

# **G20 Energy and Resources Meeting**

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Let me start by saying that it is a great honour as a business person to be asked to address you. It is not just the fact that this grouping encompasses countries with two thirds of the world's population and generating all but a small part of global GDP. You represent countries with both willingness and capacity to think through the development of policies to address major issues, but also – by and large – have the critical governance systems which allow you to implement the policies you develop.

As someone who has spent a career in the energy and extractive industries, living in ten different countries including three of the G20, I have also had opportunity to visit operations in every one of the countries represented here. There are two big issues which confront the kind of energy and mining companies in which I have worked. I am glad to see that both issues are on the G20 work programme for 2006.

The first issue is how the endowment of wealth from the development of natural resources can be used to develop human capacity, infrastructure and social capital in the form of better schooling and education in the producing countries while at the same time supplying the commodities on which growing industrial economies are built. How can what is sometimes called the “resource curse” be avoided and best be converted into a true endowment?

The second issue is how best to meet the growing global demand for energy while taking into account the impacts of different sorts of energy on future climate.

## **Natural resources – endowment or curse**

As many of you approach this issue from a finance background, there is no need for me to stress either the revenue potential of natural resource development, or its role in developing both infrastructure and supporting industries in the supply chain. There are, however, many causes of the sometimes negative effects of resource extraction. There are the direct environmental impacts. There are the economic effects – local inflation, crowding out of other industries such as agriculture, the effect of islands of affluence resulting from higher standards of facilities in and around extractive operations and the macroeconomic challenges of running an economy highly dependent on volatile commodity prices. Lastly there are socio-political effects: the impact of large streams of revenues, controversies over the distribution of that revenue and the transparency of its collection and expenditure, and the fact that a government may depend more on the stream of income from a particular sector rather than from industry in general or the efforts of the population at large. There are remedies to address each of these risks. In my opinion addressing the environmental issues is relatively straight forward through technical solutions. Next easiest are the economic effects. The most difficult to address are the socio-political effects and these are the ones that are – and should be – in many ways least in control of corporations.

I would draw your attention to work done by the International Council on Mining and Metals (ICMM) in conjunction with the World Bank and UNCTAD. After high level screening of some thirty-three mining dependent countries, work focussed on four case studies: Ghana, Chile, Peru and Tanzania. The work was done in consultation with governments, non-governmental and labour organisations and results were reviewed in consultative workshops.

Rather than review this excellent piece of work, which is well documented, and which I know the ICMM would be happy to brief you on, let me rather give you a personal hit list of existing tools and principles which I believe it would be beneficial for G20 countries and companies to embrace. The aim is to achieve, with efficiency and economy, the development of the essential supplies of energy and materials for the world, while ensuring adequate environmental protection coupled with a feeling of equity and harmony in the division of the benefits, including lasting benefits in the producing countries. If we fail in any one of these objectives the consequences can be dire – our economies may stall for lack of essential input, or projects in producing countries may be mired in delays, acrimony and at worse civil strife. Furthermore if just one of our group of countries or companies fails, it has a negative effect on all of the others. As the 17<sup>th</sup> century English poet John Donne said *“No man is an island, entire of itself. Every man is a piece of the continent, a part of the main. If a clod be washed away by the sea, the continent is the less..... and therefore never send to know for whom the bell tolls, it tolls for thee.”*

Running through the ICMM work and all of the recommendations that I make is the common thread of open involvement of all those affected. This can be done without compromising the ability of governments to make the final decisions on resource allocation which are their responsibility. It can also be done without infringing an investor’s right to take key decisions in relation to investments. But transparency and genuine consultation are essential ingredients. No project or investment, and in that I include the local and national economic and revenue impacts, can be delivered by one party alone. It needs the close co-operation of corporations, governments, communities and civil society organisations, coupled with a feeling of involvement by workers, whether or not through formal labour organisations. For such co-operation to exist we need trust. And trust is often sadly lacking both nationally and internationally.

### **Building Trust**

The UN Global Compact is one means of building such trust. At the World Economic Forum in Davos in 1999, UN Secretary General Kofi Annan called for businesses to commit themselves to a Global Compact based on nine principles reflecting the major UN conventions on human rights, the environment and labour standards. A tenth principle on corruption was added later. Some three thousand companies in around fifty countries (including all but one of the G20 countries) have committed themselves publicly to these principles. The Global Compact marked recognition by the pre-eminent international body that business was not simply the problem but should be co-opted into delivering solutions to poverty and the fight against disease.

Part of the genius of Kofi Annan was that he involved civil society and labour organisations in the process. The Compact delivers two important benefits. First, it provides a forum where businesses, civil society and labour organisations can develop practical approaches to the delivery of the high level principles. A second benefit is the development of local and regional networks where different sectors of society can work together on issues critical to that country. Business can provide logistical support for such a local network, with local government and civil society participating. In the case of the Global Compact Networks, UN representatives such as the local office of the United Nations Development Programme can provide neutral oversight.

Initially the Compact was criticised by some as being just talk, or “blue wash”. Indeed for some it may be so, but I was struck at a recent regional Global Compact Summit in Shanghai how sessions with government representatives addressed practical specifics on corruption and working conditions in local manufacturing plants and mines. International labour organisations and human rights Non Governmental Organisations (NGOs), whose presence was facilitated by the Global Compact, joined in actively and constructively and I think everyone could see hard benefits from their involvement.

## Measurement of Performance

Simply having principles is no good unless there is some means of measuring performance. One way is through very open reporting against standardised indicators such as those developed by the Global Reporting Initiative (GRI). These indicators are developed by a very transparent public process involving representatives from NGO's, UN agencies, labour organisations, and companies. Reporting should cover the whole scope of a company's activities. Inevitable local shortfalls in performance can be put in the context of overall performance. Clearly it is best if these indicators are independently verified. The GRI also develops guidelines for specific industry sectors, NGOs, governments and local governments. The GRI itself, some local governments and some NGOs are beginning to issue GRI compatible reports on their own activities, joining companies from all around the world in building a global standard. Sustainability reporting is important for the public sector also. There are some encouraging examples – for example in Norway and here in Canada in some provinces such as Manitoba. The member companies of the ICMM have worked with the GRI to develop mining sector specific indicators and then committed themselves to reporting in line with these GRI indicators. This will allow clear benchmarking of performance on standard indicators. There are major companies reporting on the basis of the GRI indicators in almost every G20 country and I would commend convergence on what is rapidly becoming a global set of indicators, with sector specific supplements, rather than trying to develop country specific variations which will make it very difficult for global companies and make global benchmarking more difficult.

### The question of global standards – and pressure to adopt them

The GRI is a set of reporting indicators and a recommended approach to reporting in the context of a company's operations. This is important for measuring performance, but it does not set a standard or a "pass or fail" level for any indicator. While the details of required standards will vary from country to country, the Environmental and Social Standards of the IFC provide an important global benchmark. The standards are updated in consultation with both business and non-governmental organisations. While many responsible companies follow these standards voluntarily, others will require encouragement to do so. **The Equator Principles**, adhered to by some 40 major banks, are an important lever. The banks commit themselves to ensuring the application of IFC standards projects over fifty million dollars which they finance. Since these banks are responsible for over 80 percent of global project financing, this is a very important lever for improvement. However, only about one third of the G20 countries are currently home to a bank which is an equator principle signatory. It would widen the applicability of sound standards if G20 Central Banks could encourage their domestic banks to commit to using the Equator Principles in their lending.

A more recent international development, with links to the Global Compact, is the **Principles for Responsible Investment (PRI)**. These principles are subscribed to by organisations responsible for some \$ 4 trillion of investment. The PRI include a recommendation to use the GRI indicators to inform investment.

One can see in this way how a network of high level global principles, such as the Global Compact, materialised through the development of detailed standards and global reporting indicators such as the GRI, is gradually being spread through pressure coming from lenders (Equator Principles) and fund managers (PRI). I would strongly urge G20 Finance Ministers and Central Banks to encourage the spread of these practical steps in their own jurisdictions.

## Corruption and Human Rights

Unfortunately, the question of standards in the extractive industries goes beyond sound environmental and social standards. Governments in many resource rich countries are often weak and

lack the will or the capacity to ensure sound governance standards. Much of the development of currently developed countries – such as the UK, Germany, the US, Canada and Australia - was founded upon the exploitation of mineral resources. Having exhausted much of their own resources and those secured through past colonisation, new deposits are increasingly likely to be found in remote areas with fragile social structures or in areas of weak governance. Thus natural resources are often found in areas where conflicts are only just coming to an end or where past injustices or perceptions of injustices have led to conflict. Arising from the “Publish what you pay” campaign by Global Witness and the Soros Open Society Foundation, the **Extractive Industries Transparency Initiative (EITI)** was launched by the UK government at the Johannesburg Summit in 2002. It involves oil, gas and mining companies publishing what they pay to host governments and the host government declaring what they have received, both being independently audited. It should be possible to extend this transparency to the vitally important ultimate use and distribution of government revenue.

Similarly the **Kimberly Process**, which grew out of concerns over the use of diamonds as a source of funding for conflict, now covers over ninety-nine percent of diamond production and prevents the fuelling of conflict. In another example, the **Voluntary Principles on Security and Human Rights** were initially developed through co-operation between the UK Foreign Office and the US State Department, with involvement of major companies and human rights NGOs. It has recently broadened its participants list and wishes to continue to do so. The Voluntary Principles provide agreed guidelines for the use of armed security, the evaluation of risk and the steps to be taken if government forces are used. Proper application of these principles helps protect companies from accusations of complicity in human rights abuses and communities from arbitrary conduct whilst the security forces concerned are engaged in protecting the company’s assets.

There is no doubt that high commodity prices and increasing demands for the metals and energy necessary in a process of industrialisation in India and China, for example, is leading to strong competition by companies from all over the world to establish projects in Africa, parts of Asia and Latin America. At a World Economic Forum meeting in Cape Town two weeks ago there was much discussion of the implications and consequences of this new wave of investment.

My own view is that such new sources of investment will provide the producing countries with welcome additional sources of investment, and the resulting competition will enable them to achieve more advantageous terms. African Union and Latin American countries attracting such investment, together with the G20 countries likely to be home to some of the investors, should insist on the broad application of the EITI and the Voluntary Principles on Security and Human Rights for all of these investments.

This is absolutely not to suggest that companies from the new investment sources are more likely to engage in corrupt practices or to be complicit in human rights abuses. Indeed the EITI was in part developed to prevent repetition of major corruption scandals involving European state oil companies. There have been issues with other companies based in G7 countries, including issues relating to Security and Human Rights. It is a question of building on the experience gained and ensuring that we can widen the application to all countries and companies – increasing the chances that resource extraction is seen as a form of endowment and not as a curse. Growing commitment in all G20 countries, not just to the EITI, but to the network of other initiatives – Global Compact, GRI reports on performance, IFC standards, Equator Principles, Principles for Responsible Investment and so on – will help to achieve this. Extending, reinforcing and building this network is something you in G20 governments can really push forward. . I have heard it suggested that both the Voluntary Principles and EITI, because they emanated from the ‘North’ are neo-imperialist initiatives. But is this really the case; do they promote objectives that any of us would find reprehensible? If the answer to this question is ‘no’, then I would urge all G20 governments to become engaged in them and to take collective responsibility for their spread.

I would add one last recommendation. Economies in Africa are not going to grow if they continue to have a future dominated by hand-outs and the agendas of external parties and unless there is a climate conducive to the development of business. For that reason I commend to you the Investment Climate Facility (ICF), supported as part of the African Union's NEPAD and committed to by G8 countries at Gleneagles. This is a business led initiative. Business is committing time and an initial \$10 million or so to it – Anglo American has committed \$2.5 million over five years. The ICF will build on and reinforce sound governance promoted by the African Union's African Peer Review Mechanism. I hope that G8 countries present will live up to their Gleneagles commitments, and G20 countries building investments in Africa should consider adding their support to an initiative which can truly improve the investment climate in Africa.

### **Growing Energy requirements and climate implications**

The second major issue I mentioned at the beginning of this talk is how best to meet the growing global demand for energy while taking into account the impacts of different sorts of energy on future climate. There is no doubt that if we are to meet the development aspirations of less developed countries, we will require more energy, perhaps 50 percent more than at present by 2030. And it is likely that the majority of that will still come from fossil fuels. Does this mean inevitable climate disaster?

I do not intend to discuss the arguments for the impact of greenhouse gases on climate change. The compilation of work in the Third Assessment Report of the Intergovernmental Panel on Climate Change, soon to be updated by the Fourth Assessment, brings together clearly evidence from a large number of sources and provides a model against which the result in climate terms of various concentrations of atmospheric CO<sub>2</sub> can be forecast. As a business person I find this to be material of the quality on which we routinely base major investment decisions. It makes clear the likely range of uncertainties. It also makes clear that climate change is a serious threat to the vast majority of mankind, particularly those who are least responsible for it – the poor and vulnerable. I think the upper end of the IPCC range is as unlikely as it is undesirable – unlikely because the input comes from a simple extrapolation from the present and we can be confident that technologies will not remain unchanged for the next century. The lower end scenario results from a doubling of atmospheric carbon dioxide concentrations from pre-industrial levels. It assumes significant – but with right and timely effort entirely achievable – changes in energy patterns.

That lower end scenario shows carbon dioxide climbing to about 550 parts per million – raising temperatures by two degrees (range 1.4 to 3.2 degs), and sea levels by 30 centimetres (range 10 to 55 cm), by the end of the century. I believe the emissions patterns which would stabilise atmospheric carbon dioxide at around this level are achievable, and the resulting changes are probably tolerable – although we would need to adapt. Work on adaptation is as urgent as work on methods of mitigation. Nor it is a matter of whether one should focus on mitigation or adaptation. The simple answer is both and in many cases, the solutions, such as biofuels or carbon sequestration, provide both adaptation and mitigation benefits. Of course we do not know the full range of possible consequences. There could be relatively sudden unexpected changes such as variations in ocean currents which could have significant regional impact. Likewise there might be longer term changes in climate, such as those seen in the geological record, which might either counteract or exaggerate the greenhouse gas effects but a reasonable person looking at the IPCC data would say that we would be very wise to try and achieve the emissions which would result in the IPCC lower end scenario. Major European and some US energy companies have accepted this.. It is important to keep in mind, that the science on climate change over the last fifteen years has tended, if anything, to underestimate the rate and impacts of the greenhouse gas effect. So 550ppm may turn out to be too high for safety. It will however be challenging to achieve - but anything beyond that would certainly be an unacceptable inheritance to our children and grandchildren.

Are the changes of energy patterns and sources of the kind which would lead to CO<sub>2</sub> emissions delivering the lower end of the IPCC scenarios realistically achievable in the next fifty years? I believe the answer is yes, if we assume the kind of rates of change in energy patterns which we have seen over the past century. After all, at the beginning of the twentieth century we had basically only two forms of energy, wood and coal. Liquid hydrocarbons were basically just lamp oil backing out whale oil for lighting. Through the twentieth century we saw liquid hydrocarbons reduce coal's share in transportation and domestic heating, with a continued decline of wood. Then natural gas arrived and backed out fuel oil. By cracking and adding hydrogen to fuel oil, oil companies were able to transform it from a waste fuel to lighter transport fuel. By the end of the twentieth century we had half a dozen different energy sources, including various sorts of renewables, nuclear, modern biomass and the beginnings of use of hydrogen as a carrier of energy. In many countries, people now talk of a return of the popular acceptability of nuclear. There are exciting developments of energy from waste biomass rather than food biomass by enzyme action, including work by a Canadian company called Iogen. All of a sudden in the US, here in Canada, in Europe and Australia there is interest in using carbon capture and storage, or sequestration, to allow the use of fossil fuels without putting carbon dioxide into the atmosphere. In a project in Australia in which Anglo American is involved and discussing partnership with Shell, there is strong federal and state support. There is the potential for some kind of common carrier commercial utility system for the sequestration of carbon dioxide from multiple sources, with a major coal to liquids project as the foundation user.

And let us not overlook the potential of energy efficiency savings through demand side management or supply side energy. Too often, this solution is being overlooked - we need the right sort of signals coming from your Finance Ministries to provide the appropriate incentives for energy efficiency gains - at all stages, including development, transmission and consumption of fossil fuels.

In a recent speech, James Smith, the Chairman of Shell UK, suggested that it was necessary to achieve two goals in order to hold carbon dioxide levels at around 550 ppm. Firstly, it needs to be possible to get a dollar of economic activity for about half the energy expended today. This would mean energy efficiency gains of about 1 1/2 percent a year. He suggested that such a rate ought to be manageable although it is 20% better than we have done in the last 20 years or so. Secondly the carbon intensity of energy needs to diminish significantly. By 2050 carbon intensity of energy needs to be 45% or so less than today. He suggested that that ought also to be possible although it represents twice the rate of decarbonisation that we have seen in the last couple of decades. In both cases, it is clear that while these are achievable they are far from automatic - there must be clear policy signals from governments to move economies and markets in the right, sustainable direction. . We have around 20 years to stabilise global greenhouse gas emissions. We need these signals both on energy efficiency as well as moves to reduce the carbon intensity of energy sources.

The critical question is not to try and pick which technology will prove most important, but how we put in place systems which will ensure that the creativity of the market develops and allocates resources to those technologies which move our energy mix in the right direction at the lowest cost.

### **Passing the buck**

At present we make limited progress because each sector of society tends to pass the buck to another.

Caricaturing the positions only slightly, business shifts the buck to consumers, with a sideswipe at government regulation. Energy companies work successfully on the energy efficiency of their own operations. They set targets for themselves well in excess of the Kyoto agreement. But these targets ignore the much larger impact of fossil fuels in the hands of their customers. Energy companies offer advice to their customers on energy efficiency and carbon footprints. Several have renewable energy

or hydrogen businesses. But we cannot sell what customers do not want. In transportation Bill Ford has made this dilemma clear – he does not think that large 4 wheel drive vehicles are a good thing environmentally, but that is what the customer wants and that is where the biggest margins are made. So Ford is trapped in an uncomfortable position, what I call the Bill Ford Dilemma. The buck is quietly passed to consumers.

Business is also paranoid about regulation. This is because of bitter past experience of the cost of unnecessary or overly prescriptive regulation which kills business. It is not only business that has been frustrated by bureaucracy. No less a person than Khrushchev said that bureaucrats are like crows, if you chop down the tree in which they are roosting they flap around for a while and settle somewhere else. Regulators' trees can grow many branches. Business acknowledges that regulation is essential to the sound working of markets – regulation on transparency, on quality, on competition etc. We all know the tragic consequences of inadequate or laxly enforced building regulations. In spite of this business people in general remain deeply suspicious of the tool in the hands of politicians and governments.

Consumers, who in democracies are also voters, have considerable power. They can destroy a company or government. Polls increasingly suggest that consumers, including those in the United States, believe that climate change is a potential problem, even if it is not fully understood. In countries all across the world, I have found consumer attitudes very similar. People want instant, economic and reliable energy. Where they do not get it – whatever their level of affluence – they go to great lengths to acquire it, whether it be through very expensive and inefficient generators, or by lugging lead acid batteries on a bicycle miles to be recharged, a dangerous, environmentally unfriendly process. Such is the demand that the very poor are prepared to spend a disproportionately high share of their meagre income to acquire energy.

The demand for personal transportation is also similarly global. In China and India, people are progressing from bicycles via motor scooters to cars, allowing them to bring goods to market and take themselves to a more remote place of work. Demand for transportation fuel in these markets has been growing way ahead of GDP growth. For both power and transportation the consumer is often very well aware of the problems, but is normally loath to forego any personal convenience to address the problems. That is something that we all think “they” should do something about, where “they” is the government or business.

Economists have a ready answer to influencing consumer choice - use price signals in the market by internalising costs through taxation. Price signals are an essential weapon, but they have their limitations. In many societies, consumers react in a very negative way to this, certainly above a certain price threshold. Look at the fuel tax protests in the UK, which forced Chancellor Gordon Brown to reverse the policy of automatic fuel tax increases above inflation. The wrath of the consumer voter is something democratic governments rightly fear.

And what of governments? They are fearful of offending the consumers, their voters. Government's two main levers are regulation and taxation. In regulation they tend to fiddle at the edges in things which are often costly to business, but whose price impacts are not directly visible to consumers. In taxation, fearful of the wrath of consumers, they also try and attack in areas somewhat remote from consumers. Given its lack of votes, business in turn defends itself with the best weapon at hand, the argument that international competitiveness will be lost.

Given all this buck passing between business, government and consumers, is there genuinely a chance of a three cornered approach which will encourage us down energy paths which are more likely to deliver a low carbon outcome?

## **The essential elements of an approach to climate change**

Any successful approach needs to have the following elements clearly and openly expressed. First, utility to the customer has to be preserved. Consumers are happy to use renewable energy as long as it is reliable, that power is available all the time, and that it does not cost a great deal more than the traditional. In transportation, they will not give up personal mobility, or will aspire to it if they do not have it, except in locations where public transport gives clear advantages. In that respect, the gains to be made from energy efficiency must become more transparent and tangible to all the world's consumers – they will respond positively, but only if they are provided with appropriate fiscal incentives.

Second, the market on its own will not deliver solutions; we need a framework to guide it. The market is an unsurpassed mechanism for allocating resources to deliver goods and services. Through the market, technologies compete and are optimised or discarded, which opens the field for creativity in competing businesses and for consumer choice. I am a strong believer in the power and value of markets. But like most things, markets have limitations. Markets tend not to be effective in securing objectives which are particularly sensitive to political priorities – such as how best to secure energy security. But even more importantly markets will not on their own deliver things which are of no immediate benefit to the individual consumer making his or her choice, even though they may be beneficial to consumers collectively, in other words society. Markets without regulation would not have delivered unleaded gasoline, autocatalysts or seatbelts and airbags, nor would they in isolation have delivered clean air to London after the killer smogs of the fifties. The Montreal protocol phased out the fluorocarbons which were damaging the ozone layer, delivering the only global atmospheric success to date. In New Delhi, mandated use of liquid petroleum gas as a fuel for public transport has had a dramatic effect on air quality. Although the result is seen as positive by consumers, it is difficult to believe that individual consumer choice in the market would have driven this change.

All of these benefits needed regulation to channel the power of the market. Consider the benefit of a regulatory framework mandating steadily increasing vehicle efficiency. Competition to meet consumer preferences for power or space would still take place within the efficiency mandate, but there would be a non-fiscal commercial premium on efficiency which would benefit all. If for example China were to phase in a mandate for increasingly tough efficiency measures for all new vehicles, this would restrict the growth of imported fuel consumption. Market forces would drive the auto manufacturers in a major market to compete for comfort and performance within this framework. There would undoubtedly also be export markets for fuel efficient vehicles with good comfort and performance. Thus technology developed to meet China's needs would impact transport elsewhere in the world. Manufacturers successful in the China market would have a product which had appeal elsewhere. An analogy is the Japanese development of hybrid vehicles. Hybrid technology was initially scorned by non-Japanese manufacturers. As its advantages were proved and hybrid vehicles also became more fashionable, non-Japanese manufacturers joined in, but they have had to do so on the basis of the more competitive Japanese technology developed by the pioneers. This is a great opportunity for major G20 markets such as China, India or Brazil, perhaps even working in a co-ordinated way and including Argentina, Turkey and South Africa. It would equally be wise for the G8 countries, but I am less optimistic for initiatives there. To be clear, I am not suggesting mandating hybrid technology, even though I have personally been an enthusiastic user for more than five years. What is needed is an efficiency mandate, leaving the market to deliver the best solution.

Regulatory frameworks have to be simple and practical. The gut opposition of most business people to regulation comes from bitter experience of regulations which do not frame the market but bind it hand and foot and legislate on how things must be done. This simply kills markets and takes all the fun and variety out of life.



Third, we must use market mechanisms to make sure that on a global basis we apply resources where they can have the maximum impact. Climate change is a global issue. It is essential to ensure that developing economies, where much of the growth in energy consumption will occur, apply the most efficient technologies. International carbon trading schemes and the Clean Development Mechanism (CDM) of the Kyoto agreement are critical in this. The CDM provides a way for OECD companies to gain carbon credits for expenditure in such upgrading rather than a similar sum spent for marginal return on their own already efficient plant. The problem is that the CDM has proved to date to be extremely cumbersome, with very high transaction costs. I know of many companies who have CDM projects on the stocks and yet who are essentially giving up on them because of the complexity and slowness of the mechanism. To get CDM functioning smoothly, is a real challenge for G20 countries. I know that progress is being made, but we need a real step change and a bit of risk taking if it is to work.

Likewise we need to develop functioning and global trading mechanisms as soon as possible. After much struggle and initial suspicion, Europe now has a Europe wide trading mechanism. We should take this, learn the lessons, and build on it else where so that it becomes as near global as possible – G20 wide would be a fantastic start. Clearly there are lessons to be learned from the initial allocation process in Europe. Consider the situation in South Africa. Government and industry have committed to a 15 percent reduction in energy consumption by 2015. This is a very important and sensible step. But to ensure that the gains are made in the most economical way, a trading system is essential. It will take time to develop and get people used to it, but it will be faster if it builds on the lessons good and bad of the European system. Without it, one business may be struggling to make its 15 percent reduction at high cost, while another can make 30 percent at a much lower cost. There is currently no way of stimulating the reallocation of resources and the all round cost savings savings to be made. The same is of course even more true in China and India. Such systems may take several years to establish and get implanted in business and by that time we will be one fifth of the way to 2050 without a key mechanism in place. Interestingly, now that people are becoming used to the mechanisms, a group of companies in the UK, including energy companies, were calling for clearer tougher long term targets for the trading mechanism.

There have been concerns expressed by some of you that a global carbon market may work to divert critical resources from developing appropriate technologies at home to support suspect “hot air” emissions trading. Countries, companies and banks are increasingly sensitive to that criticism and they are responding by seriously discussing how any international investments can be so designed that they can credibly ensure real savings in emissions and costs of reducing emissions

If one accepts these broad assumptions – that we have to continue to provide consumers with the utility that they expect and at reasonable cost, that the creativity of the market is necessary to allow choice and to guide the allocation of resources, that trading and CDM mechanisms have to be in place to allow easy reallocation of those resources, but that a broad regulatory framework driving efficiency is necessary to guide the market – where do we go from here?

### **A proposition saleable in democracies?**

For a saleable consumer and electoral proposition to work it has to have broad government, business and NGO support. The proposition runs something like this;

*To avoid excessive damage from climate change we need to limit greenhouse gases to somewhere around the equivalent of 550 parts per million of carbon dioxide. This will result in some sea level and climate changes (10 to 50 centimetres and 1.5 to 3.5 degrees C) over the next century, but we believe that that the effects can be mitigated. To restrict the changes to this level we will have to radically increase the efficiency of energy use all around the world as well as seeking new sources*

*of energy. With the development of technology in the areas of transportation, building efficiency, renewable and other energy sources this can be done, but in order to encourage this development it will be necessary for government to create regulations to guide the development of markets, but we believe that this can be done without depriving consumers of the standards of performance that they enjoy.*

There will be much argument about the target level. Indeed it should perhaps be even lower, but most people accept that anything lower will already be extraordinarily difficult to achieve, and part of the object of this statement is to establish a common acceptable goal towards which we can work. We need a common goal and 550ppm is a good start.

There will be arguments that the consequences are dismissed too lightly. That too may be true, but again, we should be getting people to consider what steps are needed to counter what are likely to be unavoidable changes. Telling everyone that it may be a lot worse will not make it easier to sell, and there is always the argument that some unforeseen effect may mean that it is not so bad in the end.

There will certainly be arguments that we need radical changes of lifestyle in order to achieve the targets. Some brave politicians rightly say that we need to cut emissions by 60 percent. This conjures up in the mind of a consumer doing sixty percent less driving, heating or cooling their homes, taking fewer overseas holidays. This simply pushes people into denial and is not in fact what is needed. Furthermore, drastic changes in lifestyle are not saleable politically in a democracy – unless the crisis, such as a war, is manifestly absolutely at the door. It may come to that, but I suspect the boiling frog analogy is uniquely apt in this context. We need to emphasise that we will deliver the same for very much less – a classic challenge for business. And there will of course be many in business who also say that that is impossible. That is quite normal. In any business when a cost or efficiency target is first raised, the cry is always that it is impossible. Surprisingly when the arguments over the theoretical level of the target cease and creative minds are focussed on practical implementation, the targets are often exceeded.

Lastly there will be arguments from enthusiasts for one or other technology who will insist that their particular enthusiasm represents the holy grail - whether it be solar photovoltaics, wind power, biomass, nuclear, hydrogen, geothermal, carbon sequestration, hybrid vehicle technology or tidal power – and that that technology should receive special attention or even subsidy. I do not know which of these technologies will win, and I am not confident that anyone else knows either. The frameworks we need to guide the market should be technology neutral. It would probably be best to use carbon intensity as a framework rather than a broader area such as renewable energy. But I would accept some mandating of different broad power sources as a first step. It is however important that all technologies are judged on common criteria, with due attention being paid to long term potential. This is particularly important in relation to carbon capture and storage. For all its attractiveness as an interim solution, it would be just that. We must not allow successes in that field to lull us into a business as usual in relation to fossil fuel usage in the longer term. We need to encourage the development of longer term alternative energy solutions as well.

In order to achieve progress in addressing the challenge of climate change, as in other areas, different sectors of society will have to work together to achieve a common goal. In the process, each sector will have to give up something. In the case of business, I suspect that the most difficult hurdle to overcome will be the instinctive distrust of regulation, while for many NGOs it will be a distrust of business and the market.

So just as in relation to resource development there are clear things which you as G20 governments can do to encourage improved performance – supporting commitment to the network of initiatives the EITI, the Global Compact, GRI reports on performance, IFC standards, Equator Principles,

Principles for Responsible Investment, the Investment Climate Facility and so on – so too are there initiatives to be taken in the energy field. These would include a clear commitment to market based solutions, with strong support for methods of resource re-allocation such as the CDM and regional or global trading systems. This should be coupled with technology neutral and simple regulatory frameworks to guide the creativity of the market in the direction we need while preserving the utility to the consumer. Such an approach could not only reduce hydrocarbon usage in major markets such as Brazil, India and China, but also build import technology export capacity. These are difficult things to achieve, but G20 governments and in particular their finance ministries are in a unique position to contribute to their achievement.

Finally, I should mention the seminal work of UK senior economist Nicholas Stern who is currently looking at all aspects related to the economics of climate change. It is precisely this kind of initiative that will play a critical role in bringing climate change to the attention of those who really matter – you folk in Finance and Treasury Departments – where real changes in policy affecting in our greenhouse gas emissions patterns can also be implemented.

Thank you.