



World Business Council for
Sustainable Development



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OF THE WORLD

**CEO Climate Policy
Recommendations
to G8 Leaders
July 2008**

The views expressed in this publication do not necessarily reflect those of the World Economic Forum.

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CEO Climate Policy Recommendations to G8 Leaders, July 2008

Letter of Transmittal

H.E. Mr Yasuo Fukuda
Prime Minister of Japan
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100-8914 Tokyo
JAPAN

20 June 2008

Dear Prime Minister,

Over the past 16 months the World Economic Forum and the World Business Council for Sustainable Development (WBCSD) have facilitated a process to develop business perspectives on international climate change policy as part of the business community's contribution to the Gleneagles Dialogue on Climate Change, Clean Energy and Sustainable Development. We are pleased to transmit herewith to the Group of 8 leaders the final report of our work in the form of a set of consensus recommendations by over 80 chief executive officers of leading global companies regarding the structure of an environmentally effective and economically efficient long-term climate policy framework to combat climate change.

This initiative has been driven by the Industry Partner community of the World Economic Forum in partnership with the WBCSD and encompasses business leaders from companies headquartered in each of the G8 + 5 countries, as well as many other developed and developing nations. They span virtually every industrial sector, including energy, utilities, aviation, tourism, automotive, engineering and construction, chemicals, mining and metals, logistics, information technology and telecommunications, professional services and financial services.

In the best tradition of the business community, these recommendations are bold, pragmatic and clear. While recognizing that there are still some uncertainties in the scientific and economic evidence available, these CEOs conclude that a responsible risk management approach to the issue requires political and business leaders to take action now.

Their recommendations set out practical ideas for the design and the key elements of a flexible but results-oriented international framework in which there is participation by all major emitting countries. Significantly, they also propose a concrete agenda of public-private cooperation to develop cost-effective mitigation options, create and diffuse new technologies, mobilize private financing for clean technology investments in developed and developing countries, address adaptation priorities, spur changes in consumer behaviour, and communicate clearly to citizens the scale of the challenge we face.

We commend to you and your G8 colleagues this unprecedented statement on one of the world's most serious challenges by a group of the world's most respected business leaders. We wish to thank them and their delegates for the time, energy and collaborative spirit they devoted to this initiative.

The Pew Center on Global Climate Change served as a resource partner, and we wish to acknowledge the contribution of its Director of International Strategies, Elliot Diringer. We thank the Forum's Director for Environmental Initiatives, Dominic Waughray, who directed the project, as well as his team and counterparts at the WBCSD, Adam Kirkman and Andrei Marcu. And, we wish to acknowledge with appreciation all of the governments that participated in the Gleneagles Dialogue and, in particular, those which served as the chair and secretariat: the United Kingdom, Mexico, Germany and your own government of Japan.

We are delighted to have been business partners of the Gleneagles Dialogue process. We believe that this exercise in public-private collaboration has created value for both the official and business communities, and could serve as a useful model for future cooperation on this issue and others.

We wish you a successful summit.

Yours sincerely,



Klaus Schwab
Executive Chairman and Founder
World Economic Forum



Richard Samans
Managing Director
World Economic Forum



Bjorn Stigson
President
World Business Council on
Sustainable Development

CEO Climate Policy Recommendations to G8 Leaders, July 2008

Executive Summary

We are a global group of business leaders. We represent a considerable cross-section of the world economy. We set out specific and practical recommendations to G8 leaders on how an environmentally effective and economically efficient long-term policy framework to address climate change should be designed: the principles it should be based upon and the elements it needs to contain.

Climate change is a serious social and economic challenge. We accept the scientific rationale for urgent action presented in the *IPCC Fourth Assessment Report*. The Stern Review tells us that delaying action will only make future action more costly. While some uncertainties remain – applying a risk management perspective to the available information – we conclude that a reasonable approach is for all leaders of business and government to take action now.

Addressing climate change will require clear and honest communication as to the scale of the challenge we all face. Strong leadership from all governments, particularly those of the major economies, will be essential. Nothing less than a rapid and fundamental strategy to reach a low-carbon world economy is needed. It is fair that rich countries should take the lead and demonstrate strong cuts in greenhouse gas emissions, but those countries who are currently developing fast will not be able to avoid their future responsibilities. Emissions will have to fall very strongly in all countries by 2050 if we are to avoid dangerous climate change.

We are committed to addressing climate change and we are already undertaking many emission reduction strategies in our own companies. We also applaud and support the Bali Action Plan and its work program to negotiate a new international climate policy framework to succeed the Kyoto Protocol. We stand ready and willing to work immediately with governments to help this succeed. We want to ensure that a new framework to address climate change is in place by 2010. This will enable us to accelerate the required investments and emission reductions strategies from business as soon as possible.

The new framework must be environmentally effective and economically efficient. All the major economies must be party to it, including the United States, China and India. It should have an unambiguous international goal for overall GHG emission reductions, such as an aspiration to at least halve global GHG emissions by 2050. The new framework should also have a clear intermediate target and we set out some ideas on this as well.

The framework should respect the prerogative of national governments to employ the domestic policies best suited to their own national circumstances. It should encourage all clean technology options to be considered. It should be pragmatic and focus on the most cost-effective emissions abatement possibilities in the short run, particularly in energy efficiency and forest conservation. It should stimulate the international market for products and services that can help the economy adapt to those impacts of climate change that now cannot be avoided. It should be designed as a fair and flexible, international policy framework that can evolve and grow in the long run, stimulating ever wider and more meaningful participation by countries and industries.

Climate change is not only a challenge, it is also an opportunity. A paradigm shift to a low-carbon economy by 2050 has the potential to drive forward the next chapter of technological innovation. It will require a third - this time a green - industrial revolution. To realize this potential, the new framework must harness the power of the market to deliver on the environmental objective. It should facilitate the linkage of explicit or implicit carbon values established at various national and regional levels, with the ultimate aim of establishing a deep and liquid international market for carbon that takes into account international competitive pressures. The new framework also has the potential to stimulate new flows of clean technology and private finance to developing countries to support their economic growth. Designed properly, the new framework could have a greater degree of impact than any other sustainable development initiative in history. This is because a well designed, market-based framework in developed countries that enables the emergence of an international market for carbon can also help catalyse the required flows of private capital and clean energy technology to developing nations in the most innovative, entrepreneurial and cost-effective way.

The importance of a political breakthrough to help catalyse the paradigm shift to a low-carbon economy is clear. We do not have much time. Practical engagement of the international business community, along with other experts, in an effective intergovernmental dialogue process will help to develop many of the pragmatic ideas we set out in our paper. We stand ready to engage with G20 governments as they work together and with their negotiating partners over the next 18 months to help build consensus for a fair, cost-efficient and environmentally effective post-2012 international climate policy framework in time for the 15th UNFCCC Conference of Parties in Copenhagen, December 2009.

For more details on the background and process to this CEO statement, or for more information on future plans for the World Economic Forum's work on climate change issues in 2008 and 2009, please contact Dominic Waughray, Director of Environmental Initiatives, World Economic Forum.

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CEO Climate Policy Recommendations to G8 Leaders, July 2008

I. Overview and Key Messages

We are a global group of business leaders from diverse sectors and regions. We represent a considerable cross-section of the world economy. We have come together under the G20 Gleneagles Dialogue process¹ to develop this joint set of recommendations on climate change policy for G8 leaders to consider at their annual summit this year in Japan.

Climate change is a serious challenge for the international community, including the business community. We accept the scientific rationale for urgent action presented in the November 2007 IPCC Fourth Assessment Report Summary.² The IPCC tells us that warming of the climate system is unequivocal: its impacts are being felt and will very likely grow worse without immediate and sustained efforts to reduce greenhouse gas (GHG) emissions. According to the latest IPCC assessment, limiting global average temperature increase to 2° Celsius above pre-industrial levels would require that global emissions decline 50% to 85% by 2050. The Stern Review tells us that delaying action will only make future action more costly.³ While some uncertainties remain - applying a risk management perspective to the available information - we conclude that a reasonable approach is for all leaders of business and government to take action now.

A rapid and fundamental strategy to reach a low-carbon world economy is needed. We applaud the adoption of the Bali Action Plan and the creation of the Ad Hoc Working Group on Long-term Cooperative Action as the process for negotiating a new international policy framework under the UNFCCC.⁴ We stand ready to work immediately with governments and international organizations to help this process ensure a new climate framework is designed, agreed and in place by 2010. This will create a smooth policy transition from the Kyoto Protocol to the new agreement, and will enable the international business community to accelerate the required investments and emission reductions strategies as soon as possible.

Addressing climate change will require clear and honest communication as to the scale of the challenge we all face. Lord Stern describes the problem for us succinctly: "Current annual global emission flows are around 40-45 Gigatonnes of CO₂ equivalent (GtCO₂-eq). About 45% of current global emissions come from developing countries and this is set to grow. A 50% reduction in global emissions by 2050 equates to an aggregate annual flow of around 22GtCO₂-eq. As there will be around 9 billion people in 2050, this implies per capita emissions per year of about 2-2.5 tonnes CO₂-eq. Currently, US emissions are more than 20 tonnes of CO₂-eq per person per year, Europe and Japan 10-15 tonnes, China 5 or more tonnes, India around 1.5 and most of Africa much less than 1 tonne CO₂-eq per person per year. The consequence is that rich countries will have to take the lead and demonstrate strong cuts. Since around 8 billion people will be in currently developing countries, those countries will also have to be in the range of 2-2.5 tonnes CO₂-eq by 2050, otherwise the world average for the total would be unachievable. The size of their economies will, we hope, grow strongly. This means that emissions per unit of output will have to fall very strongly in all countries by 2050 if we are to avoid dangerous climate change."

The new framework must be comprehensive, long-term and results and market-oriented for it to be environmentally effective and economically efficient. All the major economies must be party to it, including the United States, China and India. It should have an unambiguous international goal to reduce GHG emissions by a significant percentage by 2050, such as an aspiration to at least halve global GHG emissions by 2050. This would be in line with the IPCC 4th Assessment and the statement issued at last years Heiligendamm summit, which G8 leaders agreed to consider seriously.⁵ We would also like the new framework to contain a series of realistic and clear intermediate targets so that GHG emissions are reduced in the near term, as well as making sure the long-term goal is met.⁶ We believe it should be designed to meet these targets in the least-cost manner possible. We would also like the framework to help us achieve new insights as we make the journey to 2050 on how to best meet these targets.

Our commitment to address global climate change also reflects the opportunity we feel that this challenge presents for technological innovation and shareholder value creation. Businesses succeed when they innovate and when they adapt to new market opportunities. The scale of new technologies, practices, services, products and innovations that will be required to address climate change is large. The business of addressing climate change and the rapid shift to a low-carbon economy that lies ahead has the potential to drive forward the next chapter of technological innovation. Making the paradigm shift to a low-carbon economy by 2050 will require a third - and this time a green - industrial revolution.

Designed properly, the new climate framework could have a greater degree of impact on developing countries than any other sustainable development initiative in history. A lack of cheap, reliable energy is a key factor that inhibits economic growth in many nations, especially developing countries. The new climate policy framework has the potential to stimulate important new private flows of clean energy technology and finance to developing countries that can support their economic growth. To realize this potential, however, the new framework must be designed to harness the power of the market. A well designed market-based framework in developed countries that enables the emergence of an international market for carbon can help catalyse the required flows of private capital and clean energy technology to developing nations in the most innovative, entrepreneurial and cost-effective way.

Business cannot fully capitalize on these new opportunities in an international policy vacuum: strong leadership from all governments, particularly those of the major economies, is essential. The new framework must be designed so that clear and predictable incentives (both positive and negative) are created to enable obvious economic value to be created over the short and long run from emission reductions. Deep absolute cuts in GHG emissions in richer countries are fair and will be required as a first step. Placed within a market-based framework these cuts must be consistent with economic growth strategies and will help stimulate the emergence of a low-carbon economy. Leaders of major developing economies will also need to engage to reap the economic benefits on offer. This means they will also have to set out their plans to achieve emissions mitigation consistent with sustainable economic development, including, ultimately, absolute cuts that could take effect on a delayed basis.

The following key activities that offer most GHG abatement potential are well known:

- Greatly improving energy end-use and supply efficiencies in the industrial, residential and commercial sectors, power generation processes and transport⁷
- Deploying all best available low carbon technologies
- Catalysing ecosystem conservation measures (particularly protecting, planting and replanting forests)
- De-carbonizing emissions from coal powered energy sources
- Accelerating the development, demonstration and deployment of new low-carbon technologies
- Changing the attitudes and behaviours of consumers

A practical international dialogue involving governments, business and expert organizations is required to evaluate what each mitigation activity can likely offer by way of abatement potential, by when and at what cost.

A pragmatic, bottom-up discussion like this will help inform the design process for the new international framework. What are the common policy bottlenecks that hold back these various abatement potentials? To what extent are the bottlenecks microeconomic and in the realm of national governments to fix? How can the new framework be best designed to fully enable the international market to drive these various mitigation activities forward?

Many international businesses are already acting to address climate change in their various operations and in the marketplace.

We are committed to strengthening our efforts to reduce our own GHG emissions.

Examples of these efforts include:

- Voluntarily reducing direct GHG emissions through using lower carbon choices, improving energy efficiency and other measures
- Bringing lower-carbon technologies to market
- Investing in research, development and demonstration (RD&D) of future technologies
- Adapting operations and supply chains to increase resilience to climate risks
- Encouraging reductions along supply chains
- Developing products and services to help others manage the risk of climate impacts
- Raising awareness among employees and consumers and providing them with lower carbon choices
- Helping to develop effective new regulatory approaches and to ensure compliance with existing, planned and proposed ones, including market based mechanisms in Australia, Europe, New Zealand, the US and other countries
- Developing a deeper understanding of how market-based programmes for carbon reduction can best function
- Working to build political support for stronger emission reduction efforts throughout the economy

The following are specific recommendations on how an environmentally effective and economically efficient long-term policy framework to address climate change should be designed.

The new international framework should act as a facilitator to help address climate change. Specific decisions to reduce GHG emissions have to be made by each national government. As a result, the new framework should respect the prerogative of national governments to employ the domestic policies best suited to their own national circumstances, as well as allow all clean technology options. It should, however, encourage a pragmatic early focus on the most cost-effective abatement possibilities, particularly in energy efficiency. It should be designed as a market-based flexible, international policy framework that is least trade distorting, avoids impacting competitiveness and can evolve and grow, stimulating ever wider and more meaningful participation by countries and industries. Above all, the new international framework must ensure that we sustain a political focus on reaching a low-carbon economy by mid-century to avoid dangerous climate change. This is a vision of a new climate protocol that we can work within and deliver emissions reductions against.

We commit to work with governments under the Bali Action Plan and in complementary processes to share our insights and ideas for the new international policy framework.

We will also work to build support within national contexts for their acceptance and implementation. Our overriding desire is for a results-oriented framework that aligns the long-term environmental and sustainable development imperative of addressing climate change with the practical business imperative of building long-term value for our customers and shareholders. We strongly believe the new framework has the potential to offer this win-win throughout the international economy, which is why we would welcome an invitation from governments for further public-private engagement.

II. Principles for a New Policy Framework

From a business perspective, it is urgent that governments ensure a smooth post-2012 transition by fulfilling the Bali Action Plan and concluding a new global agreement at the UNFCCC Conference of the Parties in Copenhagen in 2009. This agreement should build on the UNFCCC and the Kyoto Protocol, as envisioned in the Bali Action Plan and, we believe, should be guided by the core principles that we set out below. These principles reflect both our practical view of what is needed to most effectively and quickly mobilize private sector energies and innovation to address climate change, and our pragmatic appreciation of the diversity of political and policy challenges faced by governments in balancing the full range of interests at stake.

- **Avoidance of dangerous climate disruption in the long term.** As noted in the Bali Action Plan, “deep cuts in global emissions will be required to achieve the ultimate objective” of the UNFCCC.⁸ In line with the latest assessment of the IPCC, we urge governments to seek consensus on a long-term goal of at least halving global emissions against current levels by 2050. All countries need to recognize their responsibilities in meeting this long-term goal, but we seek leadership from the G8 to agree to deep cuts by 2050. This goal should be periodically reviewed in light of experience and new science, technology and economic insights.
- **Implementation of a pragmatic abatement strategy in the short to medium term.** To cement its credibility the new framework should construct an ambitious, but achievable, emissions reduction strategy for the short to medium-term. This should include the development of a realistic intermediate milestone, which would provide a marker on progress toward the long-term commitment. IPCC analysis suggests that, depending on the emissions growth scenario used, an intermediate milestone in the range of a 14-35% reduction in global emissions by 2030 against current levels could be achievable at a carbon price of US\$ 20/ton CO₂-eq.⁹ Undertaking a bottom-up quantification of the overall potential for an intermediate emissions reduction milestone would, we believe, be a useful and practical exercise for the international business community and governments to engage in over the next several months, perhaps under the auspices of the IPCC. Such an exercise would encourage a joint focus on where realistic abatement potentials can be found in the short to medium term. It would also provoke a practical public-private dialogue on how the framework can best be designed to ensure that these abatement potentials will likely be achieved. We believe that by taking this kind of pragmatic approach to develop realistic, bottom-up targets in the short to medium term (and focusing all parties on ensuring that success against targets is actually delivered), the new framework and its host will engender more confidence in their ability to deliver against longer run aspirations.¹⁰
- **Market-oriented.** The environmental objectives of the new framework should be met at the lowest possible cost. This is best achieved through the use of market mechanisms that create clear economic value from emission reductions. However, multiple ways exist to create economic value from emission reductions, and the new international framework should allow national governments to employ those market-based domestic policies best suited to their own national circumstances, provided that the overall framework is capable of meeting its intermediate and long term environmental goals. The framework should, nevertheless, facilitate the linkage of explicit or implicit carbon values established at various national and regional levels, with the ultimate aim of establishing a deep and liquid international market for carbon that takes into account international competitive pressures. To enable the framework to be market-based at the international level, a key early action must be to establish a common definition and metric for the tradable carbon commodity to allow for the fullest possible fungibility between schemes. Public-private dialogues could help to develop these tools. Their implementation within the new framework would help ensure that the system can then develop gradually by linking national and regional schemes as they emerge and grow.

- **Comprehensive.** For environmental effectiveness and economic efficiency, the framework should encompass all major economies, in particular the G20 economies,¹¹ all major greenhouse gases (not just carbon dioxide) and the principal greenhouse house gas-emitting sectors, including energy, transportation, buildings and deforestation/land use change.
- **Commitments-based.** The framework should establish clear international commitments that are “nationally appropriate”; “measurable, reportable and verifiable”; and, in the case of developing countries, “enabled by technology, financing and capacity-building”.¹²
- **Flexible.** The international framework should respect and preserve the prerogative of national governments to choose their own domestic policy options to address climate change. The new framework should accommodate this diversity by allowing variation in the magnitude and timing of countries’ commitments, providing that the overall framework is capable of meeting the agreed intermediate and long-term environmental goals.
- **Equitable.** To achieve broad participation, the framework must reflect the fundamental principle of “common but differentiated responsibilities”¹³. In light of their greater historic contribution to climate change, and their stronger capacities, G8 and other developed country governments should show leadership in sharing the burden of addressing climate change. We would support such an outcome. We also note that in moving forward, future equity and future responsibilities will require developing countries to also take on clear emission reduction commitments.
- **Framed within the context of sustainable development.** The new framework must view climate change within the context of the wider development challenge faced by many of the poorer countries in the world. The new framework must be designed to allow for economic growth in developing countries, while meeting its overall international environmental objectives.¹⁴ As agreed in the Bali Action Plan, the framework should provide incentives and support for mitigation efforts in developing countries, including finance for technology deployment and institutional/policy development and by providing adaptation assistance to those countries most vulnerable to climate impacts. In combination, these elements could provide tangible support to the sustainable development and economic growth aspirations of developing countries.
- **Technology-enabling.** The framework should promote an international level playing field to support the rapid RD&D of all clean energy and fuel technologies that can lower GHG emissions and technologies that can help adapt to climate change. In the near term it should encourage the wide-scale deployment of all best available technologies that improve energy efficiency to achieve emission reductions. It must enable research, development, demonstration and deployment (RDD&D) of the next generation clean energy technologies, in particular those needed to de-carbonize coal powered energy emissions. It must also contain mechanisms to protect the rights of technology owners.
- **Predictable.** The long-term business strategies and investments necessary to achieve such a paradigm shift are feasible only in the context of a stable, predictable international policy framework, based on the principles set out above. As this framework evolves, business must be confident that the UNFCCC will remain the principal venue for it; that nations will honour their commitments regardless of changes in government, and that successive agreements will be negotiated, accepted and implemented in a timely manner.

III. Elements of a New Policy Framework

A post-2012 framework that is consistent with the foregoing principles must include a range of elements addressing, in parallel, mitigation, adaptation, technology, finance, changes in consumer behavior and common metrics. The most appropriate mix of these elements within each national context must be informed by particular national circumstances and can be determined only through the process of negotiation. Following are the building blocks we believe to be essential.

Mitigation

Market Mechanisms. The current architecture of the Kyoto Protocol has relatively simple market mechanisms: essentially offsets for developing countries and allowances for emissions trading for developed countries. Market-based instruments must remain at the core of the new international climate framework, but they will need to become more multidimensional, involving:

- **Targets** – Clear intermediate and long term international targets (constraints on GHG emissions) are needed to drive the global market for abatement solutions. In developed countries, stronger absolute economy-wide emission targets are essential to drive deeper reductions and to sustain and to expand the international carbon market that will provide a conduit through which needed capital flows will occur. In developing countries, plans to achieve emissions mitigation consistent with sustainable development and, ultimately, plans for emissions to peak in the future and then fall, will need to be translated into measurable, verifiable and reportable internationally recognized commitments. Agreeing on equitable targets may require the establishment of a new baseline year, acceptable to all parties.
- **Crediting** – The post-2012 framework should move beyond project-based crediting to sector or policy-based crediting, either by modifying the Clean Development Mechanism (CDM) or through developing alternative mechanisms, in order to encourage and reward reductions on a broader scale. There may be a need to recognize that different crediting mechanisms will be needed for different stages of development and different types of GHG reduction.
- **Fullest Possible Fungibility** – Agreed methodologies are needed to ensure a universal price for allowances and value for carbon credits to facilitate current trading and the emergence of an international market in the future.

Policy-based Commitments. The post-2012 framework should enable those developing countries which may not be able to assume absolute emission targets in the short run, to commit instead to implement national policies that also produce measurable, verifiable emission reductions. Such policies could include energy intensity goals, non-fossil fuel energy targets, energy and fuel efficiency standards or measures to reduce deforestation. These commitments should form part of a country's Sustainable Development Policies and Measures (SD PAMs) and be registered with the UNFCCC under the new framework.¹⁵ They should, however, be considered (and quantified) as internationally recognized interim commitments under the new framework.

Energy Efficiency. The importance of energy efficiency initiatives as cost-efficient mitigation options for the new framework to actively promote cannot be overstated. Energy efficiency is projected by the International Energy Agency (IEA) to be the single largest potential contributor to carbon emission reductions in all of its scenarios. Other analysis suggests that improving so called “no-regrets” energy end-use and supply efficiencies in residential and commercial buildings and transport could contribute nearly a quarter of a global abatement target to reduce emissions by 20% by 2030 against current levels.¹⁶ We believe that energy efficiency initiatives must be a core feature of the new framework's emissions

mitigation strategy. The experience over the last 30 years of the government and business sectors in Japan in particular provides many practical examples of how to design and implement effective energy efficiency programmes. To link national activities on energy efficiency to the international framework, standardized ways to translate different kinds of energy efficiency improvements into measurable and verifiable emission reductions need to be developed and used by all parties undertaking energy efficiency strategies.

Sector Approaches. Prior to the linking together of national and regional policies into a properly international framework, particular approaches for reducing GHG emissions within some industry sectors in the interim may be worth exploring. These appear most feasible in a limited number of energy-intensive industries that are relatively concentrated, trade internationally and where competitiveness is a concern. This includes steel, cement, aluminum, paper and pulp, as well as aspects of the transportation sector. The potential contribution of sector-based approaches for these industries to the new framework should be explored. For example:

- For countries that are not able to assume absolute economy-wide targets in the short term and, where feasible and appropriate depending on national circumstances, some particular national sector-based commitments for these industries such as targets, standards, or technology measures could be considered. Such approaches may offer some developing countries a complementary short-term pathway to emission reductions and help generate momentum toward a more comprehensive framework in the longer term.
- Sector agreements for some industries may help to address competitiveness concerns within the new framework, for example by working with the UNFCCC to establish best-performance benchmarks as a basis for setting international standards or for allocating permits (with the benchmarks ratcheting up over time).

Given its role as a major GHG emitter, variations of sector-based approaches could also be useful for the power sector (for example, via policy incentives to encourage the greater uptake of available low emission technologies, mechanisms to foster low emission technology diffusion or cooperation and initiatives to encourage cross-company collaboration on demonstration projects and programmes for close to market clean power generation technologies).

Collaborative research on the potential contribution of some practical sector approaches should be encouraged and supported by governments during the Bali Action Plan timeframe and in the early years of the new framework. The recent Nippon Keidanren recommendations for measuring and strengthening efforts across sectors have considerable merit.¹⁷ Some exploratory sector-based initiatives are also underway at the WBCSD and World Economic Forum. Importantly, however, sector approaches should not be seen as mutually exclusive to the goals and targets for emission reductions that are set as part of the framework negotiations; sector approaches must link to the market-based environmental objectives of the new international framework.¹⁸

Supply Chain Approaches. As manufacturing processes have become more globalized, multiple factories in many different countries might make various components of a product that are then shipped internationally. Each factory in the production process will create GHG emissions to a greater or lesser extent. Transportation emissions during the production and final delivery process for the product might be significant too, in relation to the product's overall carbon footprint. Although it is difficult to directly manage the emissions of suppliers, many of our companies are now involved in programmes that work to reduce emissions across our global supply chains. The new international framework should support the development and wider uptake of such programmes. Many businesses involved in international supply chains are smaller, often domestic operations providing critical jobs and wealth for the local economy, so it is

important that they are helped to reduce their GHG emissions in ways that do not impose burdensome costs on them. Initiatives involving international companies working with their suppliers to reduce GHG emissions along the supply chains of their various products can be one practical way to support technology, resource and knowledge transfer initiatives from larger to smaller firms across the world. The new international framework can help encourage supply chain approaches by seeking standardization on GHG supply chain calculation methodologies and disclosure processes. International agreement on the labeling of the carbon footprint for goods mass-produced on a global basis would be one approach. This would inform the final consumer about GHG emissions in the supply chain for a given product and would create a level playing field for all companies and manufacturers to encourage further acceleration of GHG reduction programmes within their various supply chains. We would be happy to work with governments and other experts to help create such a programme.¹⁹

Adaptation

Adaptation to climate change is a critical challenge for all countries, particularly for poor countries that will be hit hardest and earliest, and for all business sectors. Even if GHG concentrations are stabilized in the coming years, some impacts from climate change are unavoidable. These include increasing water stress, more extreme weather events, the potential for high levels of migration and the disruption of international markets. These challenges cannot be separated from the challenges of sustainable development. The issue is one of development in a more difficult climate. In fact, the incremental costs of adapting to climate change for developing countries in particular will soon be close to the current flow of aid as the UNDP Human Development Report of 2007 highlights.²⁰

The international business community is starting to develop products and services that can help with adaptation. The new framework can help us do more. Several companies from the insurance and reinsurance sector are already developing insurance products, services and partnerships to help manage the risk of climate-related impacts through risk transfer, risk pooling and other risk reduction strategies (for example weather derivatives for small farmers in Africa). The wider business community is also working to adapt its operations and supply chains to increase resilience and decrease risk, and to help make energy provision (especially for the poor) and the economy more resilient. In partnership with governments, international business can do much more in this space, particularly if the economic case for adaptation activities or markets for adaptation products is further developed. Key areas to address include increased meteorological data collection capacity, human capital development for risk assessment and scenario planning, methodologies and incentives for improved fiscal resiliency particularly through innovative insurance instruments, incentives for the development of new technologies for adaptation and above all, mechanisms to ensure consistent and adequate financing. Within this context we welcome the important development of a new multilateral fund on adaptation and we offer to work with it, to ensure it leverages finance and expertise from the private sector to maximize its potential impact.

Technology

A market for carbon is necessary but not sufficient to promote the rapid development, demonstration and wide deployment of clean technologies.

While emission targets and other mitigation commitments will help draw low-carbon technologies into the marketplace, other policy measures are also needed to stimulate markets, to ensure broader deployment of and equitable access to best available clean energy and GHG mitigation technologies,²¹ and to promote the development, deployment and transfer of new and close-to-market clean energy and GHG mitigation technologies.²² Such measures include:

- Government procurement targets for clean technology, services and products
- Rolling performance standards for services and products that can work with other policy measures to promote the turnover of old technologies
- Removal of tariff and non-tariff barriers
- Development of incentives to encourage wider uptake of clean energy technologies such as purchase power agreements, mandatory targets, removal of import duties, development of common standards and green certificates²³
- International agreements to protect the rights of technology owners, in order to sustain and broaden investments in clean technology innovation
- Support for international multi-industry and multi-research centre initiatives to undertake shared investigations into the new knowledge and breakthrough technologies we still need
- Stronger public-private coordination and funding to help advance potentially transformational technologies to market, including partnerships for large-scale demonstration projects

Generally, the choice of specific technologies should be left to markets rather than government: different countries will naturally follow different routes and choose different mixes. The new international framework should not seek to hinder these diversities; indeed, there will be pay-offs in learning from different approaches. For non-mature technologies, however, markets will not be sufficient and enhanced RDD&D policies will have to be encouraged. Photovoltaics, fourth generation nuclear and the area of carbon capture and storage (CCS) technologies for coal are good examples. Acceleration of the demonstration and deployment of a range of CCS technologies is particularly important because if all new coal fired electricity generation plants are not operating with CCS from 2015 to 2020 onward, it will be difficult to realize the target of a 50% reduction in global emissions by 2050.²⁴

Technology transfer to developing countries. We stand ready to engage in projects and programmes that invest more clean energy technology in developing countries to help reduce their GHG emissions and adapt to climate change. Developing such initiatives is an important part of the Bali Action Plan. A critical factor to help rapidly scale up investment of clean technology in developing countries is to establish agreement on technology licensing issues. Technology licensing refers to the transfer of intellectual property rights (IPR) for the technology for the period of the agreement, in return for fair payment to the owners of the technology. As IPR usually remains within the private sector, a scale-up in projects that apply new clean energy technologies from developed countries in developing countries will require developed country private sector parties to agree technology licensing agreements with recipient private or public entities in the developing country. Currently, these agreements are worked out on a case-by-case basis and within the context of each particular project or initiative. For both parties, such a contractual negotiation process can be costly, time consuming and not without risk. The new climate policy framework could in a very practical way help to lower these transaction costs. It could support an internationally approved set of core contractual principles for businesses engaging in clean energy technology licensing in developing countries. And it could encourage the multilateral development banks (MDBs) or other international finance agencies to develop windows within their new strategic climate investment funds that support the fair payment of technology licenses to the owners of IPR, on behalf of developing countries. We stand ready to work with MDBs, governments and other agencies to help work on these important issues.

However, it is important to note that technology licensing agreements with developing countries will not occur automatically under the new international framework, even with the existence of approved principles or new funding windows. The key to catalysing successful clean energy technology projects lies within the governance arrangements of the developing countries themselves. In

particular, effective contractual laws need to exist and be enforced. International development agencies can play a useful role in helping developing countries to develop enabling environments that are conducive to an expansion of clean technology projects and programmes.

Finance and Investment

Even under the most optimistic scenario of donor commitments, public funds will be nowhere near sufficient to meet the investment requirements of a successful international climate change strategy. The new framework must create mechanisms that catalyse much greater volumes of portfolio and direct private sector investment in climate change-related activities. Key areas for such investment include:

- **Clean technology RDD&D funds and new financial products for developed countries.** There is an urgent need in developed countries for a steep increase in investment in RDD&D initiatives for next generation clean energy and fuel technologies. The investment required is more than the public sector in developed countries can afford. New public-private RDD&D funds need to be designed, created and capitalized as part of the new framework. Market incentives to help large institutional investors such as pension funds and sovereign wealth funds enter into this investment space also need to be encouraged. A particular focus for new investment funds should be to help shift emergent clean technologies from development to widespread demonstration – to help them pass through the so called “valley of death” and into the market.²⁵ Another important area of focus for the new framework is to encourage the development of new financial products or services that can help customers (corporate, government or individuals) overcome the high initial costs they often face in making lower emission choices, such as implementing energy efficiency programmes or buying low emission products, even though these options can often provide cost savings in the long run.
- **Clean energy for developing countries.** Until an international framework has fully evolved, the MDBs have an important role to play in helping to leverage private financial markets to support clean energy investments in developing countries. In partnership with the MDBs, several of our companies developed ideas on this issue last year. The results of our work showed how new multilateral finance facilities for clean energy have the potential to rapidly catalyse a significant pipeline of best available technology clean energy projects and close-to-market clean energy technology demonstration projects by buying down incremental costs through grants and concessional loans, and by increasing the creditworthiness of future revenue flows from carbon credits through partial guarantees.²⁶ Our analysis suggests that for a combined donor commitment over an initial 5 to 8 year period of US\$ 4 billion to US\$ 6 billion in additional funds and US\$ 10 billion in contingent liabilities, the Facility would likely deliver around US\$ 50 billion of financing. This would help catalyse a significant number of the clean energy demonstration projects prior to 2020 that the IEA recommends.

We are pleased that the results of our work have influenced the design of the portfolio of new strategic climate investment funds announced this year, in particular the Clean Technology Fund.²⁷ We note with interest that new donor commitments of US\$ 10 billion have been pledged to them. We now call on G8 leaders to ensure that these new multilateral funds do indeed maximize the potential leverage of private finance. In addition to our work with various bilateral development agencies on clean energy investment issues, we commit to continue with our specific engagement with the MDB community, to help in the detailed design process of the new climate investment funds (and the clean technology fund in particular) during 2008 and beyond.

- **Addressing deforestation and other forms of ecosystem conservation.**

Reducing emissions from land use, and deforestation in particular, has large potential to reduce global emissions at a low cost relative to other options, while at the same time protecting biodiversity and promoting sustainable development. Analysis suggests forestry measures offer a cost-effective abatement potential of just over a quarter of the target to reduce emissions by 20% by 2030 compared to current levels.²⁸ We welcome recent proposals by countries with tropical forests to address deforestation and their reflection in the Bali Action Plan. The new international framework should facilitate flows of finance from international market-based mechanisms and other investment sources to greatly accelerate the pace of avoided deforestation. This is because reducing deforestation can be a tangible, cost-effective win-win global emissions reduction strategy in the short run that buys down the marginal cost of carbon abatement. It also buys the international economy time while cleaner energy technologies are being demonstrated and deployed to reduce industrial emissions in the medium term. Although market mechanisms to stimulate forestry measures can play a powerful role in the short to medium term, we recognize that there is much work to be done. For example, in general the country where the trees stand should shape policies for avoided deforestation. This means that in the shorter term a focus on developing specific governance, administration and legal structures is necessary. The international framework should help facilitate these processes. It can also help create policy mechanisms that combine public sector aid flows with private sector investment to enable avoided deforestation to be included in carbon trading. To this extent we welcome the announcement of the recent Forest Carbon Partnership Facility.²⁹ We offer our engagement with the international community to help examine how best to design and catalyse private finance through this new facility.

Consumers

Business and government cannot solve the climate change problem alone. Consumers, too, have a vital role to play.

Consumers will determine whether actions undertaken by business and government to make a paradigm shift to a lower-carbon society will be met with a viable market. Indeed, Article 6 of the UNFCCC obligates governments to educate and inform consumers, although the importance of the consumer is less prevalent in the Bali Action Plan. Business and government discussions on the new framework will have to pay close attention to the role of the consumer.

Consumers need clear, honest information and the right price signals. The market-based solutions to climate change we outline above will work best when there is an informed base of consumers who understand the implications of their consumption and buying choices – they need clear, honest information and the right price signals. We believe that the international business community and governments have an equally important role to play in this regard, including the sensitization of consumers to the importance of tighter GHG emissions policies. The new international framework should encourage the development of national business and government campaigns to stimulate a sustained change in attitude and behaviour across the consumer/vote base, similar perhaps to rolling public health or safety campaigns. The labelling of carbon footprints for a basket of commonly consumed international products is one practical area to explore, which can be linked to the supply chain approach mentioned earlier.

Common Metrics

Agreed information metrics and methodologies (such as common carbon accounting standards and methodologies, data calculation tools and disclosure processes) are needed to create a level playing field for all.

Common metrics can help:

- Negotiate an equitable outcome (by enabling parties to better assess and compare relative levels of effort)
- Monitor and benchmark international progress and compliance
- Facilitate wider engagement in carbon trading through the establishment of universal measurements of carbon emissions
- Improve capital allocation, in particular through establishment of a generally accepted framework for corporate carbon disclosure

We commend to governments the wider uptake of GHG measurement tools already developed. Where mandatory climate regimes are in place, these can include the GHG Protocol³⁰ and the establishment of a generally accepted framework for corporate carbon disclosure as per the work of the Climate Disclosure Standards Board.³¹ In other circumstances, the recently announced Voluntary Carbon Standard is pertinent.³² Wider uptake of these existing tools will help measure, verify and report business and governmental delivery of commitments under the new framework.

Collective progress toward the long-term objective should also be periodically assessed, to take into account new science, technology and economics, and the experiences of government and the private sector in various national contexts. New institutional arrangements closely linked to the post-2012 framework, in addition to the IPCC and UNFCCC, may be required for this process.

IV. Moving Forward

In 2006 the Gleneagles Dialogue intergovernmental process invited, for the benefit of G8 leaders, a comprehensive international business discussion process to explore what an environmental and economically effective post-2012 climate change international policy framework should look like. This CEO statement is the result.

We stand ready to work with the G8 and G20 governments and the UNFCCC Ad Hoc Working Groups to explore and refine the ideas we set out here and to help build consensus for a fair and effective post-2012 framework. The importance of breakthrough public-private collaboration to help make the paradigm shift to a low-carbon economy is clear. We do not have much time. Practical engagement of the international business community in the Bali Action Plan Ad Hoc Working Group and/or a related business-intergovernmental process would help develop many of the practical ideas we have set out in this paper. As a set of international companies, we stand ready to help build our group to reflect further industrial sectors or geographies as required.

To this end, we are prepared to engage in further direct dialogue and collaborative thought with governments under the auspices, on the business side, of the World Economic Forum and World Business Council on Sustainable Development as a way to contribute to a successful outcome in Copenhagen at the end of 2009. We believe that it is essential to engage the international business community in an effective governmental dialogue process to move these ideas forward over the next 18 months from Hokkaido-Toyako to Copenhagen. We would welcome the opportunity to closely link these activities to any further G8 or G20 processes that may be created.

Annex 1

There are three informational documents, which are referred to in the CEO statement. These documents can be accessed on the World Economic Forum's server using the links below.

Please note that these annexes do not necessarily reflect the individual institutional viewpoints of the World Economic Forum, the World Business Council for Sustainable Development, or any of the particular companies or other institutions whose representatives have taken part in this process. These annexes do not form part of the statement which we are asking CEOs to endorse.

- *Document 1* **Changing Behaviours**. This explores some practical no-regrets GHG emissions reduction opportunities by 2030, and the hurdles which need to be removed to encourage these opportunities.
www.weforum.org/pdf/climate/Document1.pdf
- *Document 2* **A Framework to Catalyse Private Investment through the Clean Energy Investment Framework**. This presents a proposal for a framework to catalyse more private investment for clean energy projects in developing countries, through the Clean Energy Investment Framework of the World Bank and other regional development banks.
www.weforum.org/pdf/climate/Document2.pdf
- *Document 3* **Industry Workstreams**. This document contains some ongoing discussions on climate policy issues within a few World Economic Forum industry communities - Engineering & Construction; Chemicals; Aviation, Travel & Tourism.
www.weforum.org/pdf/climate/Document3.pdf

Footnotes

- ¹ For information on The Gleneagles Dialogue
<http://www.defra.gov.uk/Environment/climatechange/internat/g8/index.htm>
- ² IPCC, 2007: *Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the 4th Assessment Report of the Intergovernmental Panel on Climate Change*, IPCC, Geneva, Switzerland.
- ³ Nicholas Stern, *The Economics of Climate Change: The Stern Review*, Cabinet Office - HM Treasury, <http://www.hm-treasury.gov.uk>, 2006.
- ⁴ Report of the Conference of the Parties on its 13th session, held in Bali, Indonesia, from 3 to 15 December 2007, Addendum, *Part Two: Action taken by the Conference of the Parties at its 13th session*, UNFCCC/CP/2007/6/Add.1, 14 March 2008.
- ⁵ G8 Summit 2007 Heiligendamm, *Growth and Responsibility in the World Economy*, Summit Declaration 7 June 2007 <http://www.g-8.de>
- ⁶ As mentioned later in this text, agreeing on equitable international targets may require the establishment of a new baseline year acceptable to all parties
- ⁷ It is important to note that designing for energy efficiency from the outset is much more cost effective than retro-fitting existing assets or processes to be more energy efficient. This highlights a tangible opportunity for the new framework, insofar as it could develop incentives that encourage the "lock-in" of low cost GHG abatement opportunities from the outset in the new infrastructural assets being created in fast developing countries, where the demand for capital investment in new physical assets is high.
- ⁸ Report of the Conference of the Parties on its 13th session, held in Bali, Indonesia, from 3 to 15 December 2007, Addendum, *Part Two: Action taken by the Conference of the Parties at its 13th session*, UNFCCC/CP/2007/6/Add.1, 14 March 2008, p3
- ⁹ The IPCC analysis of bottom-up studies suggests a global economic mitigation potential of 9-17 GtCO₂-eq/year by 2030 at a carbon price of US\$ 20/ton CO₂-eq. Depending on the emissions growth scenario used, this would represent between a 14% and 35% reduction in emissions in 2030 against 2000 levels. This analysis takes 2000 global emissions levels as 43 GtCO₂-eq. (*The IPCC Fourth Assessment Report Summary for Policymakers*, May 2007, pp11-13).
- ¹⁰ Annex 1 to this statement provides a link to other work forming part of the business input to the Gleneagles Dialogue, which identifies where the most pragmatic abatement potentials lie within the G8 economies by 2030.
- ¹¹ The G20 consists of Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, South Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey, UK, USA and the European Union.
- ¹² Report of the Conference of the Parties on its 13th session, held in Bali, Indonesia, from 3 to 15 December 2007, Addendum, *Part Two: Action taken by the Conference of the Parties at its 13th session*, UNFCCC/CP/2007/6/Add.1, 14 March 2008, p3
- ¹³ *ibid*, p3
- ¹⁴ The principle of encouraging a flexible, market-based international framework to evolve is particularly helpful in this regard, as over time it would enable new sources of finance to flow into a particular developing country, generated from that country's traded emissions allowances. The scale of the inward financial flow would depend on the ambition of the national target (the carbon constraint) the developing country sets itself.
- ¹⁵ A sustainable development policy and measure (SD PAM) is a developing country commitment to implement a policy or measure to address climate change but is not based on achieving absolute GHG reductions. An SD PAM should be declared and registered with the UNFCCC. Examples of a SD PAM might include targets for biofuels for transport in Brazil or targets for renewable energy in rural electrification in India. For more details on SD PAMs see Environment Directorate, International Energy Agency, *SD-PAMs: What, Where, When and How?*, 26 November 2007, COM/ENV/EPOC/IEA/SLT(2007). As part of the registration process with the UNFCCC, the cost effectiveness of SD PAMs should also be examined in relation to other more market-orientated options for GHG reduction, so as to ensure maximum reductions will be achieved at minimum cost.
- ¹⁶ See *The McKinsey Quarterly 2007 Number 1* (A Cost Curve for Greenhouse Gas Reduction) and the United Nations Foundation: *Realizing the Potential of Energy Efficiency*, 2007, which recommends energy efficiency improvements of 2.5% per year 2012 through 2030 in the G8.
- ¹⁷ Nippon Keidanren (the Japan Business Federation) is a comprehensive economic organization in Japan and regional partner of WBCSD. As of June 2007, its membership is comprised of 1,343 companies, 130 industrial associations, and 47 regional economic organizations. In April 2007, Nippon Keidanren published a policy document entitled "Toward the Post-2012 International Framework on Climate Change", included an analysis of the potential for sector approaches. A document dated October 2007 developed the ideas further. More information can be found at:
<http://www.keidanren.or.jp/english/policy/2007/080.html>

¹⁸ Annex 1 provides a link to some short descriptions from a few international business sectors as to the particular sector initiatives they are currently engaged in.

¹⁹ It should be noted that a label explaining the carbon footprint of a product could allow the consumer to make a more informed purchasing choice about a product on the basis of its overall GHG footprint as one selling point.

²⁰ Human Development Report, *Fighting climate change: human solidarity in a divided world*, United Nations Development Programme, 2007.

²¹ According to the IPCC the key mitigation technologies currently commercially available include, but are not limited to energy efficiency, fuel switching from coal to gas, nuclear power, renewable heat and power (hydropower, solar, wind, geothermal and bio-energy); combined heat and power; early applications of carbon capture and storage (CCS); more fuel efficient vehicles, hybrid vehicles, cleaner diesel vehicles and biofuels. IPCC Working Group III Report on Climate Mitigation, *A contribution to the IPCC fourth assessment report, Summary for policymakers*, Bangkok, Thailand, May 2007, p.10. A useful comparison of the maturity (market readiness) of various energy technologies can be found in WBCSD, *Powering a sustainable future, an agenda for concerted action*, November 2007, www.wbcsd.org

²² According to the IPCC the key mitigation technologies, which need to be commercialized by 2030 to stabilize emissions, include but are not limited to CCS for gas, biomass and coal-fired generating facilities; new and improved forms of renewable energy, including tidal and wave energy; concentrating solar and solar PV; improved energy efficiency; second generation biofuels; higher efficiency aircraft; advanced electric and hybrid vehicles; CCS for cement, ammonia and iron manufacture; and advancement in agricultural technologies. IPCC Working Group III Report on Climate Mitigation, *A contribution to the IPCC fourth assessment report, Summary for policymakers*, Bangkok, Thailand, May 2007, p.10. We would add integrated gasification combined cycle (IGCC) systems and CCS, and fourth generation nuclear power to this list.

²³ On this point we also commend the recent *Chief Technology Officers roundtable joint statement* coordinated by the IEA, (18 January 2008), which calls for governments to create the legal and regulatory frameworks and development of public infrastructure that will enable clean energy companies to accelerate the uptake of best available technologies. The trend of setting clean and/or renewable energy technology milestones is encouraging, for example.

²⁴ Coal-fired electric power is currently the dominant technology in many countries around the world. Fossil fuels will likely still account for half of energy supply by 2050. Developing countries are investing heavily in coal-fired technologies. This means it is critical to develop the market readiness of CCS. Over the longer term it is likely that other fuels and power generation technologies will dominate, but CCS will be critical over the interim period from the present to 2050. We note that the IEA estimates the equivalent of 58 CCS projects a year will need to be installed by 2050 and that 30 CCS demonstration projects are required by 2020. The new framework should internalize a clear push to realize the IEA recommendation of 30 CCS demonstration projects by 2020. Source: International Energy Agency, *Energy Technology Perspectives 2008 – Scenarios and Strategies to 2050*, release for 6 June 2008.

²⁵ The so-called “valley of death” phenomenon refers to the gap between public and private funding that can occur when a technology has overcome basic scientific barriers but has yet to be demonstrated in a commercial setting.

²⁶ As part of the business input to the Gleneagles Action Plan, the Forum/WBCSD has coordinated a partnership with the Multilateral Development Banks under the Clean Energy Investment Framework, to develop recommendations that catalyse private sector finance for clean energy investments in developing countries. Annex 1 provides a link to the executive summary of this work, which was put forward to Ministers of Finance meeting in Bali in December 2007.

²⁷ Early details of the suite of new Climate Investment Funds were given in a World Bank presentation entitled *Meeting Financing Needs – Progress since Gleneagles*, presented at the 4th Ministerial meeting of the Gleneagles Dialogue, Chiba, Japan 14-16 March 2008.

²⁸ See *The McKinsey Quarterly 2007 Number 1 (A cost curve for greenhouse gas reduction)*.

²⁹ See World Bank Carbon Finance Unit, <http://carbonfinance.org>

³⁰ A partnership between the World Resources Institute (WRI) and the WBCSD, the Greenhouse Gas Protocol (GHG Protocol) is the most widely used international accounting tool for government and business leaders to understand, quantify, and manage greenhouse gas emissions. It serves as the foundation for nearly every GHG standard and programme in the world, from the International Standards Organization to The Climate Registry, as well as hundreds of GHG inventories prepared by individual companies, <http://www.ghgprotocol.org>

³¹ The Climate Disclosure Standards Board (CDSB) is a consortium of seven business and environmental organizations - California Climate Action Registry, Carbon Disclosure Project, CERES, The Climate Group, International Emissions Trading Association, World Economic Forum, World Resources Institute, that has been formed for the purpose of jointly advocating a generally-accepted framework for corporations to report climate change risks and opportunities, carbon footprints, and carbon reduction strategies and their implications for shareholder value, <http://www.cdproject.net/cdsb.asp>

³² With The Climate Group, the International Emissions Trading Association, the World Economic Forum and the World Business Council for Sustainable Development as founding partners, the Voluntary Carbon Standards is a program that provides a robust, new global standard and program for approval of credible voluntary offsets, <http://www.v-c-s.org>

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List of Endorsees **

This document contains recommendations that enjoy broad support within the group of companies represented; however, not every CEO necessarily agrees with each observation or idea expressed herein. CEO endorsements apply to the foregoing text of the main statement only and do not necessarily extend to the footnotes or annexes contained in this document.

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