

CHAMPIONS OF THE LOW CARBON ECONOMY

Why CEOs are Ready for a Global Climate Agreement



Dalberg

A report by the UN Global Compact and Dalberg Global Development Advisors

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“The economic repercussions of a climate agreement can lead to faster economic growth and the protection of things that are very important, including water, food, and the development of emerging economies.”

— *Pierre Ozendo, Swiss Re*

Executive Summary

The world is waiting expectantly. This December, people around the world will look toward Copenhagen to see what agreement is attained to address one of the biggest challenges humankind has faced. The climate is changing and the best collective bet to avoid the risk of devastating consequences is a deep, worldwide reduction in greenhouse gas emissions. It is a massive undertaking. Some in the corporate world express concern that the necessary changes will be too costly to their businesses.

The 40 Chairmen and CEOs of corporations from around the globe contributing to this report, however, convey a different message. They see inaction as being too costly to their businesses and the world. They support a strong global climate agreement and are ready to lead the resulting world economy. They are the low carbon champions. To embark on the transition, they need a commitment in Copenhagen. The hope is that their voice will tilt the balance in favor of a strong agreement.

There are many reasons to support a strong global climate agreement and “Seal the Deal”* in Copenhagen. As highlighted in this report, the reasons are not limited to humanitarian concerns. There are clear economic rationales for an ambitious agreement, and strong opportunities for growth resulting from it. This message is particularly important for negotiators to keep in mind as they proceed toward Copenhagen, and to convey to their domestic constituencies.

The low carbon champions voice their support of a strong climate agreement both in this report and directly to over 60 heads of state at the UN Leadership Forum on Climate Change on September 22, 2009. In discussions with Dalberg Global Development Advisors in August and September 2009, these senior executives offered their insights and reflections. They argue that:

- **There is tremendous economic opportunity in addressing climate change.** The mandate to revolutionize how we produce and consume provides one of the greatest value creation opportunities the world has ever seen. Many believe this potential could surpass even the value created in the information technology revolution. The opportunity is not restricted to either newcomers or incumbents, but is instead open to anyone ready to find solutions.
- **This opportunity can only be unleashed with regulatory certainty and a price on carbon.** While many companies are already moving to a lower carbon economy, they are poised to invest massively more. What they require to make the investments is a regulatory environment that is stable, and sends the market a clear signal on how to price carbon. A price on carbon, established globally, ensures a level playing field without competitive distortions or disruptions to trade.
- **A low carbon economy is attainable, and business is a critical part of the solution.** The CEOs profiled in this report highlight that the transition to a low carbon economy is within reach. All that is needed is a framework within which business can move forward with the transition. Not only do we have the necessary solutions today, an agreement would spur further innovation. As the implementers of a move to a low carbon economy, business has a critical role to play.
- **Climate change needs to be addressed by governments now.** Not ten years from now, not five years from now, but now. The effects of climate change are already evident. The transition to a low carbon economy, if advanced now, can deter the worst human and financial costs. The current economic crisis should not prevent us from moving ambitiously on an agreement. Moving on an agreement now will reduce the risks of climate change and create a more secure economic future for all.

In the context of convincing scientific evidence, compelling humanitarian reasons, and strong messages from the business community that a low carbon economy is attainable and offers tremendous opportunity for global growth, there remains a critical question.

Is there sufficient political leadership to arrive at a strong global agreement?
Will the Deal get Sealed?

“It must,” say the low carbon champions.

* For more information on the UN’s Seal the Deal! campaign, visit www.sealthedeal2009.org



Participating Companies

The low carbon champions profiled in this report represent a range of industries – energy, pension funds, airlines, insurers, newspapers, food, and fabrics, among others. They are incumbents and start-ups, industry stalwarts and entities based entirely on the low carbon economy. With headquarters across Asia, Europe, Australia, and North and South America, they provide a truly global perspective. Each of them plays a role in shaping the future of our planet.

Insights from CEOs and senior executives of the following companies – gathered in interviews with Dalberg Global Development Advisors – define the content of this report. The continuing investment of their time is testament to the urgency and opportunity the low carbon economy represents. These are the low carbon champions*:

- ABB Group
- Ajia Partners
- Alcoa, Inc.
- Allianz Climate Solutions
- APG Group
- Asahi Shimbun
- BP
- British Airways
- BringCity Mail
- California State Teachers' Retirement System (CalSTRS)
- Calvert Investments
- C Change Investments
- De Beers
- Deloitte
- Deutsche Bank Group
- DuPont
- Duke Energy
- Enel Green Power
- Eni
- Environmental Capital Group
- Ericsson
- ESB (Electricity Supply Board)
- Eskom
- First Solar
- HESTA
- ITC Limited
- Marocaine Industrielle, Financiere et Agricole (MIFA)
- Nextel Mexico
- Novozymes
- Philips
- Praj Industries
- SKF Group
- SAP
- SAS Group
- Sompo Japan
- SUN Group
- SunRice
- Suntech
- Sustainable Living Fabrics
- Swiss Re
- TAQA, Abu Dhabi National Energy Company
- Tata Group
- Vattenfall
- Vestas
- Visao Sustentavel

* The number of low carbon champions in the business world is by no means limited to 45. The Copenhagen Climate Council brought together over 500 business leaders in May 2009 at the World Business Summit on Climate Change, and issued a joint call on the specifics of the strong climate agreement sought by business. This report seeks to profile a set of the low carbon champions in depth, and present the rationale behind their stance.

“The energy revolution is one of the greatest economic opportunities of our time. It will make the tech sector’s growth seem like a minor economic boom.”

— *Uday Khemka, SUN Group*

Transition to a Low Carbon Economy is a Tremendous Opportunity for Global Growth

Champions of the low carbon economy view a global climate change agreement as an immense opportunity in terms of revenue, job creation, and investments.

Caio Koch-Weser, Vice-Chairman of the leading global investment bank Deutsche Bank Group and former Deputy Finance Minister of Germany, argues that "There is huge opportunity in this space. As we emerge from this recession, growth will shift from the U.S. consumer to the middle class in emerging markets and to climate change." Swiss Re is one of the largest and most diversified reinsurers in the world with visibility across a wide spectrum of the global economy. Pierre Ozendo, Executive Board Member of SwissRe, advises that "The economic repercussions of a climate agreement can lead to faster economic growth and the protection of things that are very important, including water, food, and the development of emerging economies." Still other business and investment executives consider the immense potential for clean technology as rivaling previous economic revolutions. Uday Khemka of India-based SUN Group, a leading principal investor and private equity fund manager in emerging markets, notes "The energy revolution is one of the greatest economic opportunities of our time. It will make the tech sector's growth seem like a minor economic boom."

Not surprisingly, companies with specific clean technologies and services see considerable revenue opportunity following a strong agreement. John Gaffney, Executive Vice President of US-based First Solar, notes that "If solar is to play a meaningful role in addressing climate change, the sheer number of solar power plants that need to be installed between now and 2030 is staggering. For solar to provide say 4% of the world's electricity demand by 2030, every existing solar company would need to grow ten-fold." Another solar industry leader, China-based Suntech is the world's largest producer of solar cells, with 2008 revenue in excess of \$2 billion. Suntech's CEO Zhengrong Shi holds 11 patents and grew his business from a startup to its

current size in just eight years. He notes that his company's growth plan includes investments in plants in the United States, Europe, and China. An increase in solar power demand at this scale benefits not only these companies - it reduces the per unit cost of solar cell production, unlocking the commercial viability of power from the sun. This strong growth trajectory extends to many renewable energy sectors. Pramod Chaudhari, Executive Chairman of Praj Industries - a global leader in the biofuels sector headquartered in India - envisions "2-3 times worldwide growth [for Praj] in the subsequent 4-5 year period once a strong agreement and roadmap is in place."

Companies without a specific focus on climate change related products and services also underscore the imperative for a strong climate agreement, often in terms of protecting their customer base.

Tom Johnstone is President and CEO of the SKF Group, the world's leading manufacturer of bearings. Though his is a well established industry, Johnstone sees a "Huge opportunity in services to transition the existing installed base of machinery to be more energy efficient" and has focused new product and service development in this area. Peter Foyo leads Nextel Mexico, which began operations in 1998 and now has over 2 million customers in 60 cities. For him, climate change regulation secures his customer base. "My customer tomorrow needs to be a healthy person in a healthy world," says Foyo. "That's my business interest."

The investment opportunity to address climate change is considerable and senior executives note billions of dollars worth of investment opportunities. The Allianz Group established Allianz Climate Solutions in 2007 to focus on the opportunity relating to renewable energies, clean technologies, and carbon related services. As CEO Armin Sandhoevel notes "We are currently investing \$1 billion in renewables but we are able and willing to do more with greater regulatory certainty." CEOs of leading power

"The net/net is, over time, positive for our company and that's why we've been active and a leader in the space."

- Chad Holliday, DuPont

"My customer tomorrow needs to be a healthy person in a healthy world. That's my business interest."

- Peter Foyo, Nextel Mexico

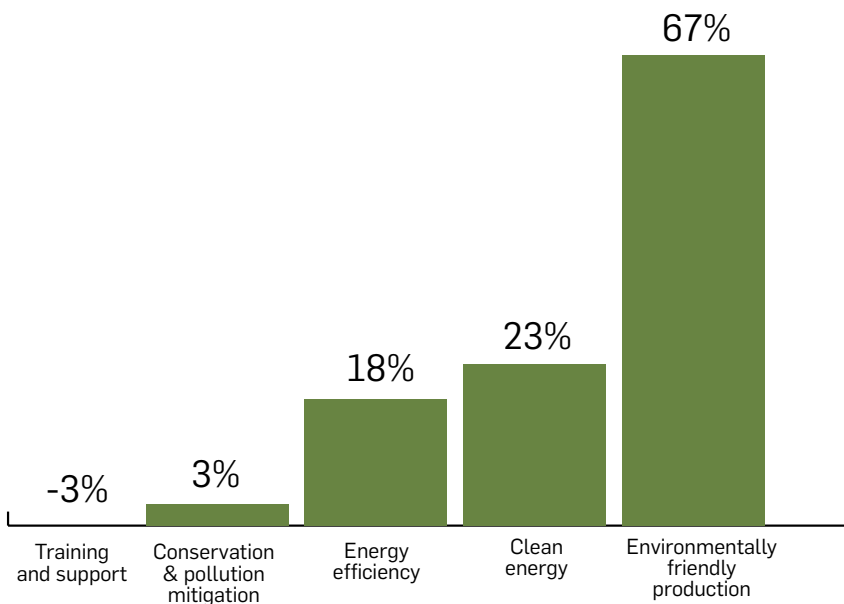
utilities highlight the investments that will be required in order for them to achieve the objectives they've set. CEO Padraig McManus of Ireland's leading utility, the Electricity Supply Board (ESB), identifies their emissions reduction targets of 30% by 2012, 50% by 2020, and an achievement of zero emissions by 2035. To meet those goals, he expects investments of approximately 22 billion Euros. Similarly, CEO Lars Josefsson of power company Vattenfall notes that "We have stated the goal to be carbon neutral in, at latest, 2050 which means this can only happen through massive investments." Still other

senior executives cite specific investment and market opportunities that have long been neglected. Francesco Starace is the President of Enel Green Power, which the Enel Group of Italy established to develop and manage renewable energy operations throughout the world. Enel would "see potentially billions of Euros going into investments in potential new renewable energy markets like Russia." Starace notes that "They have a huge potential which is currently not being investigated due to lack of clarity on the determination of the renewable energy sector regulatory and legislative framework."

JOB CREATION:

Investments in clean energy can have a significant impact on job creation. As seen in the United States, jobs have grown considerably in the clean energy sector and have outpaced overall jobs from 1998-2007. During that time period, clean energy economy jobs grew by 9.1% while total jobs grew by only 3.7%. As noted by the Pew Charitable Trusts in a recent report, "although we expect job growth in the clean energy economy to have declined in 2008, experts predict the drop in this sector will be less severe than the drop in U.S. jobs overall."*

GROWTH OF JOBS IN THE CLEAN ENERGY ECONOMY IN THE UNITED STATES, 1998-2007



Linked to the revenue and investment opportunities, senior executives highlight the considerable job creation potential of a climate change agreement. South African utility Eskom generates approximately 95% of South Africa's electricity and approximately 45% of the electricity used in all of Africa. Eskom's Executive Director, Steve Lennon notes that their solar investment priorities would have a significant impact on job creation in South Africa and that a high percentage of the installations would involve local content, creating not only new jobs but new businesses as well. Low carbon champions also foresee job creation well outside their home markets. Ditlev Engel is the CEO of leading wind company, Denmark-based Vestas. From his perspective, "Instead of simply shipping high technology to developing countries, it's important for us to develop local production and supply chain capabilities to create jobs and anchor the projects in the countries. Vestas produces turbines in both China and India already. Even in countries where we don't have our own manufacturing, we invest heavily in developing local skills and capacities and bringing them up to world-class standards. In all our markets, job creation and green sector investments go hand in hand." The job creation potential associated with the production of non-food biofuels is also substantial, with strong links to rural agricultural development. Thomas Nagy of Novozymes, which produces industrial enzymes for biofuels, estimates that "If the Chinese decide that 10% of their fuel market should comprise second generation biofuels, approximately 5 million agricultural jobs would be created in the country. "

* Source: The Pew Charitable Trusts. "The Clean Energy Economy: Repowering Jobs, Businesses and Investments Across America," June 2009.

The low carbon champions – even those in traditional industries – emphasize that the “net impact” of climate change regulation is positive for their companies. For DuPont, one of the world’s largest chemical companies, Chairman of the Board Chad Holliday asserts that “The net/net is, over time, positive for our company and that’s why we’ve been active and a leader in the space.” For insurers, the impact of climate change is immediate. Pierre Ozendo, Executive Board Member of SwissRe, has been involved with tracking

climate change impacts for two decades and notes that “This affects our business daily, with more volatile storms, bigger droughts, and medical impacts of climate change all being apparent.” With this increased impact of climate change, Swiss Re has found they have needed to engage companies more on these risks over time. From Ozendo’s perspective, “The best way for the private sector to tackle this is to see it both as a risk and as a business opportunity.”

Institutional investors are urging companies and governments to recognize climate risks and unleash capital to address it

Low carbon investment will achieve scale only when the most influential and largest investors – institutional investors – move into the sector strongly. In fact, more than 130 leading investors, representing assets worth \$6.4 trillion have called for a strong and binding global climate deal to unlock a low carbon future. *

“The most important message is that the resources exist in the value chain of capitalism to solve this problem. The finance gap can easily be plugged, but needs to be thought of differently. Government needs to work together with the largest institutional investors, investment managers and banks to mitigate risk, solve the deadlock, and unleash hundreds of billions of dollars for investment.”

– Uday Khemka, Vice-Chairman of the SUN Group

“The biggest issue really is legitimizing the definition of risks and obligations. Without national and global frameworks in place, we are not effective in pushing companies to have a climate change strategy to fulfill our fiduciary obligations.”

– Jack Ehnes, CEO, California State Teachers’ Retirement System (CalSTRS)

“First and foremost, our fiduciary responsibility is to make a return that makes it possible to pay out pensions. Opportunities in sustainable investing that provide a sound return are quite limited. If a global agreement is attained, then there will be more investment opportunities and investors will naturally gravitate towards the sector.”

– Paul Spijkers, CIO, APG Group

Groups of institutional investors have already begun to self-organize to provide guidance on the best regulatory and financial environments to unleash capital for addressing climate change. An example of this is the “P8 Group” which brings together the world’s leading pension funds, including CalPERS, CalSTRS, and HESTA of Australia, among others. The effort seeks to coordinate these investors and allow them to use their long term positions to invest in companies with low carbon and sustainable energy solutions.

* Source: Investor Network on Climate Risk (INCR), Institutional Investors Group on Climate Change (IIGCC) and Investor Group on Climate Change Australia/New Zealand (IGCC, Australia/New Zealand). Press release dated November 11, 2008

“We need a global policy framework that can lead to a longer term carbon price signal. A carbon price has to be the first step.”

— *Robert Dudley, BP*

➤ Absence of a Global Climate Agreement Hinders Business from Embarking on the Scale of Change Needed

To unlock the tremendous business opportunity related to addressing climate change, senior executives underscore the need for greater regulatory certainty.

For business to make long term capital investment decisions relating to emissions reductions, regulatory certainty is a must. Large scale utilities, for example, face challenges when pursuing investments needed to achieve their carbon emissions reduction targets. For South African utility Eskom to achieve its goals of reducing emissions, Steve Lennon notes that “An agreement is needed to introduce a lot more certainty into the investment environment and give us what we need to more readily make investment decisions.” Pdraig McManus, CEO of Ireland’s Electricity Supply Board (ESB), echoes this need for certainty. To achieve its zero emissions target by 2035, ESB needs to attract capital to fund renewable energy investments. “It’s all about certainty for us,” McManus explains. “Without an agreement, the strategy won’t look as robust to financiers. An agreement would give the financial markets the certainty needed to fund our strategy and allow us to achieve our emission reduction goals.” Companies prepared to invest in renewable energy technologies similarly require the long term certainty only an agreement can provide. Executive Chairman Pramod Chaudhari of Praj Industries notes that “Without an agreement, when the price of crude oil drops, it could result in delays and deferment of investments for new projects in this sector.”

To provide long term certainty and unleash investments, senior executives emphasize the need to price carbon. Robert Dudley is an executive and board member of BP, a company with deep investments in traditional energy sources that is already planning \$8 billion in renewable energy investments. To go even further, Dudley says, “We need a global policy framework that can lead to a longer term carbon price signal. A carbon price has to be the first step.” A price on carbon allows for the costs of fossil fuels to be adequately accounted for and provides for more accurate compari-

son of the economics of renewable sources. Chad Holliday, Chairman of DuPont, similarly reports “We need a global agreement because of certainty. We have programs like biofuels, solar, and nanotechnology that can all contribute. If there were certainty about the value of those programs and the value of carbon, we would accelerate a number of them.” Institutional investors are likewise ready to increase investment that will address climate change, if there is an agreement in place. Paul Spijkers is Chief Investment Officer for the APG Group, one of the world’s largest pension administration organizations with approximately \$290 billion in assets under management. He notes that “All of our green investments need a sound return; finding those deals is difficult. If a global agreement is attained, then there will be more investment opportunities and investors will naturally gravitate towards the sector.”

A lack of clear pricing on carbon could destroy existing investments in projects addressing climate change. Promising advances in clean technologies combined with rising oil prices have created a dramatic increase in renewable energy investments over the last several years. However, lack of an agreement at Copenhagen and a failure to establish a price on carbon could destroy even existing projects which address climate change. Uday Khemka of the SUN Group puts it starkly. The failure to establish certainty and a price on carbon could, he says, “result in a categorical disaster because this could fundamentally undermine the confidence in clean energy investing and move the sector back a generation.”

To arrive at greater certainty and a price on carbon, senior executives consistently prioritize a truly global agreement over national or regional agreements. J.J. Irani is a Director and member of the Group Executive Office of the India-based Tata Group, a diversified conglomerate with more than \$70 billion in annual revenue. In his view, many global challenges such as narcotics or

“We need fair competition worldwide, otherwise certain sectors may shift to wherever it’s easiest to produce CO₂.”

- Armin Sandhoevel, Allianz Climate Solutions

“Without a global framework we could be slowed by protectionism, whereas a global agreement can help address trade issues and move the world to a carbon price with broad geographical coverage.”

- Robert Dudley, BP

arms trafficking can have effective, if partial, solutions established at a national border. But in contrast, he argues carbon dioxide “cannot be controlled or kept away by geographical boundaries since the atmosphere belongs to everybody.” The world’s leading producer of aluminum, Alcoa, also recognizes the global nature of the problem. Meg MacDonald, Director of Global Issues for Alcoa, argues that

“Climate change is a problem of the global commons, with the solution required at the same scale.” Without a global approach, comprising all countries and companies, a solution cannot be achieved to this global problem.

Not addressing climate change with a truly global agreement could result in com-

Traditional energy companies see the transition to low carbon sources as both important & natural, while newer energy companies target the immense growth potential with critical innovations

It is a misconception that traditional energy companies universally oppose climate change regulation. The low carbon champions include traditional energy companies that actively embrace the transition to low carbon sources

“We see the transition to renewable energy as part of the natural evolution of the energy sector. If one takes a historical perspective on energy, we have evolved from wood burning, to coal to oil and gas. These transitions occurred over time and the move towards innovative clean technologies and renewables is a natural evolution. BP has currently committed to US\$8 billion in spending over a 10 year period and has spent US\$3.9 billion already in solar, onshore wind, carbon capture & storage, and biofuels.”

–Robert Dudley, Managing Director, BP Group

“Duke Energy clearly understands that a low-carbon future is where the world is headed and that it’s important. Our goal is to cut our carbon footprint in half between now and 2030, and to do this we have two key themes: to make the customers and communities we serve the most energy efficient in the world and to decarbonize our electric generation fleet.”

–Jim Rogers, Chairman, President, and CEO of Duke Energy

“In South Africa we believe that electricity is the Oxygen of our economy - and Eskom is committed to ensure that we are able to sustain the supply of electricity to drive economic development, whilst creating a low carbon future which will benefit our economy and future generations.”

–Jacob Maroga, CEO, Eskom

“We need capital available to finance big changes. If you want to limit the carbon intensity in the world we need to invest. And to get investments we need stable and understandable agreements. Today a ten year option on oil or gas is a very risky proposition. Ten years from now we have hopefully reduced this risk profile. So if we reduce carbon over the next 10 years we reduce the risk of our business.”

Francesco Starace,
Managing Director of Enel Green Power

At the same time, new energy companies see the transition as an immense opportunity to unleash the innovation needed for the transition to the low carbon economy.

“If solar is to play a meaningful role in addressing climate change, the sheer number of solar power plants that need to be installed between now and 2030 is staggering. For solar to provide say 4% of the world’s electricity demand by 2030, every existing solar company would need to grow ten-fold.”

–John Gaffney, Executive VP and General Counsel, First Solar

“Vestas is living proof that tough demands are not the same as the destruction of business. If there had not been tough demands in Denmark – Vestas would not exist. I think innovation comes from tough demands. By putting tough demands on ourselves – that we need to get rid of this – that’s when innovation starts. I think that if you put pressure on us we will deliver. I disagree with those who conclude that if you put too much pressure on us we cannot deliver. Historically mankind has been able to come up with more than we were aware of.”

–Ditlev Engel, CEO of Vestas

petitive distortions. Although it is true for nearly all industries in a global economy, it is especially true for intrinsically international sectors like the airline industry. Mats Jansson is the CEO of SAS Airlines, which operates from Europe but competes worldwide. As Jansson points out, “We need a global agreement because we need to compete on fair and equal terms.” This need for a level playing field is relevant to all sectors. Ulrich Spiesshofer is an Executive Committee Member and Head of Corporate Development at the ABB Group, a global leader in power and automation technologies with revenues in excess of \$30 billion. He illustrates competitive distortion by noting that without a global agreement, ABB could find itself competing to set up desalination plants in the Middle East with competitors who are willing to install cheaper and much less efficient motors. Customers opting for the least costly solution would contribute negatively to the climate change problem, but as Spiesshofer observes, “If we had global standards, we would have a different situation altogether.” Globally, this competitive distortion could shift whole industries in a race to the bottom to countries with the weakest regulation on carbon. Armin Sandhoevel, CEO of Allianz Climate Solutions, states simply “We need fair competition worldwide, otherwise certain sectors may shift to wherever it’s easiest to produce CO₂.”

A lack of a global agreement could also lead to trade disruptions and trade wars. In response to such a race to the bottom, countries that do undertake unilateral carbon reduction may turn toward measures that restrict trade. As Bob Dudley of BP notes, “Without a global framework we could be slowed by protectionism, whereas a global agreement can help address trade issues and move the world to a carbon price with broad geographical coverage.” “This is echoed by Yogesh Chander Deveshwar, Chairman and CEO of ITC Limited, who says, “We need a global agreement to maintain the global trading regime and ensure open access to markets.” As countries begin to address climate change and incur the associated costs, disruptions in trade due to uneven regulation on carbon emissions would only exacerbate our ability to adapt to and mitigate the consequences of climate change.

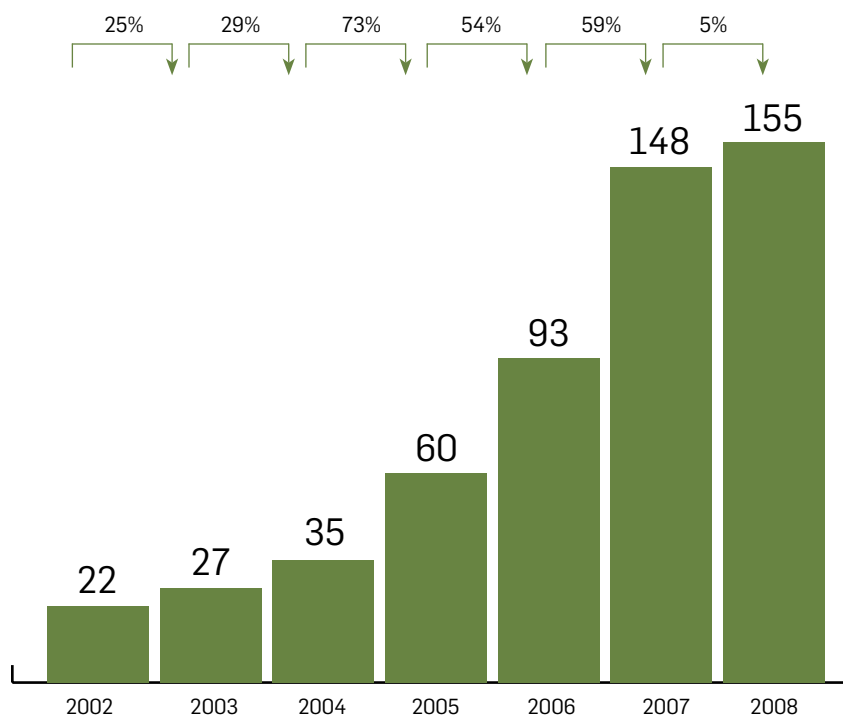
In addition to avoiding competitive distortions and potential trade wars, a global agreement would result in an integrated global market with much greater efficiency. Whereas the Kyoto Protocol established carbon trading markets for a select number of markets, a global agreement would scale this up significantly. Armin Sandhoevel, CEO of Allianz Climate Solutions, emphasizes that

SUSTAINABLE ENERGY INVESTMENTS:

Global investments in sustainable energy have grown considerably from 2002 to 2008 with new investments in 2008 at more than 7x what they were in 2002. Since 2002, this has amounted to a cumulative amount of more than \$500 billion invested. A climate change agreement would further boost investments, while the failure to establish an agreement could put existing investments at risk and undermine investor confidence.

GLOBAL NEW INVESTMENT IN SUSTAINABLE ENERGY, 2002-2008 (US\$ BILLION)

Growth:



Source: UNEP, SEFI, and New Energy Finance. “Global Trends in Sustainable Energy Investment,” June 2009.

Notes: New investments include third party investments, small / residential projects, corporate R&D, and government R&D.

“For society, a global agreement would be a sign that we have enough courage and strength of leadership to take a decision on a global basis.”

- Mats Jansson, SAS Group

“We need a global agreement to integrate single markets into a greater one,” and Bryan Martel of the Environmental Capital Group highlights that “A global agreement would provide a much more organized system for trading credits.” This integration would result in capital flowing more efficiently to attractive climate change related projects. As Bob Dudley of BP notes, such a global agreement would “reduce complexity and increase efficiency.”

Fragmentation without a global agreement would result in higher costs for businesses.

As one of the leading producers of solar panels, China-based Suntech sees the benefits of a global agreement in terms of cost reduction. Suntech’s CEO, Zhengrong Shi explains that “Without a global agreement, we would face additional costs associated with complying and addressing local regulations.” Large investors also highlight the high transaction costs from lack of a global agreement, in terms of engaging with investee companies on issues of environmental sustainability. CalSTRS is the largest U.S. teachers’ retirement fund with over \$120 billion in assets under management. CEO Jack Ehnes wants information on the environmental risk in his portfolio. “Right now, we are often compelled to run shareholder resolutions to obtain that information. Running resolutions is a laborious process and a blunt instrument. If there’s clarity on policy we can move more quickly toward solutions rather than debating the validity of the issue with companies.”

By increasing efficiencies for business and reducing costs, a strong global agreement would ensure much faster implementation of strategies to reduce emissions.

For renewable energy producer Enel Green Power, a global agreement means the ability to develop an integrated global strategy. As Francesco Starace, the company’s President, explains, “We find it difficult to have a consistent development strategy at a global level in the absence of a global rule that manages climate change issues across the world. A global agreement would enable a global strategy.” SKF CEO Tom Johnstone makes a similar point about his company’s drive to achieve its Beyond Zero target of not just reducing its own carbon footprint, but going beyond by delivering products and services which reduce customers’ emissions as well.

“A global agreement will secure the drivers to align behind that strategy better,” he says “while a lack of agreement will diminish the focus, commitment, and drive.” Although companies may pursue these opportunities on their own, business leaders understand that this would slow the progress considerably. As Willie Walsh, CEO of British Airways notes, “A global sectoral approach is the most environmentally effective way for the aviation industry to meet its full obligations on climate change.”

Finally, senior executives see a global agreement as a critical test of global leadership in the face of a daunting challenge.

For Vattenfall, a leading producer of electricity in Europe with roughly 46% of production from fossil fuel-based generation, the global agreement is critical as a signal of transition. Vattenfall’s President and CEO, Lars Josefsson, asserts that “Most importantly, it would give the world comfort and trust that the leaders of the world are changing course towards a more sustainable future.” This sentiment is echoed from other industries as well. Mats Jansson, CEO of the SAS Group also argues that “For society, a global agreement would be a sign that we have enough courage and strength of leadership to take a decision on a global basis.”



“We have enough technology not only to beat the targets for 2020 and 2050, but to beat them by a material amount. The technology is there; the only thing preventing us from solving this is ourselves.”

— *Peter Barker-Homek, TAQA,
Abu Dhabi National Energy Company*

➤ A Low Carbon Economy is Attainable, and Business is a Critical Part of the Solution

Low carbon champions underscore that the necessary transition to a low carbon economy is attainable. Numerous CEOs highlight the need for heads of state to recognize that a low carbon economy is within reach. As Robert Fowler of the Australian pension fund HESTA states, the challenge is for “the corporate world to convince the government that this is do-able.” Ditlev Engel, CEO of Vestas, asserts “This is an execution issue. Denmark is a living proof of the feasibility, with around 20% of its electricity from wind power.” The sense of viability is echoed by Josefsson of power producer Vattenfall, according to whom, “What the industry clearly can say is that this can be done and that we know how this can be done. All we need is a framework.” Champions of the low carbon economy are based even in countries relatively rich in hydrocarbons. Peter Barker-Homek is CEO of TAQA, the vertically integrated \$4.4 billion power company based in Abu Dhabi. “We have enough technology not only to beat the targets for 2020 and 2050,” he says, “but to beat them by a material amount. The technology is there; the only thing preventing us from solving this is ourselves.” Put more broadly by Gary Helou CEO of Australian food giant SunRice, “Human beings have the capacity and intellect to come out of this situation on the positive side.”

Not only do we already have the solutions we need, but further innovations will arise from a global agreement. With certainty in place, companies will develop more cost-effective solutions to meet the targets set forth in the agreement. Spiesshofer of ABB states, “In the short term, we need to implement standards for energy efficiency in industry and products. The products are there. The solutions are there. And if we start now, the impact will be felt right away. In the longer term, we can then further tackle carbon reduction with new methodologies.” This notion of an agreement further spurring innovation is reinforced by Tom Johnstone of SKF who notes “An ambitious agreement allows us to spend more on R&D.” Not only

would an agreement enable further innovation, it would also facilitate the development of the most effective solutions in each region. Robert Dudley of BP agrees, “With a cap and trade system, the market will enable different regions to gravitate towards different solutions based on their natural resource set. This can achieve the largest emission reductions at lowest possible cost.”

While all stakeholders have a role to play – countries and companies alike – companies will be the implementers of the transition to a low carbon economy. Spiesshofer of ABB highlights the need for awareness of what each stakeholder can achieve, and cites an example to illustrate his point: “ABB tomorrow can go to the CEO of a paper manufacturer and explain how a win-win solution could be achieved by investing in more energy efficient technology. If we do it well, if we leverage all available options, we can produce a win-win situation for industry, for private consumers, for governments. The role of business is particularly important in that sense.” Lennon of Eskom adds, “The business sector is an incredibly important part of the solution. At the end of the day, we will be implementing all the major initiatives. We’ll be running the carbon markets, etc. It all comes down to the business sector. Business is the most important link in any implementation plan.” As expressed by Josefsson of Vattenfall, “Change requires investments, and the vast majority of those investments must happen through the private sector. Ensuring that that the private sector can expect profitability is key. If we can get the vast majority of the major states of the world to commit to a deviation from business as usual – then we are actually ready to use the market capital to work the world in the right direction.” “Markets will have a strong part to play in the transition,” stresses Nick Main of Deloitte.

“The business sector is an incredibly important part of the solution. At the end of the day, we will be implementing all the major initiatives.”

- Steve Lennon, Eskom

Information and communication technologies (ICT) companies see themselves as an integral part of the solution

Efficient use of resources and energy requires detailed information. Despite the information technology revolution, much of the energy infrastructure still relies on 20th century equipment and machinery without benefiting from currently available technology. By optimizing motor systems, transport and storage, buildings, and power grids, the ICT sector could deliver approximately 7.8 billion tons of CO₂ equivalent of emissions savings in 2020, representing 15% of total emissions.* ICT's largest influence will come from its ability to enable energy efficiencies in other sectors.

"We found that a first important step for businesses and public sector to become more sustainable is to ensure a level of transparency in actual consumption and emission. Technology and infrastructure could be an important part of the solution to create this transparency. Probably 70% of all business transactions touch an SAP system in some way. Today, business applications track values, weights and quantities – but not carbon or energy consumption. If we can add this kind of information to the current SAP or comparable systems – we would enable transparency on the transactional level. This would allow automation of the reporting of emissions or consumption and allow us to enhance business applications to take emission or consumption into account when helping business people make decisions and optimize their business. From interviews with some of our largest customers we know that they all struggle with getting the needed transparency. SAP is committed to enable our systems to handle sustainability – but we would like to suggest a set of global standards for how data concerning sustainability is recorded and exchanged across companies and systems. If we enable the digital in-

frastructure to handle this kind of data in an open way, we enable companies to track and optimize their business for sustainability – and enable public sector and governments to define the right incentives for a more sustainable world."

–Jim Hagemann Snabe, Executive Board Member, SAP

"Everyone is looking at incremental changes such as individual products that use energy more efficiently. However, information technologies can provide a transformational change for emission reductions. While the 20th century was based on physical infrastructure, the 21st century is based on information technology infrastructure, which can enable cities and nations to do things more intelligently. Today, most grids are over-producing because they don't know what the electricity demand is. An intelligent network that knows what the demand is can make a big difference. A cross-sector approach based on the contribution of information technologies can result in intelligent transport systems to pick the most efficient routes, intelligent appliances to load balance and use energy at off-peak times, and improve the way we do urban planning including building heating and cooling. ICT can offer the type of transformational change that is needed to address global warming, and therefore should be a central part of national planning for strategies to reduce CO₂ emissions."

–Carl-Henric Svanberg, President & CEO, Ericsson

Although ICT has been neglected as a critical part of the solution, information technology companies see their capabilities as critical to unlock the feasibility of implementing a global climate agreement.

* The Climate Group. "Smart 2020: Enabling the low carbon economy in the information age." 2008.



“Copenhagen is so important; if we wait another 5-10 years, we have lost it.”

— *Caio Koch-Weser,
Deutsche Bank Group*

➤ Now is the Time for a Global Climate Agreement

Current science indicates the urgency for action. As articulated by Francesco Starace of Enel Green Power, “We need an agreement now because time is running short and there’s a wide array of data showing that. As we discuss, things get worse not better.” Bill Jones, CEO of Sustainable Living Fabrics also warns, “Science tells us that the situation is getting worse faster than we expected; we need governments to take action now.” Caio Koch-Weser, Vice-Chairman of the Deutsche Bank Group, underscores this by saying, “Copenhagen is so important; if we wait another 5-10 years, we have lost it.”

Not only do we need an agreement now, we need an agreement that elicits action even in the short term. Several CEOs note the lengthy timespan associated with implementation of the Kyoto Protocol, and highlight the need for an agreement in Copenhagen that can catalyze actions in the short term. Peter Barker-Homek, CEO of TAQA, speaks to this notion, “We need things that can be committed to by society and delivered in the first 12-36 months. We can have a grander scale rolled out over multiple years, but for real impact, we need to start now. If it takes another 8 years before we have meaningful caps (as it did with Kyoto), the game’s over. We might as well start planning to relocate communities that live in coastal areas.” In order for companies to factor carbon emission reduction plans into investments — investments with 20-30 year horizons — that are being made now, certainty is needed in the short term. Jim Rogers, the Chairman, President, and CEO of Duke Energy, states that “Business makes huge long term bets based on regulation and policy. Our investment decisions can last 40 — 60 years and are measured in billions of dollars.” According to Gareth Penny, CEO of leading diamond producer De Beers, “It’s good for business to have long term goals. At the same time, not having an effective climate change strategy in the short and medium terms will have a big negative impact.”

Coming to agreement is wholly dependent on governments; business is willing to ad-

just accordingly. Companies emphasize that there are limitations to the role they can play. While they can implement the transition to a low carbon economy within the context of an agreement, they are reliant on governments to establish the framework within which they will operate. As articulated by Caio Koch-Weser of Deutsche Bank, “Business is saying, ‘Please give us certainty, direction, a price on carbon, and a framework — we will adjust.’” Nick Main of Deloitte adds, “Business can play its part, but only in a regulated environment. We need a sense that there is long term commitment by governments to a reduction in carbon emissions. Otherwise, businesses have to do what they have to do, i.e., maximize their profits. So, governments and countries have to demonstrate that a reduction in carbon emissions is not negotiable, it’s not something they will flinch on.”

Many have highlighted that costs of inaction will only be greater than the costs of addressing climate change now. For some companies, the failure to address climate change represents a considerable risk to their core operations. Gareth Penny of De Beers explains that three of the company’s largest mines are situated in semi-arid areas of Botswana and South Africa. The potential for disruption of water resources represents an immediate and material risk for the company and could have an enormous impact on both the company and the surrounding communities. As Penny notes, “Even modest water changes could create massive issues with operations and the communities they serve. Closing one of those mines would have a profound impact on tens of thousands of workers and members of the local communities.” This type of disruption can affect entire nations, as noted by Penny. In Botswana, where De Beers has significant operations, diamond mining accounts for roughly two-thirds of foreign exchange and approximately a third of gross domestic product. The severity of climate change’s negative effects is already evident, and the costs of addressing the damage later would be dramatically higher than the costs of working to avoid the damage in the first place. Gary Helou, CEO of SunRice, reinforces

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- Gareth Penny, De Beers

“Many companies use these periods of change and transition to restructure and rethink their business models. What better time is there to adapt to future new rules and guides with respect to carbon?”

*- Barbara Krumsiek,
Calvert Investments*

“Without a global agreement, we would be going back into another cycle without any rules in place and without learning what we could have from the current crisis. We’ll be going into another ambiguous risk environment, which would be very short-sighted.”

- Jack Ehnes, CalSTRS

this notion by pointing to the effects of climate change on availability of water for agriculture, “Whereas all of SunRice’s paddy rice used to come from Australia, today a majority of the rice is sourced from elsewhere. The ongoing drought forced us to do a 180 degree transformation of the business.”

Furthermore, the current global recession should not derail progress toward an agreement. Many business leaders emphasize that the tough economic climate is no excuse to avoid pushing on an ambitious climate change agreement. Several express that the current crisis should not prevent the global community from doing what is right. Chad Holliday of DuPont states that “We shouldn’t let a recession get us off track from doing the fundamentally right things.” Other companies such as British Airways have not allowed the financial crisis to change the high priority given to their environmental programs. Willie Walsh, British Airways’ CEO, says that “We are ready to accept ambitious carbon-reduction targets. These will galvanize the whole industry, from manufacturers and fuel suppliers to airlines and air traffic control providers, to accelerate the transition to lower-carbon alternatives.”

In fact, several CEOs warn that neglecting climate risk could present a worse case scenario similar to ignoring the risks that resulted in the current economic and financial crisis. Senior executives have noted that the effects of climate change are much longer term and more severe than the potential effects of the current economic and financial crisis. Jack Ehnes, CEO of CalSTRS explains that “Without a global agreement, we would be going back into another cycle without any rules in place and without learning what we could have from the current crisis. We’ll be going into another ambiguous risk environment, which would be very short-sighted.” He sees the current economic crisis as having been the result of inadequate risk management systems, and that without a global climate agreement we would be similarly ignoring a critical set of risk factors. This sentiment is echoed by Tata Group’s J.J. Irani, who contrasts the short term nature of the financial crisis with the long term crisis of climate change. “The financial crisis is like a summer shower — we are all getting a little wet, but the sun rays are peeping through the

clouds. If we don’t deal with climate change, however, we will be inundated by a down-pour of Biblical proportions.”

Many executives see the climate agreement as a spur to recovery. The recession provides a natural inflection point for change and restructuring, an opportune moment to make necessary adjustments to the global economic system. President and CEO Barbara Krumsiek of Calvert Investments explains, “Many companies use these periods of change and transition to restructure and rethink their business models. What better time is there to adapt to future new rules and guides with respect to carbon?” Large companies like DuPont see a similar opportunity, with Chad Holliday commenting that “Gearing up for the change can be good for the economy as companies make investments.” SKF’s CEO Tom Johnstone believes that “Overall, it’s an effort than can bring us out of the recession” and Yoichi Funabashi, editor-in-chief of the Japanese newspaper Asahi Shimbun, calls it a “golden opportunity.” A few executives highlight Nobel Laureate and US Energy Secretary Steven Chu’s analogy of the climate change challenge being similar to the Apollo Project in terms of its effects on the economy. As Caio Koch-Weser, Vice-Chairman of the Deutsche Bank Group, says, “Just as the Apollo moon landings spurred the information technology revolution in the 1980s in the United States, we see this moment as an enormous opportunity to move us towards the new drivers of growth.”

“It’s not enough that
we do our best;
sometimes we have to
do what’s required.”

– *Winston Churchill*

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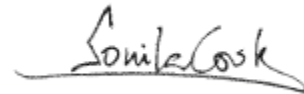
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About the United Nations Global Compact

Launched in 2000, the United Nations Global Compact is both a policy platform and a practical framework for companies that are committed to sustainability and responsible business practices. As a multi-stakeholder leadership initiative, it seeks to align business operations and strategies with ten universally accepted principles in the areas of human rights, labor, environment and anti-corruption and to catalyze actions in support of broader UN goals. It is the world's largest voluntary corporate citizenship initiative, with over 6,500 signatories based in more than 130 countries. Visit www.unglobalcompact.org.

Dalberg

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Dalberg Global Development Advisors is a strategy consulting firm specializing in international development and globalization. We advise a diverse set of CEOs, investors, and senior policy makers in all regions of the world, with a focus on emerging markets. We bring business-oriented solutions to the world's most pressing challenges, and work across sectors to facilitate large-scale systemic change. Visit www.dalberg.com.

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The Ten Principles of the United Nations Global Compact

HUMAN RIGHTS

- Principle 1 Businesses should support and respect the protection of internationally proclaimed human rights; and
Principle 2 make sure that they are not complicit in human rights abuses.

LABOUR

- Principle 3 Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
Principle 4 the elimination of all forms of forced and compulsory labour;
Principle 5 the effective abolition of child labour; and
Principle 6 the elimination of discrimination in respect of employment and occupation.

ENVIRONMENT

- Principle 7 Businesses are asked to support a precautionary approach to environmental challenges;
Principle 8 undertake initiatives to promote greater environmental responsibility; and
Principle 9 encourage the development and diffusion of environmentally friendly technologies.

ANTI-CORRUPTION

- Principle 10 Businesses should work against corruption in all its forms, including extortion and bribery.

