International Chamber of Commerce
The world business organization

Department of Policy and Business Practices

DISCUSSION PAPER

Sectoral Approaches: An International Chamber of Commerce Issue Discussion Paper

The International Chamber of Commerce represents over 7,500 businesses and associations of all sizes and sectors in 130 countries around the world. The ICC, based in Paris, has followed and participated in the U.N. Framework Convention on Climate Change (UNFCCC) since its inception.

Overview

In the evolving debate over ways to address climate change, especially in the post 2012 period, sectoral agreements or approaches have gained increasing attention. Voluntary sectoral approaches are not new; they have been established in various industry sectors across different nationalities and for different objectives, including for environmental and climate related purposes. National governments have also implemented mandatory policies to address climate change based on sectoral criteria and approaches. Sectoral approaches have the potential to address a variety of climate related challenges, including: mitigation, adaptation, research, education, capacity building, technological innovation and cooperation. Sectoral approaches are one significant element in a portfolio of actions to address climate change, but should not be considered in isolation. To avoid inefficiency and unintended effects, sectoral approaches should be understood in an integrated policy context that considers implications for closely related areas such as energy and development as well as implications for competition within and between sectors.

It is clear from discussions of global sectoral approaches in the context of the United Nations Framework Convention on Climate Change (UNFCCC) that stakeholders conceive very differently what such approaches constitute and the ways in which they might function, especially in the framework of international climate agreements and policy implementation. Some business groups have positive experience with global sectoral agreements or approaches initiated voluntarily by willing companies,

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often in partnership with governments to collect emission data, reduce emissions, promote research and technological cooperation, share good practice or improve efficiency. In these cases, such global agreements or approaches can indeed contribute significantly to mitigating emissions; however they do not have the status of binding international commitments. Such agreements appear to be most effective in energy-intense sectors, e.g. iron and steel, aluminium, cement, producing commodity goods exposed to international competition. However, some non-business stakeholders at the international level have suggested that sectoral climate-change related agreements could be the basis for binding, technology-based agreements between nations, including developing countries.

The ICC recognizes and supports the promotion of voluntary approaches by business and industry. These are important tools to encourage cost-effective steps to minimize greenhouse gas emissions and other activities to address climate change risks, such as research or technological cooperation. In many cases, such approaches and agreements include companies in a sector. Initiatives such as the APP, the global aluminium industry's Aluminium For Future Generations programme, that of the International Steel Industry and the Keidanren voluntary actions, demonstrate the potential and tangible accomplishments that properly designed, credible, voluntary, sectoral approaches can offer. Such initiatives should clearly be encouraged by appropriate policies.

The International Chamber of Commerce and its members stand ready to participate actively in the important international discussions that should lead to the development of cooperative, long-term approaches to address climate change in accordance with the UNFCCC.

In this paper we discuss certain fundamental aspects that should be borne in mind regarding any sectoral agreement or approach in the context of climate policy development and implementation.

What is a sector? – the importance of defining boundaries

Sectors have been defined by many organizations, such as IPCC, IEA and UNFCCC for data collection purposes, analyses or discussion. Furthermore, governments also define their sectoral boundaries and policies in line with their own priorities and national circumstances. These may also differ from country to country.

Defining boundaries of a given sector, for some sectors, may be straightforward or, for others, complex both within a nation and especially across nations at the international level. For example, where sectors produce largely homogeneous products, such as steel, cement or aluminium, boundary definitions can be clear, whereas, for example, the oil industry typically defines itself in terms of upstream (exploration, development and production), downstream (refining and marketing) and petrochemical operations. Not all of these sectors are present in every nation.

Furthermore, in some activities, such as the increasingly important production of liquid hydrocarbons from oil sands, production activities can involve upgrading, which contains significant elements normally thought of as downstream operations. Transportation includes a variety of modes such as light-duty and heavy-duty vehicles, aviation and marine operations. The production of liquid fuels such as ethanol from biomass blurs commonly-held distinctions between agriculture, petrochemical and transport sectors.

The technological and regulatory structure of the electric power sector may differ greatly between countries depending on their endowment of natural resources, historical development pathways and current state of markets. Looking ahead, in the case of some developing technologies, such as carbon capture and storage, it remains unclear what business model may apply or what sectors, including potentially new sectors may be involved. Finally, individual companies conduct operations in an integrated or distributed fashion that may span several sectors

In considering how sectoral policies and approaches might apply in different settings it is important to note that the current technological and market base of sectors in different countries can vary dramatically and this may encourage or discourage effective sectoral agreements. National conditions reflect past patterns of development including infrastructure, education, training and human resources, capital equipment and manufacturing facilities, the evolution of markets and regulatory structures. In turn, the economic and social implications of change to sectors vary greatly from country to country and even from locality to locality. In those sectors where production depends on utilization of long-lived, costly equipment and infrastructure, cost-effective changes to the technological base of a sector may require decades to achieve as equipment is replaced at the end of its useful productive life. Changes, such as improvements in efficiency, can have considerably different economic and social implications for different countries.

As a multinational, multi-sectoral organization, the International Chamber of Commerce also wishes to stress the economic and social linkages that occur between and among sectors. In considering approaches to mitigate greenhouse gas emissions it is important to understand the supply and value-chains uniting suppliers of materials, manufacturers, service providers, and customers. These linkages involve both business-to-business interactions and interactions between businesses and individual consumers. For example, shipping companies that distribute merchandise to internet shoppers depend on a complex web of relationships with many other economic sectors. Again, defining sectoral boundaries, especially for policies with economic consequences may be complex and lead to unintended consequences.

Finally, while approaches exist at the national level for interactions on policy development between governments and sectors, with a very few exceptions, such relationships do not exist at the international level. Only a few sectors, such as the aluminium, iron and steel and cement sectors have international associations with widespread global membership. Furthermore, the majority of international

associations do not yet have established governance procedures that would allow them to interact in a formal way in deliberations with national or intergovernmental authorities. However, most existing international associations can and do provide forums for discussion, co-operation and voluntary action. Companies do not conduct business as international entities. Rather, they operate as business entities responsible to the national and local governments where they operate. It is important to note, therefore, that any sectoral-based agreements defined at the international level among nations, would become binding on companies only through national implementation in laws, regulations or standards.

What is meant by a Sectoral agreement?

Whilst no universally accepted template for sectoral agreements yet exists, there are number of elements that appear to be necessary for any such agreement:

- Definition of sectoral boundaries,
- Parties to the agreement,
- Nature of the agreement, e.g. on emissions, greenhouse gas intensity, technical standards, research, technological cooperation and the timeframe to achieve the outcome,
- Procedures for reporting, accountability and or enforcement, e.g. to whom, and with what consequences.

For example, many sectors have undertaken voluntary commitments on greenhouse gas emissions both at a domestic, national level, and in some sectors at the international level. Such agreements may be voluntary commitments announced, for example, by members of an industry or trade association, or they may be enforceable agreements at a national level undertaken voluntarily by companies in a sector. Agreements may or may not have formal enforcement mechanisms. They may involve targets, mandates, or incentives.
Similarly, implementation of national or regional cap and trade programs inevitably requires sectoral considerations. For example, in allocating allowances, authorities must consider what share will be provided to various sectors, such as power, steel, cement, refining and transport sectors. In making such allocations authorities typically consider recent historical emissions, relative contributions to the economic well being of the nation, anticipated trends in emissions that may result from technological developments, other policies in place, and competitiveness concerns.

As economies adjust to the constraints imposed by such agreements, there may be intended and unintended consequences. For example, investment and emissions trends may shift between sectors in unexpected ways. Similarly, investment and productivity may shift offshore to nations without emissions constraints. While these impacts may be predictable others may be less obvious. For example, some efficiency gains through technology changes in automobiles may require advanced materials or advanced formulations of fuels the latter of which result in more intense processing and higher emissions in refineries. The response of different sectors to

changes in the price and availability of electricity may cause shifts in the demand for natural gas relative to coal with knock-on effects for the price of natural gas used in chemical plants, home heating and of electricity for all consumers.

In most countries, the processes involved in establishing greenhouse gas controls include established channels for sectors to provide input to political and regulatory authorities. Of course, such forums may not be involved when sectors establish voluntary commitments on emissions. Typically, such commitments are based on otherwise economic improvements that firms intend to implement over a given period and which may be accelerated through exchanges of expertise, benchmarking and collective attention. However, as previously noted, forums for such interactions do not exist within the UNFCCC. Within other international forums, such as the Asia Pacific Partnership for Clean Development and Climate, activities have been organized around sectoral approaches with procedures established for voluntary government and private sector participation.

Some Policy considerations

The legally-binding, differentiated emissions commitments of the Kyoto Protocol have given rise to competitiveness concerns as businesses in different countries adjust to the economic consequences of unequal emissions limitations. These include effects on employment, trade and investment. They inevitably arise when regulatory controls impose disproportionate impacts on any given region, country or sector. Although sectors, such as electricity, may not directly compete through international trade between countries, limits or burdens on electricity can impact on national competitiveness through the supply chain, including direct effects on energy-intense customers, and through effects on national economic growth. In turn competitiveness effects on energy-intense industries may significantly impact domestic electricity demand with consequences for power producers.

Some stakeholders have proposed sectoral approaches as a means to minimize economic distortions, but this would imply global sectoral participation which may not be acceptable to non-Annex 1 countries, even in the medium-term (and could produce a further competitive distortion if sectors producing competing materials were not similarly capped). On the other hand, no-lose crediting agreements could encourage industries in non-Annex 1 countries to develop rigorous monitoring and reporting procedures and to reduce emissions to levels equivalent to those in the developed countries. This, however, would not provide a level playing field, as industries within non-Annex 1 countries would receive credits for reductions that had already been achieved voluntarily in developed countries. Consequently, other measures would have to be applied, in capped countries, to mitigate competitiveness impacts for industries with limited, or no, ability to pass through the direct and indirect CO_2 costs.

In particular, it is important to note that international agreements between nations affect companies through national implementation. In turn the potential economic impact of policies in a particular country on companies in a given sector depend on

existing economic and social circumstances that arise from a complex web of past decisions on investment and infrastructure and evolving markets. Supply chain linkages, market conditions and the existing slate of technology and infrastructure can differ dramatically between countries.

Sectors often depend on and compete for scarce resources. For example, a number of sectors rely on natural gas as a feedstock, energy source, or component of electricity supply. Technological change in any sector that significantly affects gas markets will impact many other sectors. Similarly, investments in large projects may create significant demand for specialized materials and capabilities such as engineering design firms. The implications for significant changes in demand in any one sector can be raising project costs across many sectors. Sectors may also compete for access to infrastructure and permitting capacity in regulatory settings.

The fundamental message is that sectors do not operate independently; changes in the pace of investment in any sector may create short-term or long-term imbalances affecting supply and value-chains relations across the entire economy. Sectoral approaches should be evaluated in the context of economy-wide interactions.

In considering ways to address near-term greenhouse gas emissions through policies that promote actions beyond those that would otherwise occur through, economic, market forces, the ICC believes that policy approaches should:

- Encourage voluntary sector-based approaches where environmental and/or economic benefits can be demonstrated

- Allow markets to develop and select technologies

- Evaluate and give priority to options based on cost-effectiveness in order to achieve the largest impact on emissions with the lowest socio-economic impact;

- Maintain a balanced effort among sectors and countries that minimizes competitive distortions;

- Minimize economic damage to existing, economically viable capital stock and:
  - Focus on new investment
  - Encourage efficiency improvements in existing capital stock
  - Incentivize early retirement of inefficient equipment

- Utilize realistic expectations of foreseeable technical progress

- Maintain flexibility for companies and sectors within the context of regional and national circumstances.

These recommendations are intended to minimize economic distortions that inevitably arise in their absence. Attempts to formulate policy frameworks based on targets, incentives, taxes or sectoral approaches should be considered with these criteria in mind.