alcoa Pechiney	Yes Yes	Yes No
Appliances Maytag Whirlpool	No No	Yes Yes
Automobiles Toyota Cummins	No No	Yes Yes
Chemicals Air Products and Chemicals DuPont Rohm and Haas	No Yes No	Yes Yes Yes
Computers Intel Interface IBM	No No No	Yes Yes Yes
Electrical Equip. ABB	No	Yes
Energy: Petroleum BP Shell International Sunoco	Yes Yes No	Yes Yes Yes
Energy: Other Cinergy DTE Energy Enron Entergy Suncor	No No No No Yes	Yes Yes Yes Yes No

Environmental Engineering CH2M Hill	No	Yes
Financial Services John Hancock Holman	No No	Yes Yes
Forest Products Georgia Pacific Weyerhaeuser	No No	Yes Yes
Health Care Baxter	No	Yes
Mining and Cement California Portland Cement Rio Tinto	No No	Yes Yes
Power (Electric Utilities) Amer. Elec. Power Ontario Power PGandE TransAlta Wisconsin Energy	No Yes No No No	Yes Yes Yes Yes Yes
Telecommunications Deutsche Telecom	No	Yes

Sources: [www.ed.org](http://www.ed.org) and [www.pewclimate.org](http://www.pewclimate.org), July 4, 2002

## CANADA

John Drexhage

More closely akin to the overall US business approach on climate change, by and large Canadian businesses have regarded the Kyoto Protocol as a potential threat to their economic growth opportunities. This is the case even for relatively proactive oil companies like Shell and Suncor, as evidenced by their continued plans to make significant investments in Alberta's tar sands. That said, many such firms, including the two mentioned above, are increasingly sensitive to their carbon liability and so are pursuing a number of avenues – offsets, emissions trading, technology, renewables - that will work to protect their exposure in this area.

The decision by the Bush Administration to not ratify the Kyoto Protocol galvanized nearly all Canadian industry to oppose Kyoto. Given the special trading relationship with the United State under NAFTA, over 90% of Canada's exports feed the American domestic market, covering manufactured goods, steels, automobiles, agricultural and forestry product, coal, oil and gas to name some of the main commodities. Industry simply assumed that the government would never ratify the Protocol without the US on board.

However, Prime Minister Chretien was as determined in the other direction – particularly when he was assured that the cost of meeting Kyoto (international price ranges hovered around \$10 tonne/carbon) would have a fractional impact on the Canadian economy. It also became apparent that the provinces were far from united on this issue – Manitoba and Quebec, due in no small part to their strong hydro capacities, actively supported ratification. When it became clear that the PM remained adamant in his commitment to ratification, industry worked hard at cutting a political deal that would work to protect their perceived vulnerabilities with their American competitors.

By and large, and though not all the writing is on the wall, it appears that Canadian industry is being successful in that endeavour. The result is that rather than having an emissions trading system put in place that provides strong incentives towards putting a competitive carbon clean economy in place, the focus is on how to develop a covenants system that works to protect potentially vulnerable carbon intensive industries in Canada. It is clear that the driving force for such a decision is concerns about the impacts of not having the US ratify the Kyoto Protocol. And so on December 18, 2002 a press release was announced out of Natural Resources Minister Herb Dhaliwal office that assured industry in two ways. The government of Canada assured that:

- Canadian companies will be able to meet their emission reduction responsibilities at a price no greater than C\$15 per tonne; and

- with respect to the volume of emissions, the Government will set the emissions intensity targets for the oil and gas sector at a level not more than 15 percent below projected business-as-usual levels for 2010.

While negotiations are ongoing, particularly with respect to the other major players in the proposed covenants scheme covering the electrical utility, manufacturing, mining and pulp and paper sectors, (auto plants, for political reasons were excluded from the covered sector) it is clear that, by and large, industry's primary driving force was the threat of Kyoto rather than its opportunities.

And yet, that too is changing. Thanks to the political leadership of a few provinces and other constituencies, some industries are beginning to speak out about lost opportunities for moving Canada's economy in a more climate friendly and sustainable direction, over the long term. Coalitions, such as kyotoSmart, comprised of a range of stakeholders, including the private sector, provinces, labour groups, ngos, are making their points heard loud and clear and are likely to gain political attention over the next few months. They are, at this point, however, definitely in the minority of Canadian private sector interests.

# EUROPE

Kirsty Hamilton

## Contents

1. Introduction
2. International: brief history of business intervention at the negotiations
3. EU-US differences: style or substance?
4. National and regional business interventions
5. Company level 'micro-carbon' issues

## 1. Introduction

Three levels of business activity are examined in the context of present and future business preferences at the UNFCCC and Kyoto Protocol negotiations:

- lobbying and agenda setting aimed at the international Kyoto and UNFCCC regimes. This 'macro-carbon' approach takes more of a strategic view, and while individual firms participate, policy positions tend to be articulated largely by lobbying organisations on behalf of members.
- Kyoto implementation and climate policy at national and regional (pan-European level). This is arguably the greatest focus of business attention at present, particularly as new markets are being developed;
- business engagement at a 'micro-carbon' level, within the firm – putting carbon on the balance sheet, corporate-level carbon risk management strategies etc. This area is still novel for the majority of firms.

## Observations

EU companies have a reputation for being more progressive on climate change: they did not actively obstruct the Kyoto process, and in many cases, appeared to publicly back a target driven international regime. Post Kyoto, the European-based business community did accept the likely entry into force of the Protocol, in contrast to US counterparts.

The 'traditional' business<sup>9</sup> remains the dominant lobbying force in the EU and at national policy levels. Its preferred policy approach of 'minimal government intervention': voluntary, negotiated agreements, avoiding taxation or regulation, shifts control of achieving climate objectives towards business. This is often strenuously argued for, and justified on the grounds of competitiveness.

---

<sup>9</sup> 'Traditional' is used for the purposes of this paper to mean businesses engaged in emissions intensive sectors, defined by Michaelowa as fossil fuel producers, electricity producers using fossil fuels, energy intensive industry with high direct or indirect emissions, including the auto sector. Traditional would also include businesses that associate with lobby groups representing these sectors.

However the politically achievable policy ‘balance’ in the EU, between business competitiveness, and emissions reductions, is currently producing a sub-optimal result for the climate, identified in the discrepancy between actual emissions and targets. This could affect EU credibility and positioning in Second Commitment Period (2CP) talks.

Despite a forceful, and largely successful, strategy to avoid more regulatory government policies, larger companies have adopted ‘hedging’ investments in clean technologies, emissions reduction targets and are interested in emissions trading. It is not yet clear whether, or when, this will start to alter core investment strategies at the heart of longer-term emissions trajectories. In addition the debates over the national allocation plans for the EU emissions trading scheme are likely to be instructive, and will test business resolve to hold a common line.

The European ‘progressive’ business lobby, producing carbon reducing technologies or services, although small has punched above its weight in the international arena, alongside US counterparts. Initiatives such as ‘Emissions 55’ demonstrate the capacity for organised company intervention – in this case, support for Kyoto ratification. However at a national level this lobby is still emerging and tends towards being fragmented and sectoral or technology-specific, and rather inexperienced unless input is externally organised<sup>10</sup>.

There is almost no representation in the EU and national-level policy debate from potentially powerful players such as the financial sector, or the broad-spectrum services sector. However there are isolated, but important, signs that this is just starting to change as pressure increases for disclosure of long term carbon exposures<sup>11</sup>.

Micro carbon issues will also more sharply define winners and losers within sectors, as well as between them. It is not clear yet whether this could become a threshold issue driving forward investment and new entrants in a race for climate leadership, and a greater differentiation in the conventional business lobby. However, this is unlikely in the short term.

Finally it may be difficult to discriminate a specifically European business message from the international position taken by the ‘traditional’ lobby. At present this appears aimed at securing participation in the flexibility mechanisms for all businesses and all technologies, and fungibility across all trading regimes, not restricted to the Kyoto Protocol, in addition to protecting existing voluntary agreements.

---

<sup>10</sup> Statements from the European Climate Change Policy alliance would be an example, September 2000, March 2001. This involved several clean energy business organisations, academics and environmental NGOs. [http://old.e5.org/pages/revECCP\\_clean\\_alliance\\_statement.pdf](http://old.e5.org/pages/revECCP_clean_alliance_statement.pdf)

<sup>11</sup> For example, the Carbon Disclosure Project is an initiative of 35 institutional investors with assets in excess of \$4.5 trillion. They have requested disclosure of the greenhouse gas emissions profiles, and reduction strategies of the Global 500 companies. The results, launched February 17, 2003, are downloadable from: [www.cdproject.net](http://www.cdproject.net).

## 2. INTERNATIONAL: Brief history of business intervention to present

Within the EU-based business lobby there is a much greater diversity of views expressed publicly on climate change, on key details of the international negotiations and Kyoto Protocol ratification, compared to the seemingly closed-ranks of the US business community.

However those views remain significantly uneven, when it comes to their influence on the policy development process as indicated by the balance of organisations with well staffed operations in Brussels. These are predominantly the 'traditional' business organisations including the Union of Industrial and Employers Confederations of Europe (UNICE), European Chemical Industry Council (CEFIC), Eurelectric, the European Roundtable of Industrialists (ERT) and the Association of European Car Manufacturers (ACEA). These together with international organisations such as Geneva-based World Business Council for Sustainable Development (WBCSD), Paris-based International Chamber of Commerce (ICC), and London-based International Petroleum Industry Environmental Conservation Association (IPIECA), represent a very broad range of multinational and energy intensive companies. All have been active on matters relating to the detail, and scope of EU policy and the Kyoto flexibility mechanisms. The Federation of German Industries (BDI), and the Confederation of British Industry (CBI) are among the most prominent national organisations, which have made their views known in Brussels, most recently over issues such as emissions trading.

Business attendance at the negotiating sessions has grown considerably since the early 1990s<sup>12</sup>. Analysis of the business organisations attending the international talks<sup>13</sup> - or for that matter EU policy - provides a useful picture of European and multinational political *influence* in general, but not a sense of real entrepreneurship or which companies may emerge as market leaders in a carbon constrained world.

### Business at the UNFCCC negotiations

At the international level a split within the business community was already apparent in the lead up to Kyoto<sup>14</sup> on the core issue of whether or not there should be a legally-binding emissions reductions regime. Predominantly European-based organisations, although small, lead the active support for a

---

<sup>12</sup> Early business NGOs included the Alliance for Responsible Atmospheric Policy – representing chemical industry interests concerned about whether the Framework Convention would regulate HFCs, and a selection of US traditional industry actors (car, oil, coal) that operated for example through the Global Climate Coalition or Edison Electric Institute.

<sup>13</sup> Organisations with observer status at UNFCCC negotiating sessions are defined as 'legally recognised non-profit organisation competent in climate change issues', and must be approved by the COP  
<http://cop6.unfccc.int/observers/#accred>

<sup>14</sup> For a detailed overview of the Rio to Kyoto period, see Giorgetti, C. 'From Rio to Kyoto: A Study of the Involvement of Non-Governmental Organisations in the Negotiations on Climate Change', N.Y.U. Environmental Law Journal, Vol 7, 1999, p201-245



binding target-based approach<sup>15</sup>. The latter were in two main categories: businesses that provide emissions reducing technologies and services, which saw opportunities arising from a governmental obligation to deliver CO2 reductions; and a growing number of insurance companies, concerned over weather related insured and economic losses<sup>16</sup>. Public actions by company's such as BP, reinforced the *perception* that EU companies generally stood apart from US counterparts on climate change.

Post Kyoto, EU businesses, which include subsidiaries of US and Japanese companies, appeared to accept the reality of the Protocol's ratification and entry into force and switched attention to promoting interests related to the Protocol's implementation. This included attention to debates over policies and measures and emissions trading nationally and at EU level, as well as the rules of the game that may impact on business participation internationally. The latter included supporting full use of the flexibility mechanisms versus domestic action ('supplementarity'), credit for 'early' action by business, and avoiding exclusion of technologies from project-based mechanisms. The focus on implementation policy continued following President Bush's withdrawal from the Kyoto<sup>17</sup>.

A dramatic redefinition of business interest at the international level was evident by COP4, with many new actors participating to assess the opportunities under the Kyoto mechanisms. This represented significant cross-sector interest in understanding carbon as a new commodity<sup>18</sup>. However the diplomacy, jargon and pace of the political negotiating process<sup>19</sup> was a source of frustration and opacity for many new participants<sup>20</sup>: the opportunities at a company level would only finally be calculable with the definition of those rules, and the perception of a stable implementation policy at national level.

Engagement by business 'early movers' and 'traditional' business organisations<sup>21</sup>, both politically<sup>22</sup> and operationally with elements of the Kyoto

---

<sup>15</sup> Greenpeace International 'Industry and the Climate Debate', March, August, November 1997, detailing the positions of business lobbying organisations, and membership. Also 'Dash for Cash, Industry Lobbyists at the Climate Talks,' October 1999, COP5.

<sup>16</sup> Greenpeace International, 'Industry and the Climate Debate, membership and positions of international lobby groups' (March, August, November 1997)

<sup>17</sup> For example the Confederation of British Industries (CBI) released a statement in June 2001, 'Climate Change and the Kyoto Protocol CBI Position', stating: 'We believe the UK's Kyoto target is achievable and is not necessarily inconsistent with maintaining a competitive and thriving economy'; at the same time this press statement expressed concern about the 'Climate Change Levy' – the UK tax on business energy use.

<sup>18</sup> At COP4 there were several side events addressing issues around the flexibility mechanisms – involving the World Business Council for Sustainable Development, SGS, Monsanto, Business Council for Sustainable Energy, e5, International Cogen Alliance, UNEP Insurance Industry Initiative, ICC, a roundtable for Ministers, industry CEOs and NGOs, organised by the UNFCCC secretariat, as well as intergovernmental organisations such as UNCTAD, and NGO events. Refer <http://www.cop4.org/special/special.html>

<sup>19</sup> The main outcome of COP4 was the Buenos Aires Plan of Action, a work programme for further negotiations, not elucidation of the rules for the Kyoto flexibility mechanisms.

<sup>20</sup> pers comm. several business participants during the COP4 negotiations, also UNEPFI October 2002 'CEOBriefing Climate Risk to Global Community', states: 'Disagreements and delay in reaching a durable framework for international and national policy have discouraged financial institutions from early engagement.'

<sup>21</sup> Business lobbying organisations such as the International Chamber of Commerce, ICC, the Union of Industrial and Employers' Confederations of Europe, UNICE, have a broad membership, which is defined here as 'traditional'. Refer to footnote 9 above.

mechanisms, was evident by COP5. This was in the form of showcasing, as well as information exchange and lobbying<sup>23</sup> and the emergence of organised business engagement with the flexibility mechanisms<sup>24</sup>. While true that one characteristic of this period (COP3 to Marrakech) was the weakening influence and credibility of the 'hardcore emitters' (like the Global Climate Coalition)<sup>25</sup> in the international arena; the GCC and others such as Edison Electric Institute, remained a powerful lobbying force in the US, as evidenced by US Federal energy and climate policy since President Bush took office in 2001.

There has been significant communality of interest among the traditional business organisations seeking to avoid specific regulation, instead lobbying for unrestricted, non-exclusive (all technologies) framework for the development of the mechanisms. In 1999 prior to COP5, the ICC, for example, argued against imposing absolute emissions caps on companies or sectors<sup>26</sup>; and in the lead up to COP6 UNICE argued for eligibility for all technologies, and against any limits or ceilings or 'share of proceed' type fees apart from CDM<sup>27</sup>.

One potential upside is that consideration of market rules, albeit politically defined at the international level, has produced some positive, though low key interventions reflecting the fact that real markets work best with clear framework and and tight compliance regimes. At COP6bis, for example, there were several business groups that, at least, stated support for a clear or detailed compliance regime for the Protocol, including the International Chamber of Commerce, the UK Association of Electricity Producers and representatives from the UNEP Financial Initiative. However this does not reflect many industry constituencies, at a national or regional level, which favour a weak or zero compliance system alongside voluntary agreements.

Sector-specific lobbying intensified up to and during COP6 in efforts to avoid technology exclusion under the project-based mechanisms – a counter force to the 'positive list' approach being advocated by the NGO community. The nuclear industry, lead by organisations such as Europe's FORATOM, along with US, Japanese and Canadian counterparts<sup>28</sup> aimed to secure nuclear power eligibility for emissions reduction credits under the flexibility mechanisms. FORATOM ran

---

<sup>22</sup> Industry side events at COP5 included the International Standards Organisation and Lloyd's Register among others presenting on more detailed aspects of the flexibility mechanisms, new alliances such as the Federation of German Industries (BDI) with Ruhrgas and Gasprom, looking at the interaction of voluntary agreements and AIJ, and an assessment of emissions trading in the electricity industry presented by the International Union of Producers and Distributors of Electrical Energy, UNIPEDE, IEA and Paris Bourse (UNIPEDE merged with Eurelectric – the pan-European 'union of the electricity industry' in December 1999). <http://cop5.unfccc.int>.

<sup>23</sup> For example BP was already working with NGOs and other businesses and had established a trial internal emissions trading regime, and made forestry offset investments in Bolivia.

<sup>24</sup> For example the formation of International Emissions Trading Association mid-1999, and the Cantor Fitzgerald-PriceWaterhouseCoopers online brokerage and service, CO2e.com, launched in 2000.

<sup>25</sup> A Michaelowa, slide presentation 'The influence of business on international climate policy: comment on Kerstin Deller', at meeting of PhD research on climate policy in German-speaking countries, March 22, 2002.

<sup>26</sup> 'The Kyoto Mechanisms: A Business Perspective', 8 June 1999, USCIB, ICC. [www.uscib.org](http://www.uscib.org)

<sup>27</sup> statement to the plenary of the 13<sup>th</sup> meeting of the Subsidiary Bodies (SB13), Earth Negotiations Bulletin, Vol. 12, No. 151, Monday 18 Sept, 2000. <http://www.iisd.ca/download/asc/enb12151e.txt>

<sup>28</sup> The number of delegates from nuclear industry associations attending the negotiations rose from close to 40 at Kyoto, to over 150 on the provisional participants list at COP4, Buenos Aires, indicating the importance they attached to opportunities under the Mechanisms.

a two year national and international campaign 'to prevent any decisions being taken that would discriminate against the nuclear power sector'<sup>29</sup>. The nuclear industry failed at COP6, COP6bis, and was traded off against government support for sequestration options<sup>30</sup>. The 'industrial sinks' lobby now represents significant international business interest seeking political recognition, in particular for geological sequestration<sup>31</sup>.

Arguably the main business initiative of note, post COP6, following President Bush's withdrawal from the Protocol, was the emergence, mid 2001, of the 'Emissions 55' initiative - a short-term business alliance formed to demonstrate unequivocal business support for ratification of the treaty, irrespective of US involvement. It provided an interface between 'traditional' businesses and the progressive lobby, supported by the European Business Council for a Sustainable Energy Future (e5) and had involvement from WWF. Over 200 companies signed up with 161 from Europe, including Deutsche Telekom, Dresdner Bank, Calor Gas, AEG Domestic Appliances, CGNU plc, Nuon Holding, Rabobank, Deutsche Bahn, SNCF, Swiss Re and the Co-op Bank, others included RICOH, and Canon from Japan<sup>32</sup>. German Environment Minister, Jurgen Trittin, attested the political usefulness of a business initiative that could represent the economic opportunities inherent in climate protection, in a way that was 'more convincing than the lobby of the fossil fuel industry'<sup>33</sup>.

## Multinationals

The consequences for multinational companies operating in a bifurcated system was thrown into sharp focus after COP6bis, when it became clear that parties would proceed towards ratification without the US. In this context the distinction of what constitutes an 'American' or 'European' company, in Europe, has blurred: US companies, with subsidiaries in EU or other ratifying nations, will still face national and EU compliance costs, even though many US lobby organisations had used US compliance costs to justify opposition to the Protocol. At the same time US subsidiaries can also use Kyoto flexibility mechanisms and national trading regimes. While this would have been the case even if the US had ratified, the International Chamber of Commerce emphasised the matter in a post Marrakech briefing: *'If the Kyoto Protocol enters into force, then obligations, risks and opportunities for companies – operating in each nation that ratifies the protocol – will depend on national implementation policies...regardless of the*

<sup>29</sup> <http://www.foratom.org> > key topics > Nuclear Energy and Climate Change. Website updated March 2002.

<sup>30</sup> ENB notes the "apparent trade-off for greater EU flexibility on sinks was the insistence that nuclear energy be removed from the CDM." [www.iisd.ca/climate/cop6bis](http://www.iisd.ca/climate/cop6bis) ENB Summary, July 30, 2001.

<sup>31</sup> For example: the CO2 Capture Project, an initiative to research geological sequestration formed by BP Amoco, Chevron, Norsk Hydro, Royal Dutch/Shell, Statoil, Suncor Energy, and Texaco with state (US DoE, Norway and EU) and private funding [<http://www.coal-seq.com/Proceedings/CharlesChristopher-CO2-Presentation.pdf>]; Ford and BP have a £20 million 'Carbon Mitigation Initiative' in collaboration with Princeton University examining geological and terrestrial sequestration options. Monsanto promotes recognition of carbon sequestration through agricultural practices.

<sup>32</sup> see [www.emission55.com](http://www.emission55.com)

<sup>33</sup> Speeches to Emission55 conference, 10 December, 2002.

*nationality or nationalities of the company's owners, parent corporation or parent corporations*<sup>34</sup>.

This raises the question of whether experience of emissions trading, and other national policies outside of the US, will 'soften up' US corporate opposition to a mandatory emissions reduction regime back in the US. However it seems more likely that all companies will use opportunities inherent in Kyoto implementation to improve the income stream of business activities, and will comply with any mandatory government requirements for emissions. Therefore it is not surprising that multinational companies from non-ratifying nations will play a game of double bluff – opposing, or remaining silent on ratification of the Protocol domestically, yet actively planning to utilise its opportunities once ratified. However there are public relation costs attached to having double approach, as discussed below.

Finally, it is worth noting the interventions in the negotiating process of the finance and insurance sector – as they have been the principle credible counterweight to the fossil fuel lobby during the latter half of the 1990s<sup>35</sup>. Led predominantly by European companies<sup>36</sup>, this sector presented a powerful case for deep emissions reductions and 'rapid ratification' of the Kyoto Protocol based upon steeply rising losses from climate-related disasters.

At COP8 lead companies from the finance and insurance sector, launched 'Climate Change and the Financial Services Industry'<sup>37</sup> a detailed report, which not only highlights the scale of the problem: 'If current trends persist, the *annual* loss amounts [from natural disasters] will, within the next decade, come close to US \$ 150 billion', but also that the political response is not yet commensurate with the risk: the Kyoto Protocol "does not go nearly far enough'.

It provides an overview of some political options, already on the table, in the second commitment period discussions and establishes an ongoing interest in this debate since it will affect finance sector operations 'significantly'.

Principles set out by this sector include the 'urgent' need for a 'safe' stabilisation target for atmospheric concentrations. From a corporate economic standpoint the report concludes that short-term Kyoto Protocol timeframe tends to 'direct action towards low hanging fruit' such as fuel switching, and 'risks deflecting attention

---

<sup>34</sup> International Chamber of Commerce, Climate Change Task Force 'The Role of Companies in Kyoto Mechanisms', May 2002.

<sup>35</sup> This sector first appeared in an organised form at the 1995 COP1 negotiations in Berlin with representatives from Gerling Group, the Reinsurance Association of America, General Accident (now CGNU), National Westminster Bank and Union Bank of Switzerland, alongside Greenpeace International.

<sup>36</sup> An insightful, detailed overview of the differences between the European and US insurance industry in this area is: 'US Insurance Industry Perspectives on Global Climate Change' by Evan Mills and Eugene Lecompte and Andrew Pears, Feb 2001 <http://eetd.lbl.gov/EMills/PUBS/LBNL-45185.html>

<sup>37</sup> The report for the Climate Change Working Group of the UNEP 'Financial Initiative', was prepared by Innovest, with Dr Andrew Dlugolecki, industry expert and lead convening author of IPCC's Second Assessment Report WG II chapter on the Financial Services Sector.' The report and a 'CEO briefing' can be downloaded from [www.unepfi.net](http://www.unepfi.net).

away from more fundamental structural changes such as the retirement and replacement of existing infrastructure that supports GHG-intensive energy use’.

International strategy – traditional lobby

There is a trend towards consolidating the traditional business positioning: the International Chamber of Commerce (ICC) and the World Business Council for Sustainable Development (WBCSD), have started to publicly fuse their activities. ‘Business Action on Sustainable Development’, BASD, was a coordinated joint initiative between the two groups established for the World Summit on Sustainable Development (WSSD). Although BASD is not a formal organisation at the climate negotiations, the trend is nevertheless towards businesses agreeing a small set of key options and presenting a unified, powerful front, thereby increasing its leverage on key matters, despite the fact that individual member companies, or company delegates using the membership for access to negotiations, don’t necessarily have positions on specific policy issues.

### 3. EU-US DIFFERENCES: style or substance?

One specific question raised in this module was the nature and depth of EU-US corporate differences. While there is no definitive answer to this question, and many factors are at play, there is not a convincing case that explains a real difference at the level of company bottom line.

As outlined in the US business section above, US corporations are also now adopting varied strategies to tackle the uncertain climate policy regime. However throughout the Kyoto to Marrakech period, European traditional businesses positioned themselves publicly at the forefront of engagement with the Kyoto Protocol. Companies like Shell and BP in particular have forged this perception with leadership from the top, in marked contrast to the support of the status quo by ExxonMobil, a company generally credited with leading opposition to climate policy in the US.

The focus inevitably falls on the oil sector as the EU-US ‘divide’ was strongly crystallised with the move by BP, to break ranks from US oil sector and support precautionary action on climate change prior to the Kyoto negotiations<sup>38</sup>. The generally positive response by BP and Shell to the negotiation of the Protocol, was followed by much publicised adoption of corporate emissions reduction goals and internal greenhouse gas trading regimes to achieve those<sup>39</sup>. Following Kyoto both of the companies increased investments in renewable energy<sup>40</sup>, and

---

<sup>38</sup> Stanford University, 19 May, 1997.

<sup>39</sup> BP adopted its emissions trading scheme in 1999, and Shell at the start of 2000.

<sup>40</sup> In 1998 Shell announced it would spend \$500million on renewables by 2003; in 2001 a further \$500 million was added for the next five years, when economic opportunities arose – [www.shell.com/solar](http://www.shell.com/solar).

Shell introduced a carbon 'shadow pricing' policy for new investments<sup>41</sup>. At the time these actions by oil majors were indeed divergent from US counterparts.

One can argue that these were well-publicised, low risk, carbon management, moves, generating some business experience and capacity, together with significant 'brand' positioning and political benefits. However, where the stakes were higher – a different picture emerges.

In Europe, corporate positions on the ratification of Kyoto engendered a high level of public sensitivity, particularly for EU companies with US subsidiaries opposing the Protocol. US withdrawal from the Protocol had produced an unprecedented public and political reaction in Europe, with several European government leaders speaking out against President Bush's actions. Few European-based multinationals would want to provoke their political relationships by standing outside prevailing opinion. Daimler Chrysler, for example, had to refer the matter of its support for the Protocol right up to its Board of Management, when it appeared there was a difference of opinion between its Europe and US operations on Kyoto. Finally the company could only state "*The Kyoto treaty is an intergovernmental treaty, and needs to be worked out among all participating nations. Of course, DaimlerChrysler will obey any law that will be a consequence of the Kyoto treaty. DaimlerChrysler supports the goals of Kyoto - of reducing manmade greenhouse gases.*"<sup>42</sup> This is a strained formula of words, at best, to avoid taking a clear public stance on the matter.

BP also remained notably silent on the matter of Kyoto ratification. As the largest oil and gas producer in the US, where the Vice President was at the helm of developing the US energy bill, the political sensitivities were complex, particularly as the company had a stated interest in accessing new Arctic reserves in the US.

A contextual point that may help explain the difference in *public* positioning between EU and US corporations particularly on big-picture 'global' climate issues, is the high value accorded to corporate reputation and the linkage between public relations and political strategy. The latest 'European Risk Management & Insurance Survey' by Aon, finds that companies rank loss of reputation, after business interruption, as the second greatest risk to business<sup>43</sup>. Its survey of UK companies puts 'loss of reputation' as the top risk<sup>44</sup>, and the linkage between a good reputation and the ability to influence government or EU policy is made explicitly. 'Corporate Social Responsibility', CSR, is now widely regarded as a core part of reputation building. This suggests that a company

---

<sup>41</sup> Shell Canada, First meeting of the Climate Change Advisory Panel, Meeting, July 2000. [www.shell.com/ca](http://www.shell.com/ca)

<sup>42</sup> Email correspondence between Kirsty Hamilton and Daimler Chrysler Headquarters in Germany between 26 June and 6 July, 2001. The initial correspondence was to confirm a quote in the Wall St Journal, May 2<sup>nd</sup> 2001, quoting the CEO of Daimler Chrysler supporting the goals of Kyoto.

<sup>43</sup> Aon Limited 'The Aon European Risk Management & Insurance Survey, First Edition 2002-2003', 2002.

<sup>44</sup> Aon Limited 'Biennial Risk Management and Risk Financing Survey, 2001', a bi-annual survey of the top 2000 private and public sector organisations in the UK. Loss of reputation and brand protection has replaced environment as the area where firms most want cover. In the two years since the previous survey Aon says there was a rise in underwriters offering environmental cover, so firms will have had the opportunity to purchase it, hence its lower ranking.

wishing to engage in lobbying - even if it is to lobby for the status quo - may find its job harder if it is seen as disinterested or opposed to public interest issues, encoded as CSR. The more sensitised the public to environmental matters, the more important (and complex) it is for corporations to establish credentials in this area. Therefore by taking an overtly 'pro-climate' stance, a company increases its chance of achieving its policy objectives, as well as improving its brand value<sup>45</sup>. This would be particularly acute where the policy outcome sought is based on voluntary measures. It would be even more important to create the impression among policymakers that companies are sufficiently publicly 'trusted' to deliver environmental outcomes (i.e. adopting this policy approach will be credible in front of voters), despite simultaneous corporate opposition to a more stringent government approach. It appears that this public relations context is shifting across to the US<sup>46</sup>, although possibly for consumer, rather than policy-related reasons.

Embedding high profile, high-investment corporate branding and communications exercises on climate (BP, Shell, Elf etc) are what might be termed 'long term technological hedge strategies' (Levy and Newell, 2000) in which new or additional investments are made by fossil fuel companies in clean, renewable technologies, solar, fuel cells etc with a view to greater commercial engagement in this sector at some (undefined) point in the future. However even where these renewables businesses achieve an equal status within the company hierarchy alongside the traditional exploration and production businesses, they do not have much influence on overall investment strategies. For example, at the start of 2002 BP was operating to a 5.5% average annual production *increase* in its oil and gas business in the medium term, to 2005<sup>47</sup>. Perhaps this is unsurprising, however it does contrast with the impression created by the company's 'Beyond Petroleum' advertising campaign.

Shell in 1999, for example, entered the oil sands industry in Alberta, Canada<sup>48</sup> with investments approaching CA\$3.9 billion (total project CA \$5.7 billion). Six months after the launch, it announced a CA\$300,000 investment (over 3 years) in renewable electricity in Canada, and the formation of an environmental advisory panel. Even with a stated intention to bring down or offset emissions from the extraction facilities, the development of emissions intensive, non-

---

<sup>45</sup> CSR now accounts for a third of brand image value for a company, according to the brochure for a recent Marketing Week conference on corporate reputation building 'Achieving Excellence in Corporate Communications, pro-actively building and protecting corporate reputation', 22-23 January 2003, Marketing Week in partnership with Burson Marsteller.

<sup>46</sup> A sceptical commentary appeared in Nature over ExxonMobil's funding of a research programme at Stanford University by David Ritson, a physicist at Stanford. He writes in a commentary 'Fuel for thought', Nature, 6 February, 2003: "Undeniably, there are strings attached to the G-CEP [Global Climate and Energy Project]. The sponsors stand to reap enormous political and public relations advantages through their sponsorship, at a cost that is minuscule compared with their scale of operations. The yearly price tag to ExxonMobil, the major contributor, for example, is merely a third of what it pays its chief executive."

<sup>47</sup> The Economist, October 31, 2002 "Britain's top oilman, Lord Browne, is uncharacteristically embarrassed". While BP revised its 2002 production growth figures downward, the 5.5% average growth out to 2005 reportedly remains.

<sup>48</sup> Shell has a lead 60% in the Athabasca Oil Sands Project, which is 'one of the largest construction projects on the planet', is the first new fully integrated oil sands project in 25 years. [www.shell.ca](http://www.shell.ca)

conventional oil deposits are not consistent with reducing carbon intensity of assets.

While 'hedging' investments in clean energy are a small but very important injection of capital into emerging technologies, they appear more useful in the short term for corporate reputation-building on the environment, alongside a generating business experience in these technologies.

More generally, there were indications, that on the matter of Kyoto ratification, a careful political strategy was being played out between EU and US businesses, where some EU organisations or subsidiaries publicly supported ratification of the Kyoto Protocol, but conditional on US ratification. Journal 'Inside EPA' reported: "*Specifically US companies, through their European operations, are arguing that ratification without the US could create two, uncoordinated international systems for addressing climate change, and could hurt Europe economically by providing US companies with an economic trade advantage.*"<sup>49</sup> Although difficult to assess how deeply this strategy penetrated either the European business lobby, or influenced European officials, it would have had the effect of allowing a US-lead corporate agenda, opposing ratification of the Protocol, to advance its cause through a more moderate sounding EU approach, without damaging EU corporate public relations.

More recently the matter of EU and US corporate differences, vis a vis Kyoto, appeared at a debate on climate change between ExxonMobil and BP. ExxonMobil, in re-stating its opposition towards the Protocol, put forward the view that Europe is a 'best efforts' society with regard to its adoption of targets: the trying is as important as the attainment – contrasting with the litigious US where a company will face legal actions for non-compliance. ExxonMobil's preference is a science and technology driven approach to emissions reduction, based on market activities that achieve bigger longer-term emissions reductions. While Kyoto is seen as a distraction, the role of government is seen as important with respect to ensuring 'good things' happen (eg sequestration) when its not clear who is going to pay<sup>50</sup>. One immediate issue in ExxonMobil's approach is that there is no 'consensus' over the timeframe of the technology turnover.

One conclusion is that there is a good deal of deliberateness and brinkmanship in corporate-political interaction on climate change, on both sides of the Atlantic, even if political strategies differ and multinationals seek ways of keeping those differences from damaging corporate reputation. However where matters affect the bottom line, differences are far less obvious. Both European businesses and US counterparts are looking for ways of minimising risks associated with carbon policy, as well as strategies for avoiding many of those policies in the first place.

---

<sup>49</sup> 'US Companies pursuing two-pronged attack on Kyoto Protocol', Inside EPA, 25 May 2001.

<sup>50</sup> Views expressed by Frank Sprow, Vice President of HSE at Royal Geological Society debate 'Coping with Climate Change', London, 26 March, 2003.



#### 4. National and Regional Policy: business interventions

The development of the EU negotiating mandate for the UNFCCC negotiations, and consequent implementation of emissions reduction policy, is defined by a series of complex interactions between the diversity of member states and Brussels, and between EU institutions<sup>51</sup>. Compliance with Kyoto obligations must occur by both the EU and its member states through the agreed burden sharing arrangement. Business, therefore, has a material interest in both pan-European policy development such as carbon taxation, the emissions trading regime, or emissions reductions from the auto sector, as well as national emissions reductions plans. Setting the policy framework so that emissions reductions are achieved is essential not only for Kyoto compliance but also for establishing EU credibility in promoting any new Second Commitment Period (2CP) commitments.

The greatest influence of the business sector is at national level where the political sensitivities towards economic arguments are more acute; and where the material impact of policy may be more targeted for specific sectors. The Economist, for example, described the campaign against the EU carbon tax in the early 1990s as the “most powerful offensive against European Commission proposal ever mounted by Europe’s industrialists”<sup>52</sup>. Michaelowa (1998 – public choice analysis) refers to ‘massive lobbying’ by industry leading to industrial exemptions to emissions tax which then fell on households only where resistance was lower: Netherlands, Norway and to a lesser extent Denmark and Sweden have followed this pattern. The Confederation of British Industry (CBI) successfully pressed for changes to the Climate Change Levy, a tax on business energy, such that exemptions for 80% of the tax were available in exchange for a negotiated energy efficiency agreement. Michaelowa (2000, 1998) also assumes that interest group influence most probably accounts for the discrepancy between the EU’s international position and actual domestic or regional implementation to date.

International competitiveness issues are central in business interventions arguing for a non-regulatory approach in EU policy, perhaps unsurprising as the goal of European Economic and Monetary Union is premised upon creating a market in which Europe can compete with the United States and others (Levy and Newell, 2000). In addition, as the policy process shifts from what might be regarded as ‘environmental’ policymaking towards rule setting for markets, these arguments become more influential. This has been the case in both the UK and EU emissions trading markets<sup>53</sup>, where the weight of a broader range of company or

---

<sup>51</sup> Detailed description of processes of decision-making: Michaelowa A, Impact of Interest groups on EU climate policy, *European Environment*, 8, 5, 1998, p. 152-160.

<sup>52</sup> Levy and Newell (2000) footnote “Europe’s industries Play Dirty” *The Economist*, 9 May 1992.

<sup>53</sup> The Confederation of British Industries (CBI) played a lead role in establishing the UK Emissions Trading Scheme, and gaining exemptions for industry sectors from the business energy tax (climate change levy), in Europe, one issue all of UNICE’s members prioritise is ensuring the initial allocation of emissions allowances will be given out free of charge.

sector interests being more forcefully brought in front of governments on climate policy<sup>54</sup>, on these matters.

Lobbying efforts by the most powerful business organisations, particularly in Germany and UK and in Brussels on the emissions trading regime have been intense<sup>55</sup>, although, somewhat divergent in approach<sup>56</sup>, depending on national circumstances. Yet in Germany, it took a survey from the Wuppertal Institute to demonstrate that the most vocal trade organisations did not represent the broader view of German businesses<sup>57</sup>. The shift towards 'free', rather than auctioned allocation of permits<sup>58</sup>, and a reduced penalty for non-compliance, both in the first 2005-2008 phase, has been attributed to business efforts<sup>59</sup>.

It is clear that while the EU takes a stronger stand on many of the defining strategic issues at international level, many of the national and regional 'implementation' policies are still heavily influenced by the stated preferences of traditional industries<sup>60</sup>: voluntary action<sup>61</sup> and unrestricted or incentivised<sup>62</sup> market-based mechanisms, and "minimal government interference"<sup>63</sup>, similar to those of the US.

Generally, the policy that has been politically feasible at EU level, indeed nationally, has sought to 'balance' internally competing objectives (business competitiveness issues with emissions reductions), producing a sub-optimal result from an emissions reduction point of view<sup>64</sup>. For example, the Voluntary Agreement between German industry and the government, to cut CO<sub>2</sub> emissions per unit by 20% by 2005, actually represented a 'much lower' rise in energy

---

<sup>54</sup> The Confederation of British Industries, CBI, represents 90% of the FTSE100 companies and 70% of the FTSE 350. In addition the European Climate Change Programme (ECCP) established Working Groups on different topic areas with NGO and industry participation. The balance towards industry as the issues became more technical was exemplified in the Final Report of the WG covering Fluorinated Gases, June 2001: "The group of experts involved in the ECCP Working Group on fluorinated gases comprised about 10 permanent and 110 "revolving" participants from Industry, Environmental NGOs, Academia, Consultancy, Member States and the Commission. The majority of the 110 revolving participants represented the various sectors of industry."

<sup>55</sup> For example, Reuters, August 29, 2001: "FRANKFURT - The German energy industry was firmly at loggerheads with government and European Commission officials Tuesday over plans to introduce an EU state-wide, company-based emissions trading system by 2005".

<sup>56</sup> The German lobby groups VDEW and BDI were lobbying to avoid a mandatory trading approach, for example Reuters August 29, 2001, October 24, 2002. The UK industry groups were lobbying for as wide and 'flexible' approach as possible, one which would allow the UK approach to trading, and be focussed on 'learning' in the 2005-2008 period.

<sup>57</sup> Wuppertal Institute, 'Attitudes of German Companies regarding the Implementation of an Emissions Trading Scheme', Hermann Ott, Tilman Santarius, Aug 2002.

<sup>58</sup> Auctioning has not been finally ruled out as the Commission's proposal must go through the European Parliament which advocated 15% auctioning from 2008.

<sup>59</sup> For example, Svendsen, GT 'Lobbyism and CO<sub>2</sub> Trade in the EU', Presentation to The 10<sup>th</sup> Symposium of the Egon-Sohmen Foundation, Dresden, Germany, October 25-26, 2002. Svendsen is Associate Professor in the Department of Economics, Aarhus School of Business.

<sup>60</sup> UNICE describes itself as the 'voice of business' in Europe.

<sup>61</sup> For example the emissions reductions negotiated with the Association of European Car Manufacturers, ACEA.

<sup>62</sup> The UK emissions trading regime was implemented with a £215 million incentive to encourage industry participation.

<sup>63</sup> Quoted from the European Roundtable of Industrialists, "Climate Change – How Government and Industry can work together", October 2000, [www.ert.be](http://www.ert.be) (just prior to COP6). UNICE states 'A combination of market mechanisms with agreements between public authorities and industry is the most cost-effective and efficient way for industry to make its contribution to an overall strategy to control greenhouse gas emissions.' EU Climate Change Policy, December 2002, [www.unice.org](http://www.unice.org). The Confederation of British Industries (CBI) in a July 1998 submission to the UK government on the use of economic instruments and energy, gives qualified support 'in certain circumstances' for the use of targeted regulation, specifying that it should be 'established through consultation with business'.

<sup>64</sup> Michaelowa (2000) comments on the inefficiency of the instruments that are adopted at EU level.

efficiency than the previous two decades<sup>65</sup>. The voluntary agreement between the Association of European Car Manufacturers and the European Commission, to reduce CO2 emissions per kilometre, contains policy review trigger if competitiveness or employment are impacted. The ACEA's CO2 brochure emphasises that the specifically stated aims of its Commitment with the EU are "*at preserving the diversity of product offerings of the European car manufacturers and at maintaining their competitiveness, as well as their financial performance and employment.*"<sup>66</sup>[their emphasis] in other words potentially competing objectives are built right into the heart of this agreement.

The clear split between 'traditional' and 'progressive' businesses successfully demonstrated in the international arena by the European Business Council for Sustainable Energy (e5) and its US counterpart (BCSE)<sup>67</sup>, has not manifest itself so influentially at national and pan-European level<sup>68</sup>. The former represents telecommunications companies and public transport as well as sustainable energy companies – the latter in particular growing in both size and importance within the EU. There is evidence that at national and European level 'progressive' organisations, have been effective in standing their ground under 'policy attack' or had success in retaining policy focus on their interests, for example the wind industry joined forces with trade unions and the agricultural sector to retain the German 'feed-in' law in 1997(Michaelowa, 1998). However, aside from e5, as yet they tend to remain in technology or sector specific brackets (eg European Wind Energy Association, Cogen Europe) and have tended to engage with broader 'climate' policy only in partnership, for example, where NGOs have been involved in organizing alliances of interest [for example joint lobbying between environmental NGOs and the clean technology business organizations over the early stages of the Renewables Directive, 1996; and the ECCP alliance – see footnote earlier].

In the same vein, the financial and insurance sectors have not displayed the same engagement as they have in the negotiating process: indeed it is almost entirely absent from the domestic and EU general climate policy.

This is likely to be because the climate policy process is often compartmentalised, and tends to focus on the direct emissions producing or reducing sectors, creating some difficulty in engaging in a debate where there is not direct commercial interest. However more recently some leading companies are developing commercial interests in the carbon trading markets, and, through UNEP's Financial Initiative, have started to define important emissions market characteristics. These include the view that *absolute* emissions reduction targets

---

65 Michaelowa A, 'Climate Policy and interest groups – a public choice analysis', *Intereconomics* 33, 6, 1998, p251-259.

66 ACEA's CO2 commitment, [www.acea.be](http://www.acea.be)

67 These organisations gained formal recognition at COP2, Geneva, 1996, as representing a separate set of interests to the International Chamber of Commerce (ICC), and the right to make a separate business statement to the negotiations.

68 In an analysis of the relative economic and employment weight of different sectors, Michaelowa (2000) points out that, although declining, the absolute level of importance of emitting sectors is still 'much higher' than those profiting from emissions reducing policy, and as such play the 'major role' in climate policy.

are 'an important prerequisite for credible, efficient and effective emissions trading.'<sup>69</sup> This contrasts with the negotiation of relative targets (reductions per unit of production), or the opposition to absolute targets for emissions reductions on industry, supported by other sectors<sup>70</sup>. However what is missing is the delivery of this into policy debates.

## 5. Company level: carbon on the balance sheet.

The shift in attention towards national implementation policy has been accompanied by increasingly detailed questions about how carbon should be dealt with within the firm: from accountancy matters such as how carbon assets and liabilities would appear on a company balance sheet<sup>71</sup>, to the carbon risk management strategy of a company<sup>72</sup>. Managing Director of US firm, Evolution Markets, described corporate interests thus: "...there are two major risk categories -- companies that need to protect against increased costs and companies that want to lock in potential revenues<sup>73</sup>."

These 'bottom line' matters of corporate exposure, liability and strategy suggest the potential for re-defining 'winners' and 'losers' within sectors in the shorter term, as well as between carbon producing and carbon reducing sectors<sup>74</sup>.

However while penetration of these micro-level topics exist within the structure of some firms, and incorporated into the performance contracts of managers<sup>75</sup>, this is far from universal within firms now taking on carbon commitments<sup>76</sup>, and

---

<sup>69</sup> UNEP Finance Initiatives Climate Change Working Group 'Emissions Trading Position Paper, October 2002 (www.unepfi.net).

<sup>70</sup> For example UK Climate Change Agreements between government and industry which are in the form of a relative target (in exchange for an 80% reduction in the Climate Change Levy on energy use by business) can result in a commodity which can be traded through the UK emissions trading scheme. The ICC has also opposed absolute targets for industry eg briefing for COP5.

<sup>71</sup> For example Swiss Re Conference Report 'Reducing Greenhouse Gas Emissions', 11-12 October, 2001, Fiona Gadd, Partner, Arthur Andersen, 'Carbon and Tax Planning' page 13. Also 'Guidance for accounting for emissions under the UK Emissions Trading Scheme – key issues', October 2002, IETA, UK Emissions Trading Group and Andersen, reported in Edie Weekly News Summary, 12 July, 2002.

<sup>72</sup> John Palmisano, Managing Director and Editor, Evolution Markets 'Executive Brief' series examining risk management and corporate hedging strategies in relation to national and international policy shifts eg 'Hedging Corporate Risks associated with Greenhouse Gas Controls', 27 August, 2001. Swiss Re conference, as above, profiled the examination of risk by the reinsurance industry, its subtitle was "anticipating tomorrows drivers, opportunities and financial solutions."

<sup>73</sup> Ibid, Evolution Markets, 27 August, 2001. He goes on to raise a series of questions: "... the more pressing commercial questions have gone either unasked or unanswered. For example, what specific companies are particularly at risk? What is the relationship between carbon control costs, company profits, and a company's market value? How can companies mitigate their carbon control risks or lock in profits? How much would it cost to mitigate these risks and lock in profits? Are companies more concerned with absolute levels of carbon risk, (e.g., cash positions beyond which they dare not move?) or is there a focus on risk relative to their peer groups, similar to how fund managers evaluate risk?"

<sup>74</sup> For example even within the oil sector an analysis by WRI finds "Companies will have very different exposure to climate and access issues and their financial consequences by virtue of their unique asset bases. This differentiation is a source of competitive advantage and disadvantage within the industry." Executive Summary 'Changing Oil, Emerging Environmental Risks and Shareholder Value in the oil and gas industry', July 2002, D. Austin & A. Sauer.

<sup>75</sup> Speech by Mr. Rodney Chase, Deputy Group Chief Executive, BP Amoco at the Pew Center-Chatham House Conference, 25th April 2000 (www.bp.com)

<sup>76</sup> Many businesses signed up to Climate Change Agreements with the UK government, remain unaware or uninterested in even examining the potential for emissions trading to help meet their obligations, according to James Emanuel, emissions broker with ICAP. Comments during presentation at 'Carbon as a Commodity, Corporate Impacts', conference, London, 28 January 2003.

may produce incentives to creatively inoculate the firm from impacts of carbon policy. At a conference of the Association of International Petroleum Negotiators (AIPN) in 2002, none of the lawyers involved in oil and gas contract negotiations included carbon considerations directly in contracts<sup>77</sup>. Indeed it transpired that one possible response might be to seek corporate indemnification from any impacts of new carbon policy, in the case of company-government contracts.

It appears unlikely that differences in corporate carbon strategy will translate through into the more general policy positioning of traditional business organisations in the short term. It will likely be a case of 'piecing together' a moving picture, as initiatives such as the Carbon Disclosure Project<sup>78</sup>, and Swiss Re's climate questionnaire (sent with renewals of Directors and Officers insurance policies) come to light.

However new sectoral interests are starting to be identifiable, based upon analysis of the real world costs and beneficiaries of implemented policies.

In the UK, the Confederation of British Industry (CBI) survey of the business impacts of the Climate Change Levy – the government's tax on business use of energy – found that there were 'substantial differences' between sectors in terms of competitiveness. 'Just 28%' of the service sector reported a worsening of their competitive position within the UK, compared to 57% of the manufacturing sector<sup>79</sup>. As the revenue from the Levy is recycled back into the economy via reduced employee 'National Insurance' payments, low energy intensity, job intensive sector might be expected to benefit. This, alongside other examples<sup>80</sup>, suggests the service sector could play a more active role in policy discussions, particularly given its employment card. However in this specific UK case, the influential CBI argues for further 'tailoring' of the Levy, arguing it has a 'negative impact' on business (a sweeping generalisation given its own report)<sup>81</sup>.

This nevertheless suggests that there are many new players that will emerge in the debate in the next 5 to 10 years – within a timeframe relevant to the second commitment period (if not its negotiation). This should create a more nuanced complexion for the rather black and white picture at present – particularly one, where one side clearly holds political sway.

---

<sup>77</sup> AIPN conference, 13-16 October 2002, Paris, France. At the start of a presentation I was giving to the conference, I asked the audience if carbon was taken into account in contract negotiation, particularly as these contracts are for 15-20 years, there was no response, although all the lawyers I talked to were aware of the issue.

<sup>78</sup> See footnote 2 above.

<sup>79</sup> Confederation of British Industries, Engineering Employers Federation 'The Climate Change Levy, First Year Assessment', 5 nov, 2002.

<sup>80</sup> Michaelowa (1998, public choice analysis) points to the service sector as a low emitting sector, which lobbied for higher energy taxes in Germany in the late 1990s.

<sup>81</sup> . Note that the manufacturing sector in the UK accounted for around 18% of Gross Value Added in the economy in 2000, but declining compared to its position in the mid-1990s; the services sector accounted for around 70% of GVA in 2000 up around 4% since 1995. There are broader concerns over impacts on the struggling manufacturing sector further, however its decline is not a result of the Levy.

NOTE: This section has not gone into the views and submissions of business into the EU emissions trading regime, this may shed further light into variations of commercial interest, particularly interesting where US companies are involved. However a focus on emissions trading will not necessarily throw up a sense of where the real climate entrepreneurs will be found, although in the shorter term it can ameliorate some entrenched opposition, and may help shift from a 'compliance view' to 'market acceptance/opportunity'.

## ACADEMIC SOURCES

Giorgetti, C. 'From Rio to Kyoto: A Study of the Involvement of Non-Governmental Organisations in the Negotiations on Climate Change', , N.Y.U. Environmental Law Journal, Vol 7, 1999, p201-245.

Levy, D.L., Newell, P. 'Oceans apart? Business Responses to Global Environmental Issues in Europe and the United States, Environment 42 no9 8-20 N 2000.

Levy, D.L., Egan, D. 'A Neo-Gramscian Approach to Corporate Political Strategy: Conflict and Accommodation in the Climate Change Negotiations.'

Michaelowa, A. 'Climate policy and interest groups – a public choice analysis', Intereconomics, 33, 6, 1998, p. 251-259

Michaelowa, A. 'Impact of interest groups on EU climate policy', European Environment, 8, 5, 1998, p. 152-160.

Michaelowa, A. 'The strength of different economic interests in shaping EU climate policy', Energy & Environment, 11, 3, 2000, p. 277-292.

Svendsen, GT. 'Lobbyism and CO2 Trade in the EU', Presentation to The 10<sup>th</sup> Syposium of the Egon-Sohmen Foundation, Dresden, Germany, October 25-26, 2002. Svendsen is Associate Professor in the Department of Economics, Aarhus School of Business

## JAPAN

This section is divided into two parts: the first is an overview that provides the background and context of the Japanese experience and perception of the Kyoto Protocol.

The second part is a detailed case study of the Keidanren Voluntary Action Plan for the Environment (KVAPE), providing an analysis of the efficacy and motivation for the development of this plan. Keidanren (now the Japanese Business Federation) is the most influential business organisation in Japan, representing a large proportion of emissions producing industries.

### Alien Born at Home: Kyoto Protocol and Japan Taishi Sugiyama

#### **Abstract**

The Kyoto Protocol was alien to Japanese environmental policy, since the targets are legally binding and the process was not based upon in-depth consultation between government and industries. This novelty created many mistakes and misunderstandings during the course of negotiation, resulting in the current resentment of the Protocol itself by industries. Given this dissatisfaction, the Japanese position in the post-1<sup>st</sup> commitment period negotiation is highly uncertain.

#### Environmental Politics of Japan

The subject of environmental issues in Japan began its history with a series of tragic incidences that killed many people. While there had been pollution problems before WWII, the most serious ones occurred after WWII, side by side with the miraculous economic growth. In the 1950s and 1960s, four major pollution events *Minamata*, *Niigata-Minamata*, *Yokkaichi*, and *Itai-Itai*, were reported to have caused thousands of fatalities by heavy poisoning. Through a series of litigations, which the polluter industries finally lost, the mal-intentioned behavior of the industries was revealed. Some of them had intentionally hidden data and continued their operations, knowing that they were killing people.

It created very emotional and strong public pressure against industry to take decisive mitigation measures. Sometimes their requests went to extremes beyond international standards. While pollution control laws were less stringent than those at the international level, the industries were faced with severe local citizens movement (including fishermen in the case of water pollution) and local governments, many of them led by then-popular liberal governors, to take pollution control measures. Almost all major facilities with potential emissions did not have any choice but to conclude negotiated agreements with those local stakeholders and governments. The negotiated agreements, or what they called

pollution prevention agreements, typically requested the use of best available emission control technologies.

As the result, the level of pollution control performance became the top in the world. Around the 1970s, there were massive investments in pollution control technologies. Taking an example from air pollutants from the power sector: sulfur scrubbers were installed at major emission sources. It took more than a decade in Europe (under the convention on Long-Range Trans-boundary Air Pollution) or two decades in USA (under its emission trading scheme) to use the same equipment to the extent that Japan did. NOx scrubbers were also installed around 1970 at major emission sources. These technologies are rarely seen in the rest of the world even today.

The costs to industry, however, were kept within a feasible range, often helped by subsidies and loans available from the government. This was possible since the policy was carefully crafted based on consensus between the government and industry. The policy-making relied upon the very infrastructure that once served the miraculous economic boom after WWII. The policy-making arena and membership for decision making was quite similar, or even the same: there were governmental committees of stakeholders, bilateral negotiation between the government and well-organized industrial associations, and informal channels such as “breakfast meetings of leading presidents of industrial associations with senior governmental officers”. Citizens were not so concerned with the lack of procedural justice, such as the opaqueness of decision making (or, it would be fair to say, there was simply a lack of idea of procedural justice at that time), but seemed to be satisfied with the mitigation performance, that became obvious at the end of 1970s. Heavy compensation also served to calm things down. In sum, the informal and consensus-based decision making system with limited participation was surely the most effective way of performing best in combating pollution, where the objective and the means were rather clear.

### Climate Politics in Japan

The Kyoto Protocol is a powerful and strange alien to Japanese environmental policy. It is not based on in-depth negotiation with the government. It is not informal, but very legal. As such, the Kyoto Protocol is very different from the traditional environmental policy, though the difference was barely recognized as of COP3. Most stakeholders were not aware of the difference in legal nuance between the binding Kyoto targets and non-binding numeric targets that are traditional policy instruments in Japan.

Kyoto targets were negotiated among stakeholders and governments without knowing what exactly was under negotiation.

In setting up their own numeric targets, Keidanren, after carefully looking at their own emission reduction possibilities, voluntarily committed to a ceiling, or zero



percent reduction, from 1990 emission levels (though it turned out later they were still too optimistic about nuclear development).

The Keidanren Voluntary Action Plan covered 70% of industrial stationary GHG sources – a remarkable share from an industrial umbrella association, showing the consolidation level of Japanese industries --- still, neither residential & commercial sectors nor automobiles were covered.<sup>82</sup>

However, the government picked up Keidanren's target and applied it energy-wide, including residential & commercial as well as transportation sectors. This was the first mistake, since the energy elasticity against income and price are totally different across sectors.

There was also a second mistake that was to fail to understand the difference in legal nature of the voluntary plan and the legally binding numeric targets of the Kyoto Protocol. While numeric targets are very familiar policy instruments in Japan, they are non-binding and they rarely aim at achieving the targets. Rather, they are recognized as a policy instrument to signal the overall direction of the policy, harmonize a set of policy tools therein and make adjustment among them. Such effectiveness of the numeric targets is called the “adjustment function” by policy scientists. It seemed that industry misunderstood the legal nature of Kyoto targets as if they were the same as traditional non-binding targets – it turned out that they are not, only after the deal at Kyoto in 1997.

Another mistake took place at Kyoto. During negotiation Japan had to concede down to minus 6% from the 1990 level. After allocating 0% to energy, 3.7% to sinks, and so on, the “residue” 1.8% was allocated to Kyoto mechanisms. Since then, those allocated numbers were interlocked, because they were regarded as the hard-won negotiation gains from each negotiator and sector. It created a strange position for Japan after COP3: as an Umbrella Party, Japan stuck to free trade of emission quotas, while asserting for just 1.8% of quota, which could be easily achievable within even a highly restricted regime. The thing was that 1.8% was thought to be the amount earned by the government, and there may be additional reduction through Kyoto Mechanisms if other sectors failed to reduce domestically. It was not clear who bore the latter part of burden, which thus created another political tension.

Keidanren, worried about an extra burden beyond the voluntary plan, cautioned the government that Keidanren will not buy any more quotas beyond their plan, and pressured the government to procure 1.8% by itself. However, this double structure was rarely explained outside, hence the Japanese position was not easy to understand for the rest of the world. Even within the government and industry, this complex position was not widely understood and often invited misunderstandings.

---

<sup>82</sup> There are pro-climate activities other than Keidanren Voluntary Action Plan, but their size is far less than Keidanren. For example, there are companies that signed up with e55 initiative coordinated by WWF, but there are only four Japanese participants. ([www.wwf.or.jp](http://www.wwf.or.jp)).

In retrospect, the Japanese position after COP3 would have been much clearer if the government and industries had reached an agreement upon the burden sharing among themselves. If the burden of industries were clarified, they would have been more relaxed to discuss emission trading without being too cautious. It was (and still is) not clear who will bare the burden of the huge gap between current emissions (10% above the base year) and the target (6% below the base year). Such a high uncertainty of burden sharing was not observed in traditional Japanese environmental policy-making – since there was neither a binding legal cap nor regulation without in-depth consultation on cost sharing.

It was only after COP3 that industry became aware of the fact that they are facing the alien, harsh legal target. Though it was too late for them to wake up to this since Japan had already created political momentum toward ratification, there was mounting resentment of the Kyoto Protocol and industries began to pressurize the government to negotiate hard to gain more in the post 1st commitment period.

The resentment of major energy intensive industries is observable, for example, in the current *Sankoshin* process. *Sankoshin* is one of METI's committees for policy consultation with stakeholders and academia. In one of the working groups of the committee (Translation of the original name of the working group is: Committee for Industrial Structure/ Environmental Group/ Global Environmental Subcommittee, or *Sangyokozoshingikai Kankyobukai Chikyukankyoshouinkai* in Japanese), a debate on the post-Kyoto regime has taken place since October 2002.

The characteristics of the working group activities are as follows. The secretariat is METI/Global Environmental Policy Office. It will produce a first recommendation on post-1<sup>st</sup> commitment period issues in March 2003. The sessions are held once a month, and they are open to the public for 100 or so observers. The Chairman is Prof. Kaya of Tokyo University, and the membership is, roughly, five from University, 15 from industry, two from consumers, one from labour, and others, in total 30 members.

The working group is reviewing the status of Kyoto Protocol and considering possible future institutional design for the post-1<sup>st</sup> commitment period. They have identified the following questions as being crucial<sup>83</sup>:

- 1) In which negotiation arena should the negotiation for post-1<sup>st</sup> commitment period take place?
- 2) How should the negotiation schedule be designed?
- 3) What legal framework should be established?
  - a) Target setting (level, global, regional, national, sector), gases, legally-binding or not, target setting formulae.
  - b) How should market mechanisms be designed?
  - c) How to strike a balance between mitigation and adaptation?

---

<sup>83</sup> 11th meeting/4 p 21, 12th/6 p1

These questions obviously keep total restructuring of the Kyoto Protocol as an option, going far beyond simple renegotiation of numeric targets.

The background of this broad agenda setting is industry's resentment of the Kyoto Protocol. The following opinions were observed in the working group meeting reports:

- Kyoto is an unfair and ineffective treaty, since US, China and India are out and Russia & EU do not bear costs (11<sup>th</sup>/5 p1, 12<sup>th</sup>/6 p3)
- Japan is the sole loser. Japan is framed by EU's plot and USA has betrayed (12<sup>th</sup> /6 p5)
- Japan should not pay money to Russia to buy emissions (11<sup>th</sup>/5 p1)

It is widely understood among the participants that Japan has the highest energy efficiency level, hence there is minimal room for further emission cuts, and that Japan faces the highest marginal costs if the emission reductions are based upon across-the-board cuts<sup>84</sup>. While there is slight differentiation of targets, the Kyoto Protocol is basically across-the-board cuts among developed countries. This is one source of the feeling of unfairness. Another source of the feeling is that the EU is unilaterally benefited from windfall emission reduction through the commercial shift to natural gas, and eastern European hot air in the expanding EU. Many are seriously thinking that the EU had done very well in framing Japan.

Given this recognition, there are arguments for "more equitable" target setting from their perspective, i.e. target setting based on more serious technology assessment, rather than the simple political deals that occurred in Kyoto.

The following opinions were observed with strong support:

- Japanese energy efficient technology is at top level now.
- New target setting should reflect those efficiency levels
- A new treaty should aim at efficient technology diffusion through mechanisms such as technology benchmarking (12<sup>th</sup> /6 p2)
- Nuclear should be properly recognized in the new treaty (12<sup>th</sup> /6 p5)

However, to industry's irritation, other stakeholders are either in favour of the Kyoto Protocol or mixed. The diets, both upper and lower house, unanimously supported the ratification of the Kyoto Protocol before COP6.5, and there has been no sign that they will change their position so far. However, the unanimous votes do not mean, mysterious as it may sound, that all lawmakers are happy with the Kyoto Protocol at heart. Just before the unanimous support for ratification, there had been intense, behind the scenes debate on the "unfairness" and "shortcomings" of the Kyoto Protocol. However, once these lawmakers became aware that they would not have a majority, and that they may lose votes if they remained openly recalcitrant, they simply chose to vote for ratification.

---

<sup>84</sup> While it is not widely known, Japan has been very active in promoting renewable energies. There have been heavy governmental subsidies for renewable. For example, subsidies for home solar-system in 2001 amounted to JPY 23.5 billion, that was roughly equivalent to USD 200 million.

Still, it would be fair to anticipate, despite a desperate struggle by some industries, that the diets' position will remain stable in support of the Kyoto regime in the near future, since the unanimous support created certain political inertia and the political calculation amongst the lawmakers is not likely to change overnight.

Such a difference in opinions surfaced in the mass media. The mixed views were observed during the ratification debate - which was a salient issue in the diet in early 2002. Divergence in tone was observed among major newspapers, which have great influence in public opinion making of lay people. While *Asahi* was supportive for Kyoto, *Yomiuri* sought to have a balanced view by inviting pros and cons for the Kyoto Protocol. Industrial newspapers, which are critical in forming the opinion of business elites, had remained more sceptical towards the Kyoto Protocol.

In sum, while on the surface Japan may seem firm in support of the Kyoto Regime, major industries are dissatisfied with the burden sharing of the Kyoto Protocol. Given this range of opinions, it is not easy to forecast if Japan will remain calm. There is high uncertainty about the position that Japan may take in the post-1<sup>st</sup> commitment negotiations.

## CASE STUDY, JAPAN: KEIDANREN Voluntary Action Plan on Environment

Takao Aaiba

### Contents

1. Nippon Keidanren and its approach on Global Warming
2. Keidanren's action after US withdrawal
3. Current situation of Keidanren Voluntary Action Plan on the Environment (KVAPE)
4. Criticisms to KVAPE and Keidanren's reactions
5. Conclusion

### 1. Nippon Keidanren and its approach on Global Warming

The most influential business society in Japan is Nippon Keidanren, which is a comprehensive economic organization born in May 2002 by the amalgamation of Keidanren (Japan Federation of Economic Organizations) and Nikkeiren (Japan Federation of Employers' Associations). Nippon Keidanren is comprised of 1,232 companies, 127 industrial associations, and 47 regional employers' associations<sup>85</sup>.

---

<sup>85</sup> As of June 2002

The origin of Keidanren's actions on environmental protection was "Keidanren Global Environmental Charter," which was adopted in 1991. This charter says that Keidanren's fundamental philosophy: "endeavouring to deal with environmental problems was an essential condition for corporate existence and activities<sup>86</sup>." In terms of environmental conservation, Keidanren expressed its preference for a voluntary approach in the charter.

In 1996, Keidanren made a "Keidanren Appeal on the Environment," which is the concrete expression of the charter including its intention to adopt voluntary action plans to global warming. In 1997, Keidanren produced the "Keidanren Voluntary Action Plan on the Environment," whose goal regarding global warming is "to endeavour to reduce CO2 emissions from the industrial and energy-converting sectors in fiscal 2010 to below the levels of fiscal 1990."

Behind this action plan, there is a wide spread consensus in Japan that Japan's industrial energy efficiency is quite high in comparison with its counterparts in Europe and US, or even the most energy efficient in the world due to previous efforts after the oil crisis. There is a famous metaphor in Japan: Japan is a dried up towel, while the US. is a dripping wet towel and the EU is a somewhat wet towel in terms of energy efficiency. To test this claim is a somewhat difficult task because sufficient, objective data are not available and there exist quality problems regarding products. The product mix and industry mix of Japan is significantly different from those of the EU countries. It is quite difficult to make an objective and fair comparison by adjusting such differences between Japanese companies and those of other countries. As shown in figure 1, some Japanese data show many Japanese industries are much more energy efficient than the in US and somewhat more than in the EU. Figure 1 also shows that the energy efficiency of the Japanese Iron and Steel industry is the world number one (according to the data of that industry).

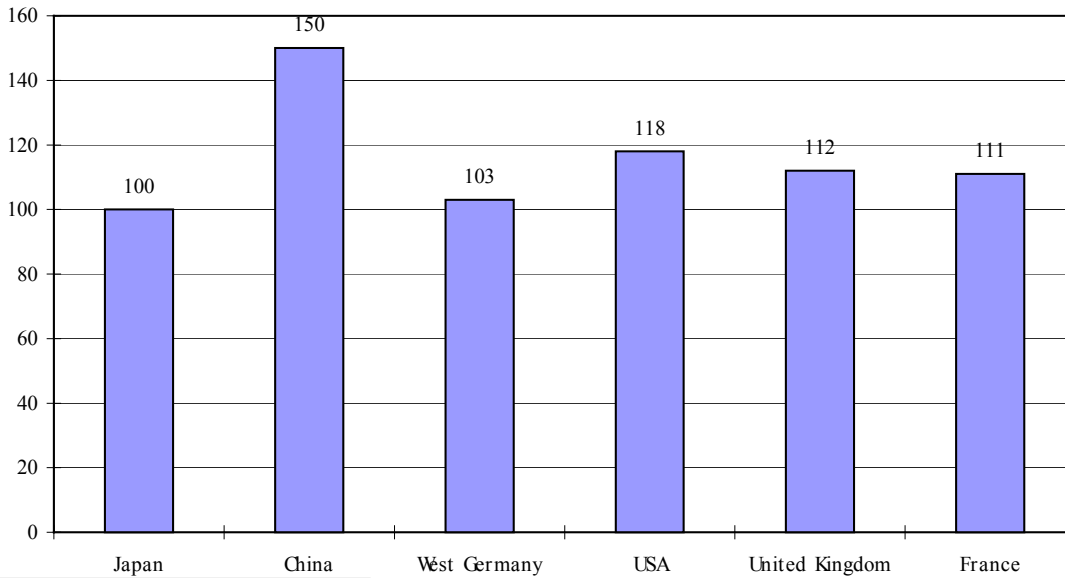
---

<sup>86</sup> <http://www.keidanren.or.jp/english/policy/2002/064/reference1.html>

(Figure1)

Per unit energy usage  
when Japan's is 100

**International Energy Efficiency Comparison in Iron & Steel industry**

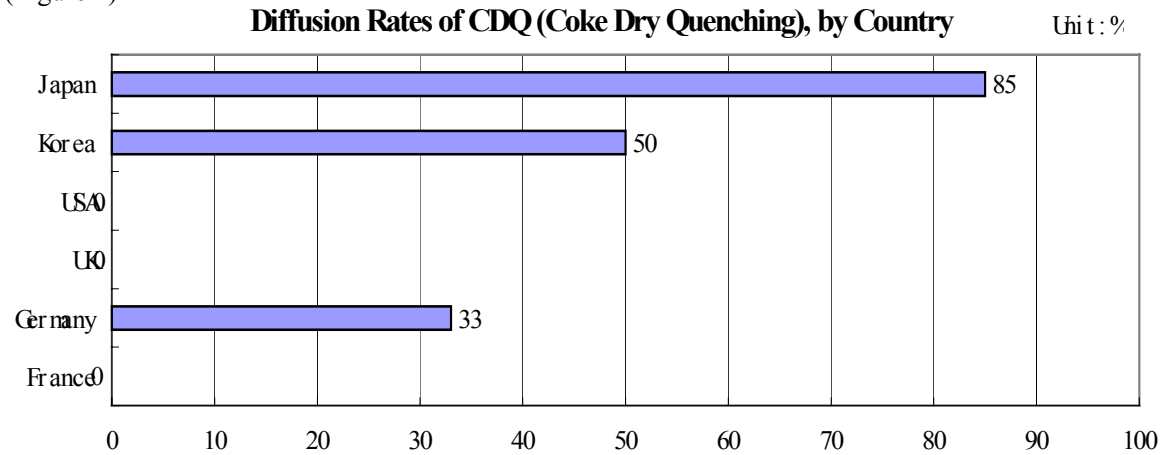


Source: The Japan Iron & Steel Federation.

Compiled by T.AIBA

The claim of the Japan Iron & Steel Federation is also backed up by some micro data in Figures 2 and 3. The diffusion rates of the key equipment that determines the energy efficiency of industries are a relatively objective index for comparing the energy efficiency of an industry in country A and a counterpart industry in country B. In the case of the Iron & Steel industry, the diffusion rates of CDQ and TRT are decisive factors, and those of Japan are significantly higher than those of their European and US counterparts. According to the Dutch energy efficient covenants, many Japanese industries, including Iron & Steel, are ranked in the top level.

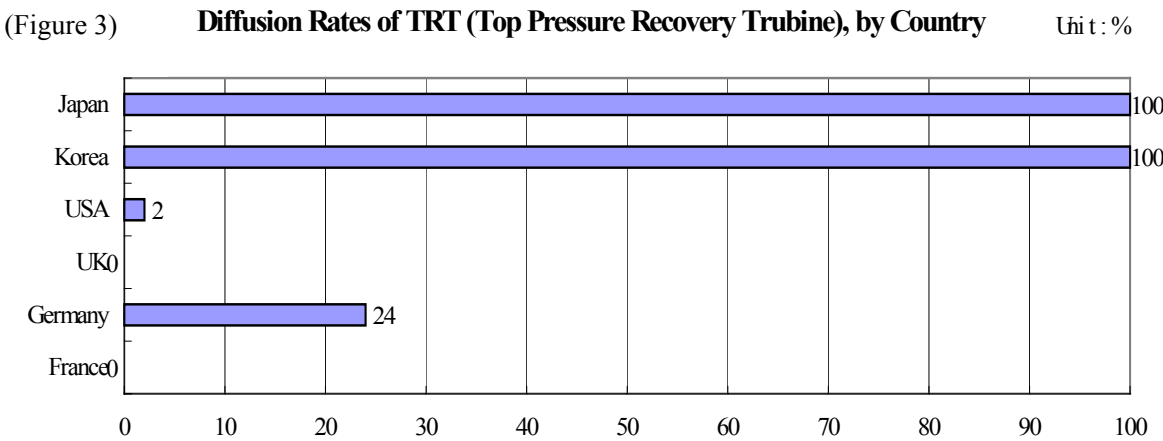
(Figure 2)



Source: The Japan Iron & Steel Federation

Compiled by T.AIBA

(Figure 3)



Compiled by T.AIBA

In addition, the European Climate Change Programme Report, issued June 2001, which claims that the “EU can affordably reach its Kyoto target,” was a shock for Japanese industries because some of the measures mentioned in the report are very obsolete for Japanese companies that took the same measures, in some cases, twenty years ago. Estimated marginal abatement cost, 20 Euro per CO<sub>2</sub> ton for EU was very low compared to that of Japan, which is more than 100 Euro and in the worst case, more than 300 Euro, calculated by the Ministry of Environment using basically the same methods as in the ECCP report.

Based on those claims, Nippon Keidanren believes that its action plan’s goal for 2010 is clearly extremely challenging and ambitious. According to the Keidanren’s estimate, on a business-as-usual basis, Keidanren’s CO<sub>2</sub> emissions in fiscal 2010 will rise by 8.4 percent from fiscal 1990.

In addition, the basic position of Nippon Keidanren toward Global Warming is as follows:

- Global warming should be dealt with principally through **voluntary actions** with mechanisms to ensure transparency,
- Technology development is key to solving the problem in the long run.
- The use of nuclear energy is also an issue of utmost importance from the standpoint of dealing with global warming.
- Measures for transportation, households & building and transportation sectors are much more important than those for the industrial sector.
- The advantages of a voluntary program are negated by use of agreements or mandatory plans because they undermine the flexibility that is the inherent advantage of voluntary efforts.
- Domestic emissions trading premised on compulsory emissions limits are inappropriate.
- Introduction of environmental taxes (including carbon tax and carbon-energy tax) that might undermine competitiveness of industry.
- It urges the immediate launch of a discussion on how to set targets for future commitment periods starting from the year 2013, by which all the countries (including the US and developing countries) must abide.
- The Kyoto mechanism is an effective option for achieving the Kyoto target while balancing environment and economy and the voluntary participation of the private sector will be essential.

These basic claims of Nippon Keidanren generally seem quite normal as a business association. However, there are two remarkable characteristics.

One is the preference for nuclear power. In the Nippon Keidanren, electric power companies have significant political clout as in other business associations in Japan. Almost all major regional business associations are headed by a chairman or president of a regional electric power company because of their company size and profit level, which is the largest in each region in many cases.

Among the emissions portfolio of Keidanren, the electricity sector is the largest on a direct emission basis (Table 1). If emissions from electricity generation are apportioned out to user industries and sectors, the largest emitter is Iron & Steel. As in Table 1, the major six industries emit about 80% of the total industry and energy conversion sector emissions. These six are electricity, iron & steel, chemical, petroleum, paper, and cement. This emission portfolio of industry seems to affect the position of Keidanren, which was headed by the chairman of Nippon Steel until May 2002<sup>87</sup>.

---

<sup>87</sup> After May 2002, Nippon Keidanren has been led by a chairman of TOYOTA Motor corporation.



**Table 1) CO2 Emission Trends & Shares of 9 Major Industries in Japan**

	Industry	Ratio to the total emis. of 34 major industries		Compared to fiscal 1990	
		Fiscal 1990	Fiscal 2001	Emission amount	Emission intensity
1	<b>Electric Power</b>	55.4%	64.5%	12.6%	-10%
	figures are used in the calculation of the 34-industry totals below.)	6.2%	7.0%	8.7%	
2	<b>Iron and Steel</b>	39.0%	36.8%	-8.7%	-5%
3	<b>Chemical</b>	14.1%	15.5%	5.8%	-6%
4	<b>Petroleum</b>	6.8%	9.1%	29.3%	-12%
5	<b>Paper</b>	5.7%	6.1%	3.8%	-4%
6	<b>Cement</b>	5.5%	4.9%	-13.5%	3%
	Share of the 6 industries above. Electric Power is attributed to users.	<b>77.3%</b>	<b>79.3%</b>	<b>-0.7%</b>	
7	Communications Industry Electronics and Information Technology Electronics Manufacturers Business Machines and Information Systems	2.4%	2.9%	18.8%	10%
8	Auto Parts	1.5%	1.3%	-17.5%	-18%
9	Automobile Manufacturers	1.5%	1.2%	-22.9%	N.A.
	Total CO2 emissions by 34 industries in the industrial & energy- converting sector	100.0%	100.0%	-3.2%	N.A.

Compiled by T.AIBA

Data source: Keidanren (Japan Business Federation).

Note: CO2 emissions of these 34 industries association amounts to 44.7% of Japan's total.

Emission intensity: CO2 Emission per unit output. (-10% means 10% improvement from FY1990).

The other is a strong aversion to mandatory targets or compulsory emissions caps. The relationship between the government and business sector is adversarial, especially about global warming, and there is little mutual trust between the government and business sector due to past experiences. Even the Ministry of Economy, Trade and Industry, which is much closer to the business sector than the Ministry of Environment, does not receive sufficient support from the business sector. In addition, Japanese private businesses have experienced severe economic control by the government after World War II, and this stifling experience still causes trauma for them.

## 2. Keidanren's action after US withdrawal

Japanese Business reacted slowly to President Bush's February 2001 declaration of US withdrawal from the Kyoto Protocol, while the Ministry of Environment and environmental NGOs responded actively. Those two eagerly appealed to the House of Representatives and the House of Councillors and succeeded in obtaining two unanimous resolutions of the two Houses about Japan's early and leading ratification of Kyoto Protocol, respectively. The two resolutions determined the final negotiation positions of Japanese negotiators in COP6 bis. After the declarations, Keidanren and other business associations took numerous actions, but these proved too late.

In June 2001, before COP6 bis, Keidanren made an official statement as follows: "Request for Calm and Patient Negotiations on the Issues of Global Warming"

1. Japanese government should continue its efforts to establish an international framework including Japan, the US and Europe.
2. Industries should not slow down their action against global warming.
3. Calm discussion is required among the public.

In September 2001, after the COP6 bis Bonn Agreement, Keidanren made an official statement as follows:

"Our country's action about a global warming problem," which insisted that

1. Japan has been making the best efforts in the world to stop global warming. Per unit of GDP, Japan's GHG emissions are about a half of the EU and a third of the US. Thus the cost for additional emission reduction of Japan is the highest in the world.
2. The role of the public sector and private sector should be clearly defined.
3. US participation in the international framework is indispensable.
4. Need to take into account the negative effect on economy and avoid negative consequences on domestic employment. An unemployment problem is the most important task of the cabinet. Additional measures on industries, including the introduction of environmental taxes, worsen the domestic employment situation, raising environmental costs and damaging international competitiveness.

In November 2001, immediately after COP7, Keidanren made an official statement that requests the government to calmly decide countermeasures for global warming. The statement said:

US participation in the international framework is indispensable.

Keidanren Voluntary Action Plan should be the basis for measures on industrial emissions.

Measures on global warming must not cause negative economic impact and unemployment.

Keidanren hopes for effective emission reduction measures on households & the building and transportation sector.

Nuclear power generation should be promoted as the most effective measure for global warming.

Clearly these claims were so vague and hardly effective. In a democratic country like Japan, whose constitution stresses the superior power of the House, unanimous resolutions in the two Houses are strong indeed. The Japanese

administration and the House decided to ratify the Protocol without US participation in June 2002.

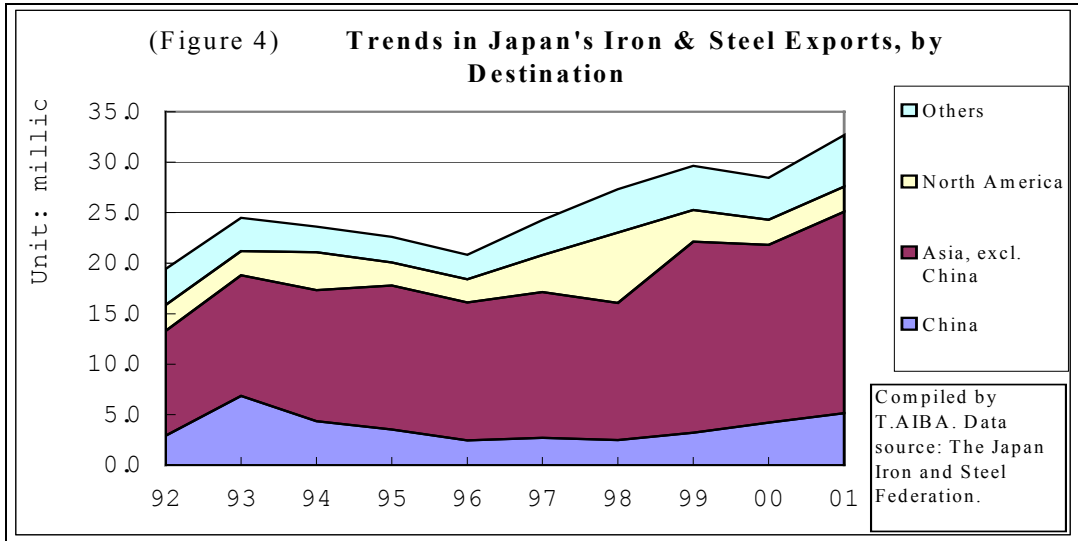
Why has Japanese business has been insisting so adamantly on the importance of US participation in the Kyoto Protocol? It is because not only are the US GHG emissions the largest in the world but also Japan's economic relationship with the US is so tight. As shown in Figure 4, the weight of the US as a receiver of Japan's exports is much larger than that of the EU. About thirty per cent of Japanese exports are directly bound for the US and a significant portion of exports to Asian countries are also finally headed for the US. Japanese economic relations with the US and Non-Annex I countries, especially China and other Asian countries, are huge. In contrast the EU economy seems to be relatively self-sufficient and can take tough environmental measures without damaging competitiveness to the same extent, assuming all EU countries take the same action.

(Table 2) **Share of Export Destination by Countries**

Exporting countries	to the USA	to Developing Countries	to the EU	to Japan	to Others	Total
EU	7.6%	20.3%	62.9%	1.9%	7.2%	100.0%
of which Germany	8.3%	23.5%	58.2%	2.4%	7.6%	100.0%
of which U.K.	13.2%	20.3%	55.3%	2.2%	9.0%	100.0%
Japan	29.5%	48.0%	17.3%		5.2%	100.0%
USA		42.2%	22.4%	10.0%	25.5%	100.0%

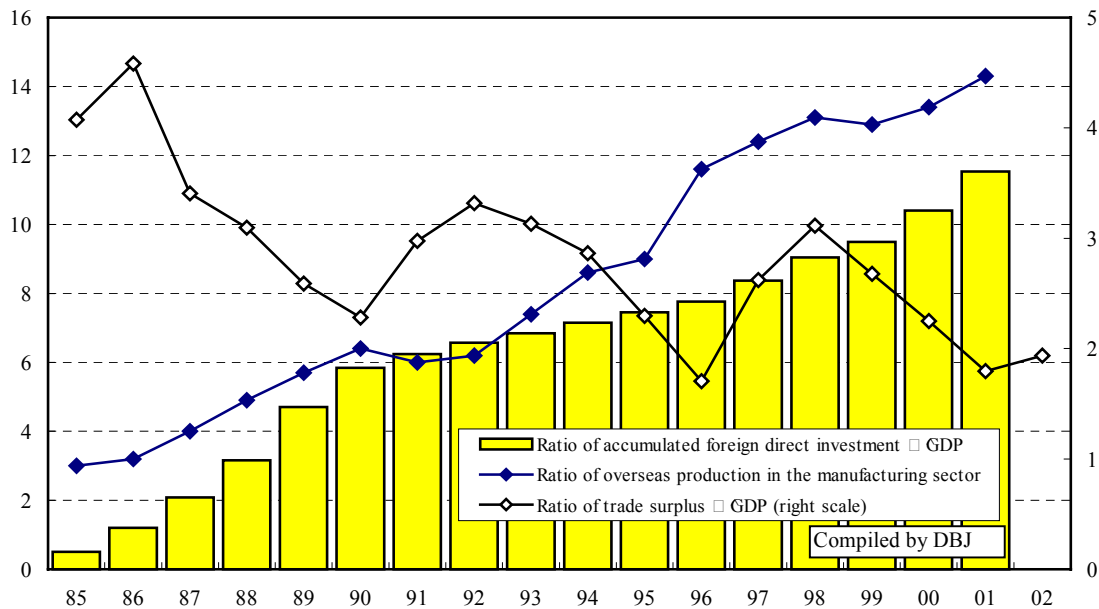
Compiled by T.AIBA. Data source: IMF "Direction of Trade Statistics"  
 Note: Figures are averages between 1990 and 2001.

In Figure 4, we can see that in terms of Japan's Iron & Steel industry, exports to Asia, China, and North America is far larger than that to elsewhere. Not only at the macro level but also at the micro level, Japanese business is facing severe competition with the US, China, and other Asian countries.



In addition, Japanese industry has been threatened by Asian countries as manufacturing bases. Since the late 80's Japanese industry has been increasing its overseas production and the Japanese trade surplus has been getting smaller and smaller.

(Figure 5) Development of Overseas Production and Trend in the Trade Balance



Many manufacturing industries, such as Transportation equipment e.g. automobile and motorbikes, and Electric equipment, have been increasing their outputs overseas. The ratio of overseas production has been rising, while the trade surplus has been going down. The hollowing out of industry became a real and severe economic problem for Japan. The unemployment rate in Japan has been rising since late 90s. Such a hollowing out of the industry is thus becoming a very important agenda point for Japan. However, not many Japanese people recognize the linkage between emission reduction measures and the competitiveness issue.

In many surveys of countries' competitiveness, Japanese competitiveness has been deteriorating since the early 90s. Japanese corporations are very sensitive to anything that damages their competitive edge, especially against China. The Japanese economy has been losing its competitive edge compared to the 1990s. In the early 1990s Japan was ranked at the world number one in terms of competition. However in 2002, it became 30th in the competitiveness ranking compiled by the IMD<sup>88</sup> and far below the U.S., the number one (Table 3). European big economies such as Germany, the UK, and France are also much higher than Japan as they ranked at 15th, 16th, and 22nd, respectively. Now Taiwan, 24th, Malaysia, 26th, and Korea, 27th are ranked higher than Japan, and China is just below it as it, ranking 31st. Many Japanese trade partners are ranked higher than Japan.

**Table 3** Declining Japanese Competitiveness

Ranking	1992	Ranking	1996	Ranking	2002
1	Japan	1	United States	1	United States
2	Germany	2	Singapore	2	Finland
3	Switzerland	3	Hong Kong	3	Luxembourg
4	Denmark	4	Japan	4	Netherlands
5	United States	5	Denmark	5	Singapore

15	Germany
16	United Kingdom
22	France
27	Korea
30	Japan
31	China
32	Italy

Sources: The World Competitiveness Yearbook, IMD International

<sup>88</sup> IMD is one of the world's leading business schools in Switzerland and issues "World Competitiveness Yearbook" every year (<http://www01.imd.ch/wcy/ranking/>).

### 3. Current situation of Keidanren Voluntary Action Plan on the Environment (KVAPE)

According to the fifth follow-up survey on KVAPE conducted by Keidanren itself, 34 industries<sup>89</sup>, which emitted 499.88 million t-CO<sub>2</sub> in fiscal 1990 equivalent to around 44.7% of the total Japan's emission in the year, participated in the fifth Follow-up survey. These 34 industries' emissions amount to about 80.1% of the total amount of CO<sub>2</sub> emitted by the industrial and energy-converting sectors in fiscal 1990. In addition to these 34 industries, there are 16 industries that are participating in the KVAPE but not in the follow-up survey.

Thus coverage of the KVAPE is significant compared to similar voluntary programs in other countries. Although there is no direct incentive and mandatory requirement, large Japanese companies are taking significant actions.

Keidanren said that according to the survey, "CO<sub>2</sub> emissions in fiscal 2001 were 483.70 million t-CO<sub>2</sub>, a 2.9% decrease compared to fiscal 1999 and a 3.2% decrease compared to fiscal 1990. CO<sub>2</sub> emissions in fiscal 2005 will be 509 million t-CO<sub>2</sub> (approximately 1.8% higher than in fiscal 1990); on a business-as-usual basis, CO<sub>2</sub> emissions in fiscal 2010 will increase to 542 million t-CO<sub>2</sub> (+8.4% compared to fiscal 1990)."

### 4. Criticisms to KVAPE and Keidanren's reactions

Environmental NGOs and the Ministry of Environment have been criticizing KVAPE. The main points of their claims are as following:

- **Not Transparent:** the formulating process of KVAPE was not open to the public. As a result, emission reduction targets of KVAPE are not sufficient for the national "Basic Principles for the Promotion of Measures Dealing with Global Warming," which require the industrial sector to cut emission by 7% below the 1990 level. Although each sector has a different reduction target, such as a 20% cut in CO<sub>2</sub> intensity and a 10% cut in energy usage, Keidanren does not show how it adds up those different targets to the total reduction target of

---

<sup>89</sup> 34 industries in the industrial and energy-conversion sectors:

Flat Glass Association of Japan; Japan Federation of Housing Organizations; Communications and Information network Association of Japan, Japan Electronics and Information Technology Industries Association, Japan Electrical Manufacturers' Association, Japan Business Machine and Information System Industries Association; Japan Sugar Refiners' Association; Flour Millers Association; Japan Coal Energy Center; Petroleum Association of Japan; Limestone Association of Japan; Cement Association of Japan; The Japan Soft Drinks Association; Federation of Electric Power Companies; Japan Aluminum Association; Japan Sanitary Equipment Industry Association; Japan Chemical Industry Association; Japan Gas Association; Japan Federation of Construction Contractors, Japan Civil Engineering Contractor's Association, Inc. and Building Contractors Society; Japan Mining Industry Association; Japan Machine Tool Builder's Association; The Japan Rubber Manufacturers Association; Japan Society of Industrial Machinery Manufacturers; Japan Industrial Vehicles Association; Japan Automobile Manufacturers Association; Japan Auto-body Industries Association, Inc. ; Japan Auto Parts Industries Association; Japan Brass Makers Association; Japan Paper Association; Federation of Pharmaceutical Manufacturers' Associations of Japan and Japan Pharmaceutical Manufacturers Association; The Shipbuilders' Association of Japan and The Cooperative Association of Japan Shipbuilders; Japan Iron and Steel Federation; Japan Association of Rolling Stock Industries; Japan Electric Wire and Cable Makers' Association; Japan Dairy Industry Association; Japan Bearing Industrial Association; Brewers Association of Japan. Camera and Imaging Product Association skipped the current Follow-up because of reorganization of the association.

curving emissions to the 1990 level. Keidanren does not disclose the emission reduction target of each participating company.

- Not sure about the real effect of voluntary measures: GHG intensity on Index number of Industrial Production, IIP, has been deteriorating since the early 90s. Keidanren's analysis on the factoring out of emission reduction reasons is not transparent.
- Keidanren's follow up is not transparent: Data disclosure is not enough. It is difficult for a third party to trace Keidanren's analysis.
- There is no mechanism that guarantees that the actual emission reduction will be achieved. It is unclear who takes responsibility in the case of non-compliance with Keidanren's commitment.
- Participation rate is not enough: Small and medium size companies are not taking part in the KVAPE. There is no incentive to facilitate participation in KVAPE.

The above-mentioned criticisms are relevant in some cases and not in others. Keidanren claims "Vagueness of the KVAPE is creating the flexibility that is a major advantage of the voluntary action plan."

Keidanren itself accepts some of the criticisms and is trying to improve KVAPE. Every year Keidanren carries out follow-up surveys with industry about the progress being made under the KVAPE. Some related councils of METI review the outcomes of these annual follow-ups. Outcomes of the follow-ups are also made public through the Internet and other means. In addition to the annual follow-ups, Keidanren established the Third-party Evaluation Committee in July 2002 in order to enhance the credibility of KVAPE.

## 5. Conclusion

Keidanren's position on global warming is affected by its economic situation and emission portfolio.

Keidanren has failed to influence the government's position at the COP6 bis negotiations, and the ratification of the Kyoto Protocol, looking down on the House resolutions.

Nippon Keidanren has been sticking to voluntary actions and in general, KVAPE has given valuable and workable measures to Japanese industry. However, there is still room for improvement. KVAPE is one of the major vehicles in the national government's "Basic Principles for the Promotion of Measures Dealing with Global Warming," which is the main Japanese framework for complying with Kyoto targets. As the importance of KVAPE is becoming greater and greater, so the requirement for KVAPE is getting bigger and bigger. KVAPE has to be more transparent and may need to have a mechanism that ensures the achievement of the emission reduction targets. There are risks that some additional measures may kill the advantage of KVAPE's flexibility. In order to save KVAPE, Keidanren

needs to improve it, taking into account such risks, namely Keidanren babble. Sooner or later Keidanren will face the same difficulty that German counterparts are now facing in relation to introduction of the EU wide Emission Trading Scheme.

## References

<http://www.keidanren.or.jp/english/policy/index07.html> : This Webster shows that Keidanren's Policy Statements, Proposals and Reports regarding Global Environment and Energy.

- Keidanren Global Environment Charter,
- Keidanren Appeal on Environment -- Declaration on Voluntary Action of Japanese Industry Directed at Conservation of Global Environment in the 21st Century –
- Keidanren Voluntary Action Plan on the Environment (Final Report)
- Results of the 5th Follow-up to the Keidanren Voluntary Action Plan on the Environment -- Section on Global Warming Measures -- October 17, 2002

AIBA, Takao, "Competitiveness & Kyoto Protocol, A Japanese Perspective," Dec 2002, a presentation material at the Policies to Reduce Greenhouse Gas Emissions in Industry Successful Approaches and Lessons Learned, Policies and Measures Workshop in Berlin organized by the OECD and the IEA on behalf of the Annex 1 Expert Group on the UNFCCC, <http://www.oecd.org/EN/document/0,,EN-document-8-nodirectorate-no-20-37482-8,00.html>

AIBA, Takao and T. Saijo, "The Kyoto Protocol and Global Environment Strategies of the EU, the USA, and Japan: A Perspective from Japan," pp22-pp44 "International Frameworks and Technological Strategies to Prevent Climate Change," SAWA, Takamitsu (Ed.), Jan 2003, ISBN 4-431-00001-1, Springer

European Commission, European Climate Change Programme Long Report, June 2001.

European Commission, "EU can affordably reach Kyoto target according to new report," 11 June 2001, DN: IP/01/816



