

2008 Investor Summit on Climate Risk

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Final Report



Co-Hosts

Amir A. Dossal
Executive Director
United Nations Fund for
International Partnerships

Mindy S. Lubber
President, Ceres
Director, Investor Network
on Climate Risk

Timothy E. Wirth
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FOREWORD

The next 50 years will require a massive shift to low-carbon energy sources and technologies to avoid unmanageable climate change. Major capital investments are needed to make that shift, creating large economic opportunities.

To consider the scale and urgency of the climate challenge and how investors can advance solutions, Ceres, the United Nations Foundation, and the UN Fund for International Partnerships co-hosted the third Investor Summit on Climate Risk at the United Nations on February 14, 2008. More than 450 investors, representing over \$22 trillion in assets, participated in the Summit.

The 2008 Summit featured speakers drawn from the investment community, science, business, labor, and government who discussed the risks investors face from climate change, as well as the very significant economic opportunities of a global transition to a clean energy future—with a particular emphasis on energy efficiency.

At the Summit over 50 leading U.S. and European institutional investors managing \$1.75 trillion in assets announced a new Investor Network on Climate Risk (INCR) Action Plan, committing to boosting investments in energy efficiency and clean energy technologies and requiring tougher scrutiny of carbon-intensive investments that may pose long-term financial risks.

We extend our deepest appreciation to the United Nations, the Summit Conveners, and our corporate, foundation, and UN sponsors for their support. This historic gathering would not have been possible without their generosity and commitment.

We look forward to working with you to address the risks and opportunities posed by climate change. Many investors will continue their efforts through INCR, a network of investors coordinated by Ceres and launched at the first Investor Summit on Climate Risk in 2003. We welcome your participation in INCR and other initiatives.

Summit Co-Hosts

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United Nations Fund for International Partnerships

Mindy S. Lubber
President, Ceres
Director, Investor Network on Climate Risk

Timothy E. Wirth
President
United Nations Foundation



Summit Co-Host Amir Dossal, Executive Director,
UN Fund for International Partnerships



Summit Co-Host Mindy Lubber, President, Ceres
& Director, Investor Network on Climate



Summit Co-Host Timothy Wirth, President,
United Nations Foundation

EXECUTIVE SUMMARY

More than 450 investor, financial and corporate leaders from around the world gathered at the United Nations Headquarters in New York City on February 14, 2008 for the third Investor Summit on Climate Risk. Participants engaged in dialogue with leading scientists, investors, business leaders, and others on how investors can minimize climate risk and seize opportunities of the transition to a low-carbon economy.



Summit participants networking in the UN Delegates Lounge

Speakers who addressed the gathering included Harvard University Professor John Holdren, McKinsey Global Institute Director Diana Farrell, AFL-CIO President John Sweeney, International Energy Agency Executive Director Nobuo Tanaka, Khosla Ventures founder Vinod Khosla, Ceres President Mindy Lubber, and Nobel Peace Prize winner and former Vice President Al Gore.

Investor speakers included BT Pension Scheme Trustee Director Donald MacDonald, CalPERS CIO Russell Read, CalSTRS CEO Jack Ehnes, California Controller John Chiang, California Treasurer Bill Lockyer, Connecticut Treasurer Denise Nappier, Florida CFO Alex Sink, New York Comptroller Thomas DiNapoli, and Oregon Treasurer Randall Edwards.

United Nations speakers included UN Secretary-General Ban Ki-moon, UN Fund for International Partnerships Executive Director Amir Dossal, and UN Foundation President Timothy Wirth.

Corporate and Wall Street speakers included Swiss Re Managing Director Richard Murray, PG&E CEO Peter Darbee, Goldman Sachs Chief U.S. Investment Strategist Abby Joseph Cohen, Bank of America Managing Director Richard Cohen, Deutsche Bank Head of Asset Management Kevin Parker, and State Street Global Advisors Executive Vice President Arlene Rockefeller.

Presenters at the Summit noted that:

- The science is clear that global climatic disruption is real, largely human-induced, already producing serious harm, and happening more rapidly than expected. To minimize suffering and avoid catastrophic interference with the climate system, we need significant mitigation and adaptation, which requires putting a price on greenhouse gases (GHGs) immediately.
- Technologies are available and in use today that can make significant differences in reducing GHG emissions. Investments in energy productivity can provide attractive economic returns and are the single most cost-effective, important, short-term steps to address climate change that are already commercially viable.
- New technologies in the next few years have the potential to make a huge impact on emissions reductions. Securing the right policies and incentives can make an enormous difference in spurring technological development, deployment, and investment.
- Investors must show responsibility and leadership, which means engaging with companies in all sectors, collaborating with other investors, investing in clean technology, improving the energy efficiency of real estate portfolios, exploring all asset classes for opportunities to further clean energy, requiring investment managers to evaluate climate risk, and generally undertaking a thorough study of portfolios to assess climate risks and opportunities. Investors cannot wait for governments to act, though they must also continue to engage governments to push for action.

- More and more investors are addressing climate change. In the last two years, investor and asset manager participation in the Investor Network on Climate Risk (INCR) has more than doubled, to over 60 institutional investors. At the 2008 Summit, Deutsche Asset Management, which manages over \$800 billion in assets, announced it was joining INCR, increasing INCR's total member assets to over \$5 trillion.
- More companies and Wall Street firms are taking action on climate change. Investors have been engaging with a broader range of companies on issues including disclosure of climate risks and actions to address those risks.
- Climate change presents opportunities for economic growth and job creation.

Over 50 leading U.S. and European institutional investors managing more than \$1.75 trillion in assets announced the 2008 Investor Network on Climate Risk Action Plan calling for nine specific steps investors can take to address the growing risks and opportunities from climate change. The investors pledged to collectively invest \$10 billion in clean technology opportunities over the next two years; reduce energy use in core real estate holdings by 20 percent over the next three years; incorporate green building standards into their investment decisions; require tougher scrutiny of carbon-intensive investments that may pose long-term financial risks; and a range of other specific steps involving policy support, corporate engagement, and investment practices. *(Please refer to Appendix A for complete text and list of signatories.)*

The Summit would not have been possible without the generous support of our United Nations sponsors, foundation sponsors, underwriters and contributors (see Appendix C for a complete list). Participants included asset managers, state and city treasurers and comptrollers, public and labor pension funds, foundations, and other institutional investors.

The Summit was hosted and organized by the United Nations Foundation, the United Nations Fund for International Partnerships, and Ceres, which directs the Investor Network on Climate Risk (see Appendix D for more information about INCR).



The Summit plenary sessions took place in the Trusteeship Council Chamber of the UN

SUMMIT AGENDA

9:00 am – Welcoming Remarks (Trusteeship Council Chamber, 2nd Floor)

- Amir A. Dossal, *Executive Director, United Nations Fund for International Partnerships*
- Ban Ki-moon, *Secretary-General, United Nations*
- Timothy E. Wirth, *President, United Nations Foundation*

9:15 am – Climate Change: Scientific Findings, Technological Solutions

- John P. Holdren, *Professor, Harvard University & Director, Woods Hole Research Center – presentation and discussion*

10:00 am – The Case for Investing in Energy Productivity

- Diana Farrell, *Director, McKinsey Global Institute – presentation*

10:20 am – Discussion

- Mindy S. Lubber, *President, Ceres & Director, Investor Network on Climate Risk (moderator)*

10:45 am – Panel and Discussion: Unleashing the Business Potential for Clean Energy

- Timothy E. Wirth, *President, United Nations Foundation (moderator)*
- Nobuo Tanaka, *Executive Director, International Energy Agency*
- Peter A. Darbee, *Chairman, CEO, & President, PG&E Corporation*
- Vinod Khosla, *Founding CEO, Sun Microsystems & Founder, Khosla Ventures*

12:00 pm – Panel and Discussion: Factoring Climate Change into Institutional Investment Strategies

- John Chiang, *Controller, State of California (moderator)*
- Donald MacDonald, *Trustee Director, BT Pension Scheme*
- Denise L. Nappier, *Treasurer, State of Connecticut*
- Russell Read, *Chief Investment Officer, California Public Employees' Retirement System (CalPERS)*
- Alex Sink, *Chief Financial Officer, State of Florida*

1:00 pm – Luncheon (Delegates Dining Room, 4th Floor; closed to press)

- Luncheon Welcome: Richard H. Murray, *Managing Director & Chief Claims Strategist, Swiss Re*
- UN Welcome: Dr. Srgjan Kerim, *President, 62nd session of the United Nations General Assembly*
- Introduction: Jeff Skoll, *Founder & Chairman, Skoll Foundation & Participant Productions*
- Featured Speaker: Al Gore, *2007 Nobel Peace Prize winner; Former Vice President of the United States; Chairman, Generation Investment Management*

1:30 pm – Investor Press Conference (Press Room, 2nd Floor)

2:45 pm – Opportunities for Economic Growth and Job Creation (Trusteeship Council Chamber, 2nd Floor)

- John J. Sweeney, *President, AFL-CIO*

3:00 pm – Panel and Discussion: Investing in the Face of Climate Change

- Mindy S. Lubber, *President, Ceres & Director, Investor Network on Climate Risk (moderator)*
- Abby Joseph Cohen, *Chief U.S. Investment Strategist, Goldman Sachs*
- Richard S. Cohen, *Managing Director in the Strategic Investments Group & Head of Environmental Strategic Investments, Bank of America*
- Kevin Parker, *Global Head of Asset Management, Deutsche Bank*
- Arlene Rockefeller, *Executive Vice President & Global Equities CIO, State Street Global Advisors*

4:00 pm – Investor Action Plan to Manage Climate Risk & Capture Opportunities – presentation and discussion

- Bill Lockyer, *Treasurer, State of California*
- Randall Edwards, *Treasurer, State of Oregon*
- Jack Ehnes, *Chief Executive Officer, California State Teachers' Retirement System (CalSTRS)*
- Thomas P. DiNapoli, *Comptroller, State of New York*

4:45 pm – Conclusions and Next Steps

- Mindy S. Lubber, *President, Ceres & Director, Investor Network on Climate Risk*
- Timothy E. Wirth, *President, United Nations Foundation*

INTRODUCTION

Welcome from United Nations

UN Secretary-General Ban Ki-moon praised the participants at the Investor Summit in his comments at a dinner the evening before the Summit and again in opening remarks delivered on his behalf by Amir Dossal of the United Nations Fund for International Partnerships. He applauded investors for focusing on the delivery of results, such as the investment of \$1 billion in clean energy technologies, a target investors pledged to meet at the 2005 Summit and achieved in less than a year.

The Secretary-General reaffirmed the need for participation from the financial community: “The shift towards a greener future is still in its infancy and needs nurturing. The ability of the financial community to determine investment flows gives it great influence over the pace of innovation, technological change and adaptation. While the world looks to the United Nations to steward the negotiating process, the United Nations looks to you, as leaders in the financial sector, to lead in innovative financing and technological development.” He urged participants to continue to seek to address climate change in ways that are both affordable and promote prosperity.

The Summit opened with Timothy Wirth, President of the United Nations Foundation, commending Secretary-General Ban Ki-moon for taking such strong leadership in addressing climate change, most recently through his organizing of high-level sessions that led into the Bali negotiations. He explained that throughout the meetings and negotiations surrounding the UN Framework Convention on Climate Change, it has been vital to understand and make the economic case for taking action, as the Investor Summit was designed to do.

Wirth asserted that “one of the things that we hope will ultimately be accomplished coming out of sessions like this is to bring the political leadership along and get them comfortable with the need for transformational change ... and get them to understand that climate should not be viewed as ‘woe is me’, ‘this is a terrible burden on all of society,’ - but in fact as the Secretary General said, it becomes a great opportunity for all of the world to develop a job base, a transformed economy, and a very significant new direction.” He reminded Summit participants that they have “a very large leadership responsibility” and that “we are all part of this global issue and the global solution.”



United Nations Secretary General Ban Ki-moon

CLIMATE CHANGE: SCIENTIFIC FINDINGS, TECHNOLOGICAL SOLUTIONS

The first session of the Summit was a presentation by one of the world's preeminent climate scientists, John Holdren, Harvard University Environmental Policy and Earth and Planetary Sciences Professor. He discussed:

- climate science
- climate technology
- climate economics
- climate policy



Dr. John Holdren, Harvard University & Woods Hole Research Center

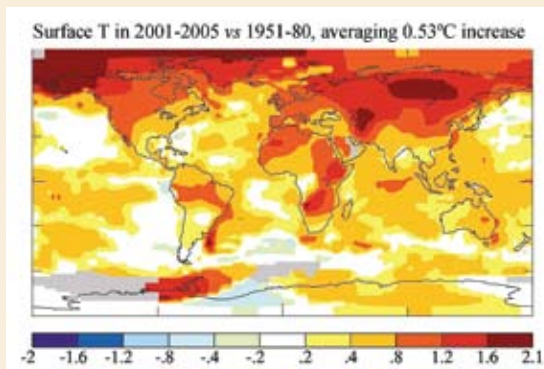
Climate Science: What do we know?

Holdren explained that the term “global warming” is not sufficient in describing the current changes in climate because it implies uniform, gradual, and benign change. “Global climatic disruption” is a more accurate term to use because the changes in climate we are witnessing are non-uniform, rapid, and harmful. This ‘disruption,’ largely caused by human activity, is already producing significant harm and occurring more rapidly than expected.

“Climate” is the pattern of weather—meaning averages, extremes, timing, and spatial distribution of various weather occurrences. “Climate change”, therefore, means altered patterns. While much emphasis is placed on the rising global average temperature (and the earth is getting hotter), this is just an index of the state of the global climate; small changes in the index represent big changes in the patterns. Climate change puts at risk everything that climate governs, including:

- availability of water
- productivity of farms, forests, and fisheries
- prevalence of oppressive heat and humidity
- geography of disease
- damages from storms, floods, droughts, and wildfires
- property losses from sea-level rise
- distribution and abundance of species

The current heating is not uniform geographically



Source: J. Hansen et al., PNAS 103: 14288-293 (2006)

Changes that are already occurring include: warming surface temperatures (though not uniform geographically); changing circulation patterns; increasing evaporation and precipitation (also not uniform geographically); thawing permafrost; shrinking glaciers and sea ice; expanding surface melting on Greenland; and rising sea-level. These changes are causing a range of harms, including floods, wildfires, and altered storm intensity.

Holdren stressed that even bigger disruptions are yet to be seen, asserting that past Intergovernmental Panel on Climate Change (IPCC) scientific assessments have underestimated the pace of emissions growth. Looming

disruptions could include: increased heat waves, increased smog, declining crop yields in the tropics, increased droughts, acidified oceans, and rising seas.

Climate Technology: What can we do?

There are three options for dealing with climate change: mitigation, adaptation, and suffering. Holdren asserted that “we need enough mitigation to avoid unmanageable climate change, and we need enough adaptation to manage the unavoidable climate change.”

Mitigation involves measures to reduce the pace and magnitude of the increase in global greenhouse gas (GHG) concentrations. These efforts must include:

- reducing emissions of GHGs and soot
- reducing deforestation
- increasing reforestation and afforestation
- modifying agricultural practices to reduce emissions of GHGs and build up soil carbon

Mitigation may also necessitate “scrubbing” GHGs from the atmosphere or pursuing various “geo-engineering” ideas to create cooling effects.

Adaptation (reducing the adverse impacts of climate change on human well-being) includes:

- altering crop patterns and developing heat-, drought-, and salt-resistant crop varieties
- strengthening public-health and environmental engineering defenses against tropical diseases
- building new water projects for flood control and drought management
- building dikes and storm-surge barriers against sea-level rise
- avoiding further development on flood plains and near sea level

Many adaptation measures are “win-win” and would be wise to pursue even without the risks of climate change.

Noting that we already have “dangerous anthropogenic interference with the climate system, Holdren maintained that the key question we face now is: “can we avoid catastrophic interference?” The chances of catastrophic change are much higher with a rise in average temperature of more than 2°C above pre-industrial levels, so limiting the change to less than 2°C is the most prudent target that still might be attainable.

Cutting emissions will be a huge challenge. Carbon dioxide (CO₂) emissions from human activities—75% from burning fossil fuels, 25% from deforestation and burning in the tropics—are the biggest piece of the problem. With \$15 trillion already invested in the existing global energy system, the system cannot be changed quickly.

The basic options for reducing emissions are to reduce population growth, the growth of GDP/person, the energy/GDP ratio, or the CO₂/energy ratio—all of which have limitations and liabilities. Holdren stressed the need for a portfolio of approaches, in addition to increased research and development. He underscored that to make the necessary emissions reductions, “we can’t just think big. We have to think huge.”

Climate Economics: Can we afford to address climate change? Can we afford not to?

The cheapest, fastest and cleanest method to reduce emissions is to increase the energy efficiency of buildings, industry, and transport, which saves energy, increases domestic jobs and energy security, and reduces pollution. Putting a price on greenhouse gas emissions, along with carbon capture and sequestration, are necessary to ensure adequate mitigation. Holdren made clear that while the world can afford the costs of avoiding the necessary amount of emissions (and may even benefit economically in the transformation to sustainability), the economic damages of not stabilizing the climate are literally incalculable, and likely higher than the mitigation costs.

Global climatic disruption entails both big dangers (for firms and investors that make bad or no choices about how to respond to climate risks) and big opportunities (for those that act creatively and aggressively to help society reduce climate risks and make money doing so). Business risks include damage to assets, operations, customers, and markets, as well as reputational damage, competitive disadvantages, and potential liability for contributing to climate risks. Opportunities, on the other hand, include new or improved products and services, trading of emissions permits and offsets, and “green” portfolio development and management.

Climate Policy: How do we get it done?

U.S. domestic climate policy must be national, mandatory, stringent, and enacted soon. Internationally, it is important that industrialized nations lead in implementing costlier solutions, offer assistance to developing countries, provide compensation to developing countries for not cutting down their forests, and agree to a formal and binding global instrument for the post-Kyoto Protocol period in 2012.

Key Next Steps

The most important, immediate next steps are to:

- Accelerate win-win mitigation and adaptation measures
- Put a price on GHG emissions
- Complete a global post-2012 agreement by 2009
- Ramp up investments now in R&D by 4–10 times (public and private combined)
- Expand international cooperation on deploying advanced energy technologies

THE CASE FOR INVESTING IN ENERGY PRODUCTIVITY

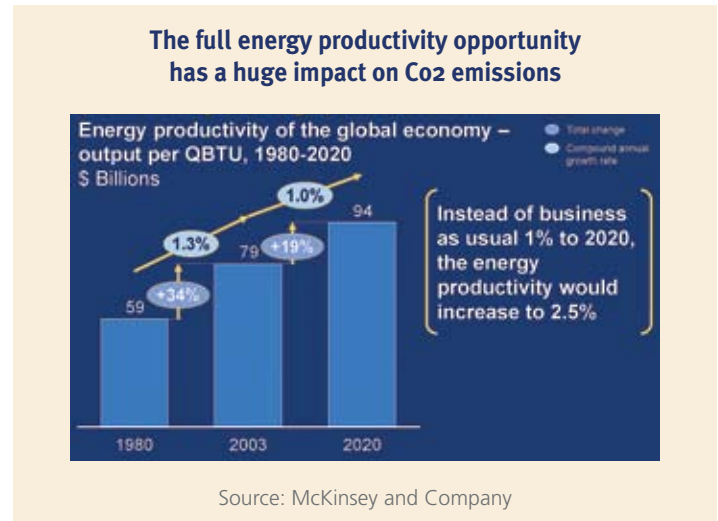
Diana Farrell, Director of the McKinsey Global Institute (MGI), presented a strong case for investment in energy productivity (defined as higher economic output per unit of energy) as highlighted in the MGI report released at the Summit entitled, “The Case for Investing in Energy Productivity.” She explained that energy efficiency improvements can provide attractive economic returns and are the single most cost-effective, important steps to address climate change that are already commercially viable.

Without mitigation, energy demand will accelerate, but this growth can be cut by more than half by 2020. Farrell argued that energy demand growth could decrease from 2.2% to 0.7%, with positive returns, and that it is possible to realize these cuts in energy demand growth across all regions and end-use sectors.

Although the rate of increase of energy productivity has slowed recently from 1.3% to 1.0%, that rate could be increased to 2.5% by 2020 through investments of \$170 billion—or just 1.6% of global fixed investment (0.4% of current global GDP). Realizing the full energy productivity opportunity would have a huge impact on reducing CO₂ emissions, with a negative cost of abatement. The rate of return could be as high as 17%, translating to \$900 billion of annual savings by 2020—which means \$900 billion available for investment in energy supply infrastructure.

Farrell outlined the largest energy productivity opportunities across the industrial, residential, commercial, and transportation sectors:

- Industrial sector opportunities provide 39% of the opportunity for global energy productivity improvement with an \$83 billion investment annually and short payback times. Investments could include combined heat and power generation, optimization of motor-driven systems, and various sector-specific efforts. The capital investments needed are moderate—a cumulative \$20 billion per Quadrillion British Thermal Units (QBTU) abated in 2020.
- Residential sector opportunities represent 26% of the potential increase in energy productivity—requiring \$40 billion in investment annually in improving lighting, new buildings (heating and cooling), building replacements, water heating, and appliances. These opportunities require the lowest-capital investments—a cumulative \$15 billion per QBTU abated in 2020.
- Commercial sector investments, where \$22 billion in annual investment could yield 10% of the potential productivity gains, could support improvements in water heating, HVAC, lighting, and appliances. Most of these opportunities are concentrated in developed countries, and they have high capital needs—a cumulative \$21 billion per QBTU abated in 2020.
- Transportation sector opportunities also represent about 10% of potential productivity improvement, requiring \$25 billion in annual investment in better fuel-saving design. Capital needs in this sector are very high—a cumulative \$40 billion per QBTU abated in 2020.





Diana Farrell, McKinsey Global Institute

The biggest energy productivity opportunities are in the U.S., China, and other developing countries, with the Middle East an often overlooked opportunity.

Four key investment opportunities for the public and private sectors were stressed:

- Set efficiency standards for appliances and equipment.
- Finance energy efficiency upgrades in new buildings and remodels.
- Raise corporate standards for energy efficiency. There are extensive opportunities to encourage managers to reduce energy use; to request energy efficiency and greenhouse gas emissions information on a regular basis; and to encourage companies to develop appropriate metrics. Many companies have already demonstrated that these measures can provide huge annual savings. Private equity also has a significant role to play.
- Invest in energy intermediaries. Identify new ways to aggregate and combine skills among energy service companies, green investment funds, regulators, utilities, and others.

Finally, Farrell emphasized that \$170 billion of investment in energy productivity provides energy savings that yield attractive returns, a potential source of additional revenue from sales of white certificates or emission permits, reduced exposure to energy related risks, freed-up investment system-wide, and critical CO₂ emissions reductions. These energy productivity opportunities mean that, even while waiting to get essential regulations in place, “there are no-regrets things that can be done.”

UNLEASHING THE BUSINESS POTENTIAL FOR CLEAN ENERGY

Timothy Wirth, President of the UN Foundation, moderated presentations about the potential for clean energy from: Peter A. Darbee, Chairman, CEO, & President of Pacific Gas & Electric (PG&E) Corporation; Nobuo Tanaka, Executive Director, International Energy Agency (IEA); and Vinod Khosla, Founding CEO, Sun Microsystems and Founder, Khosla Ventures.

Experience with Efficiency and Renewables

Mr. Darbee presented remarks based on PG&E's "first-hand practical experience" in California.

He stressed that "technologies are available today and in use today that can make significant differences" in reducing GHG emissions, as demonstrated through California's progress over the last 30 years. Lack of will—not invention—has become the biggest obstacle. Darbee argued that if business leaders are serious about climate change, then they must take accountability for these choices, rather than pretending their hands are tied until future technology hurdles are overcome. The federal government also must set long-term national targets and timetables for reducing greenhouse gases, which would provide clarity and context for businesses.

Opportunities in energy efficiency

PG&E views energy efficiency as the "first fuel" to meet energy demand because it is highly cost-effective, relatively fast to implement, and achievable with existing technology. California has kept per capita energy use constant over the last 30 years, while the rest of the country has seen a 50% increase, because California adopted policies that aligned the right incentives for energy efficiency, such as decoupling utility profits from energy sales and providing opportunities to earn returns on energy savings. Darbee advocated that the California experience be replicated in other states, although he recognized that progress is slow because these policies require a substantial change in mindset on the part of both utilities and regulators. He argued that decoupling provides investors with an increased level of predictability in earnings and also focuses management on the customer and innovation, as opposed to putting more capital into constructing new generating capacity.

Opportunities in renewable energy

Darbee affirmed PG&E's support for California's renewable portfolio standard (and for a national standard), but clarified that like energy efficiency, companies need more than just mandates for renewables to reach their full potential. He described the obstacles to achieving California's 20% renewable portfolio standard, including competitive pricing and transmission constraints.

He stressed the need to address these obstacles in an integrated, strategic fashion that blends incentives, standards, public sector investment, and other mechanisms. In particular, Darbee advocated:

- a price and market for carbon so that the real costs of conventional generation can be reflected
- the extension and expansion of renewable energy production and investment incentives by the federal government to reduce investment uncertainty, spur the development of longer-term technology, encourage fuller deployment of these technologies, and send a critical signal to investors to take the long view and commit to these projects
- investment in transmission and distribution infrastructure



Peter Darbee, PG&E Corporation

Role for the Investment Community

Darbee encouraged the financial community to support calls for transparency on GHG emissions and expressed support for a national reporting standard for GHGs. To separate companies that are internalizing climate change and its impact on business from those that are not, Darbee urged the investment community to consider two questions:

- Is the company engaged in understanding where policy on climate change is headed?
- Is the company running the business with an eye toward the broader changes associated with climate change? (Are they following the science? Are they taking steps to adapt to the impacts on natural resources, energy use patterns, customer needs, infrastructure, etc.?)

As an example, Darbee described how PG&E is examining forecasts of climate impacts on the Sierra Nevada snowpack and is starting to consider how the company would address diminished hydro capacity.

Companies that are asking these questions now are going to have a much richer understanding of the long-term risks and opportunities and will be substantially ahead of the game. If the investment community begins to recognize and reward this kind of thinking, it could go a long way in driving innovation, helping the industry and the country turn the corner on the challenges posed by climate change, and creating significant value and growth opportunities.



Nobuo Tanaka, International Energy Agency

The International Energy Agency (IEA) Perspective

Stating that energy security is IEA's main mission, Mr. Tanaka acknowledged the need for a new energy revolution to reduce energy-related emissions to 23 Gigatons (Gt) by 2030—a large cut from the 42 Gt projected for 2030 and even from the current level of 27 Gt. This reduction, which could allow us to stabilize atmospheric concentrations at 450ppm, should come partially from energy efficiency and partially from decarbonization of power sector technologies.

Simply setting a CO₂ emissions target cannot solve the problem; infrastructure is needed as well. Tanaka emphasized the need to build huge numbers of power plants every year, but recognized the enormous challenge this presents.

Marginal costs for cutting CO₂ emissions are lowest for end-use efficiency, followed by power sector de-carbonization, industry fuel switching (and carbon capture and sequestration), and transport sector fuels. Bringing emissions back to current levels by 2050 can be achieved by end-use energy efficiency, at a marginal cost of \$50/ton. Reducing emissions 50% by 2050 would require a marginal cost of \$200/ton CO₂. The costs to achieve these reductions could exceed \$50 trillion—a huge investment, although only 1% of GDP.

Tanaka emphasized that we must double our energy efficiency efforts, noting that the rate of energy efficiency improvement in IEA countries since 1990 has been less than 1% per year—much lower than in previous decades. IEA has already recommended 16 energy efficiency measures, including phasing out incandescent bulbs and reducing the power consumed by electronic equipment while in a power-off/stand-by mode. Even though energy efficiency is good for the economy, the environment, and security, the challenge has been implementation of these measures—in part due to government hesitation to prescribe stringent standards.

Tanaka also discussed renewable energy, urging that all options be kept open and subject to the market. He pointed out that wind energy is nearly cost competitive with fossil fuels. He also

advocated a re-energizing of support for research and development, noting that government spending on R&D has fallen since the 1980s.

Tanaka asserted that open dialogue and cooperation between environmental and energy groups is needed. His goal is to transform the IEA into the International Energy & Environment Agency. He observed that “the scarce resource that we have to talk about is not energy or natural resources or the capital, but probably time.”

Role of Technology

Offering “mostly convenient truths from a technology optimist,” Mr. Vinod Khosla provided a different point of view. He asserted that forecasting is difficult in a new world. He quoted a Silicon Valley computer scientist who said that “the best way to predict the future is to invent it,” noting that today’s unimaginable is routinely tomorrow’s conventional wisdom.

Khosla forecast that within 10 years, everyone will believe that oil will have to start dropping rapidly in price to compete with second generation biofuels. Even today, it is possible to produce power from solar thermal energy more cheaply than nuclear, carbon capture and sequestration (CCS), and integrated gasification combined cycle (IGCC).

Energy efficiency will not be a demand-side phenomenon, Khosla asserted, but rather supply-side. For example, economics will drive the change if we produce an engine that does not cost as much as current engines and uses only half as much gas. Khosla maintained that few of the usual technologies (e.g., wind) will be relevant to addressing climate change and that the “new green” is about technologies that can replace 80% of coal plants without subsidies—new engines, lighting, appliances, batteries, and flow cells. “Capitalist greed will drive the solutions,” and new ideas will make all the assumptions in all the forecasts wrong.

Some of Khosla’s predictions include:

- Enhanced geothermal and solar thermal will be cheaper than carbon capture & sequestration, and solar thermal will be utility-scale.
- Food-based fuels will be obsolete; corn-based ethanol will be uneconomic within 5 years.
- Cellulosic fuels will be cheap—Khosla Ventures’ goal is \$1.25/gallon in 3-5 years.
- Wood chips will provide diesel; waste will provide jet fuel.
- Renewable materials (glass, cement, etc.) will be available for use.

All of this will be driven by technology, on the supply side, and technology will change the cost equations. Khosla declared that if it is possible to replicate Khosla Ventures’ investments 100 times over, then fossil fuel technology will itself be “fossilized” very quickly. He noted that “a crisis is a terrible thing to waste,” that this crisis provides an opportunity, and that “technology is changing the art of the possible.”

Discussion

Diana Farrell of McKinsey responded to Khosla by noting that efficiency and technology do not work at counter-purposes and that we should be more efficient as we seek out technological solutions. Khosla agreed that efficiency and technology can be complementary, but he noted that the fundamental difference is that he focuses on making technology cheaper for consumers and allows demand to respond to the lower price. Ms. Farrell also pointed out that there have been



Vinod Khosla, Founding CEO, Sun Microsystems & Founder, Khosla Ventures and Peter Darbee, CEO, PG&E Corporation (left)

promises of technology breakthroughs for 30 years and asked Khosla what made him think today was different. In response, Khosla explained that it is possible to bring about faster technological breakthroughs today because more people are focused on developing innovation and are applying the Silicon Valley mindset to energy. Years ago, university presidents could not prompt the best 10% of graduate students to enroll in energy studies, whereas today the best 10% all want to work in energy innovation. He predicted that ten years from now, there will be an explosion in energy innovation as a result. Darbee added that a critical driver of technology will be internalizing the cost of carbon emissions, which changes the economics substantially and makes the opportunities pointed out by Khosla much more attractive. He asserted that it is important to get the incentives and policies right, but acknowledged that technology can deliver results far beyond expectation.

E. Angus Friday, Ambassador to the U.N. from Grenada and Chairman of the Alliance of Small Island States (AOSIS), asked the panel whether enough money was going into venture capital for climate change, whether there is a need to encourage more funding to speed up the pace of innovation, and whether carbon trading (or a carbon tax) that changed the competitiveness of fossil fuels would generate new technology fast enough. Tanaka responded that Khosla must convince investors to put money into his ventures and that government has to spend money on R&D. He argued that one of the challenges for governments is to put a price on carbon; otherwise, use of coal—which is currently very cheap—will continue to increase. He expressed hope that Khosla is right regarding the ability to quickly develop the new technologies needed. Khosla commented that despite rapid increases, more venture capital funding is needed, particularly in the area of project finance, since providers of project capital typically finance projects that use existing technologies, not new ones.

FACTORING CLIMATE CHANGE INTO INSTITUTIONAL INVESTMENT STRATEGIES

Mindy Lubber, President of Ceres and Director of the Investor Network on Climate Risk, introduced a panel on factoring climate change into institutional investment strategies. She noted that the panelists “provide enormous hope” as pioneers who have taken on the issue of climate risk as fiduciaries and asset owners, who have encouraged improved disclosure and governance at dozens of companies, and who have begun to engage with policymakers such as Congress and the U.S. Securities and Exchange Commission.

John Chiang, Controller of the State of California, moderated the panel, directing a series of questions to the panelists: Donald MacDonald, Trustee Director, BT Pension Scheme; Denise Nappier, Treasurer, State of Connecticut; Russell Read, Chief Investment Officer, California Public Employees’ Retirement System (CalPERS); and Alex Sink, Chief Financial Officer, State of Florida.

Opportunities for Investors

The panel highlighted several themes and key points regarding investor opportunities due to the growing awareness of climate change and corresponding changes in the global market.

- Mr. MacDonald declared that the exercise of investor responsibility and professional leadership, including engaging with companies and collaborating with other investors, is essential in order to assess climate risks and opportunities in portfolios. BT Pension Scheme, a conventional mainstream investor at the forefront of sustainable investments in existing property portfolios, is now looking to invest US \$1 billion in clean building technology and clean development. In its conventional portfolio, it is trying to apply existing efficiency and renewable energy technologies in an integrated way.
- Mr. Read emphasized that fundamental to being a successful long-term investor is seeing where capital is needed and then deploying it. For example, CalPERS is doing so in infrastructure, real estate, and clean tech. It is developing its own infrastructure program, in addition to coordinating with other pension funds, and sees the capital requirements and time horizons as well-suited to long-term investors. In terms of real estate, innovations in the housing and construction sector are essential given that roughly 2 billion people will advance from subsistence-level housing. In terms of clean tech, Read noted the importance of getting the incentives right for producers and consumers, including effective pricing of GHG emissions and appropriate disclosure that allows for comparability for investors.
- Treasurer Nappier underscored the point that “all asset classes within our institutional investment portfolio are ripe for innovative ideas to further clean technology and renewable energy initiatives,” such as renewable energy project debt financing. Nappier also noted that more individuals in the investment management community are beginning to appreciate climate risks and opportunities.



Donald MacDonald, BT Pension Scheme; Alex Sink, Florida Chief Financial Officer; Denise Nappier, Connecticut State Treasurer; and John Chiang, California State Controller

Progress in Corporate Engagement

Treasurer Nappier then described some of the progress that has been made in terms of corporate engagement on climate risk and opportunity. Nine years ago, companies would not let investors speak to directors about the subject, and many did not even acknowledge that climate change affected a company’s bottom line. That attitude is now the exception to the rule; more

executives recognize that they do not have to work through these issues as adversaries, since investors share an interest in companies' growth and success. Fueled in part by the media, consumer demand, government action, and the clout of investor colleagues, shareholder activism on climate change has had a widening scope and reach since 2005. For example:

- Conversations with executives have moved beyond whether climate change is a problem, and with some, the conversation is no longer even about disclosing the risks so much as about taking immediate action to mitigate those risks. Investors are talking with Ford and GM about developing strategic plans to meet the new CAFE standards and are talking to utilities about their strategic plans to be profitable as rate structures change to give utilities incentives to help consumers save energy. Nappier stated her belief that the next Congress will pass a carbon cap that will be signed by the President, and that "our companies need to get ready to operate in that new world."
- Investors' focus has gone beyond the major GHG-emitting sectors to sectors like banking and insurance. Some banks are now adding climate as a risk factor in their assessments and are also looking to reduce the carbon footprint of their loan portfolios. There is also some focus on big-box retailers, some of whom are using their tremendous clout with vendors to reduce energy throughout the supply chain, causing a ripple effect through the business community.
- A lot of major firms in the investment management community are now issuing their own reports on climate risks and opportunities, with sector- and company-specific analyses. Evolving investment strategies, vehicles, and instruments will allow these firms to make a profit on climate risks and opportunities. The more institutional investors demand this kind of approach to the investment of assets, the more the market will respond.



Florida CFO Alex Sink

Monitoring Investments

CFO Sink described the Florida Treasury's initiative, as part of the Treasury's regular semi-annual review of its external managers, to ask its managers how they are incorporating issues of climate risk into their evaluations of their investments on the Treasury's behalf. Manager responses ranged from a dozen pages to "I don't have a clue." She highlighted the frequent response from managers about their lack of sufficient information, which led her to focus on getting public companies to disclose how their boards are thinking about and addressing these issues, which in turn led Florida to sign onto the September 2007 petition calling on the SEC to issue guidance clarifying that material climate-related information must be included in corporate disclosures under existing law.

Controller Chiang shared California's practices, noting that a portion of their public equity portfolios uses environmental screens. In 2008, Chiang asked the investment committees of CalPERS and CalSTRS to seek more disclosure on climate risks from companies. He also asked the committees to improve corporate governance by incorporating the Ceres "Climate Change Governance Checklist" to evaluate best practices. In addition, he asked his staff to work with other investors in INCR and the Ceres staff to develop and implement a survey of public equity investment managers regarding their ability to evaluate climate risks and opportunities, the results of which will be considered in manager reviews and hiring.

Sectors Facing Significant Climate Risk

The panel discussed the sectors they see as facing the most significant climate risks, as well as what can be done to address them.

- MacDonald declared that apart from the more esoteric asset classes, almost every asset class is exposed to risk, including property, infrastructure, private equity, and commodities. Climate change is also a driver for a range of other social, environmental, and political risks. The way that institutional investors set their asset classes in the future will reflect the changes that will occur in the world economy. MacDonald maintained that “the climate change issue should be a real driver for all of us to do a root-and-branch study of our portfolios.” He pointed not only to the engagement process with equities, but also to direct investments in property, equities, and infrastructure. He noted that tackling emissions from buildings or making major changes in the electrical grid will require heavy investment and long-term financing—investment that institutional investors can provide. Investments demonstrate a range of risks, from the bond-like investments in infrastructure to seed capital for private equity for scientists and engineers to develop new technology. “We are now reviewing all of our asset classes and all the components that make up each of those classes to see what the impact is of our investments in terms of existing climate problems and where the smart money is going to go.” He acknowledged that none of this will be easy, but he noted both a social obligation and an obligation to beneficiaries.
- Read focused on real estate and clean tech. He pointed out that CalPERS has a \$20 billion real estate portfolio and is halfway through the “Green Wave” initiative seeking 20% reduction in energy use in 5 years. For clean tech, Read predicted that if we get the incentives right, it will mean that many industries will be re-valued, with lots of winners and losers.
- Nappier emphasized that all sectors are at risk. The biggest issue initially was the huge emitters like the oil & gas sector, but some of the focus has now moved to other sectors like insurance. Insurance companies get hit with a “double whammy” in that climate risks can affect their ability to pay claims but also can affect how they can prudently invest their assets.



Connecticut State Treasurer Denise Nappier



Russell Read, California Public Employees' Retirement System (CalPERS)



Richard Murray, Swiss Re

KEYNOTE LUNCHEON

The featured speaking during the Summit luncheon was 2007 Nobel Peace Prize winner and former U.S. vice president Al Gore. Vice President Gore was preceded by welcoming remarks from Amir Dossal, on behalf of Dr. Srgjan Kerim, President, 62nd session of the United Nations General Assembly, and from Richard H. Murray, Managing Director & Chief Claims Strategist, Swiss Re. Mr. Gore was introduced by Jeff Skoll, Founder & Chairman, Skoll Foundation & Participant Productions.

Luncheon Welcome

Mr. Murray explained that Swiss Re has long been committed to climate responsibility, including producing one of the first corporate reports on climate concerns in 1994, committing to carbon neutrality within five years, focusing on responsible investment, and pledging to develop insurance products and services to facilitate and support clean energy ventures. Swiss Re believes that even greater mobilization of responses to the climate crisis will emerge when reporting and disclosure of corporate systemic and regulatory climate risks are not just best practice but are mandatory.

Referring to Holdren's presentation about the current harms of climate change, Murray commented that "the future is here now," noting that "the insurance industry has the dubious privilege of being able to recognize that commerce mirrors science" since it encounters these conditions in the core of its business earlier than others.

Consequently, Murray emphasized that Swiss Re has three principal reasons for its commitments:

- The obligation to Swiss Re shareholders to understand and properly control the losses already visible.
- The obligation to share the insurance industry's insights into the presence and pace of climate change damage with public sector policymakers and private sector leaders.
- It is the right thing to do, since the problems of climate change fall mostly on those least able to deal with it, threatening life and stability around the world. "Beyond commerce, science, economics—this goes to the heart of humanity."



Jeff Skoll, Skoll Foundation & Participant Productions

Introduction of Al Gore

Mr. Skoll, Founder & Chairman, Skoll Foundation & Participant Productions introduced Vice President Gore. After the 2000 election, Gore updated and expanded his slideshow presentation about global warming. Skoll and his colleagues convinced Gore that he needed to transform the slideshow into a movie in order to reach a mass audience. The result—An Inconvenient Truth, produced by Skoll among others—became the fourth largest grossing documentary of all time. Skoll asserted that this is just the beginning of the story. The next question is: are we prepared to make the difficult decisions to address this challenge?

Featured Speaker—Al Gore

Mr. Gore began his speech by emphasizing that the solutions to the climate crisis are neither mysterious nor complicated. “We have to put a price on carbon. Carbon has to be accounted for in the marketplace.” Noting the need for a carbon tax, cap and trade, and renewable energy standards, he declared that “we need all the arrows in the quiver.”

The investor community in particular must look far into the future. “This is a group that can’t afford to wait until new laws are passed and regulations enacted. You have an obligation to match your long-term assets to the certainty of your long-term threats.”

Gore praised the accomplishments of the Investor Network on Climate Risk (INCR) and the UN, and stated that the INCR Action Plan released at the Summit “is an example of great leadership.” He noted that many investors have “gone from talking the talk to walking the walk”, though others have taken only baby steps. But although the efforts so far have been “fantastic,” Gore stressed that “you need to do much more.” In particular, he declared: “You need to really scrub your investment portfolios. Because I guarantee you, that if you really take a fine-toothed comb and go through your portfolios, many of you will find them chock-full of sub-prime carbon assets. Now that the world is moving to recognize the true scope and magnitude of this historic challenge we’re confronting, the time is drawing nigh when you, like some colleagues in the mortgage business, will be personally held accountable for what you didn’t see that you should have seen.”

“There are few things as powerful as an assumption whose time has passed,” Gore observed, referring to investing in business models that assume carbon is free. He called that “an assumption that is about to go splat.”

Summit participants were urged by Gore to “start amping up the actual changes in your portfolio to make them sustainable.” He continued: “Don’t just talk the talk, don’t just walk the walk. Run the run—towards sustainable asset management. When the judgment comes—were you among the sleepwalkers or the ones who saw it and acted?”

Moving to a note of optimism, Gore discussed his vision of what is to come. Thanks to a huge increase in venture capital and private equity investing, Gore sees a range of solutions that are “in the on-deck circle” and “a wave of green-collar jobs ready to open up.” He urged the world as a whole to combine the struggle against extreme poverty and the solution to the climate crisis. He maintained that there are substitutes available today for building new “dirty fossil fuel plants”, including concentrated solar power, and that putting a price on carbon will bring these new sources into the marketplace.

Investment by Summit participants is critical “not only because it is the right thing for you to do as trustees, but because to get this new reality to come to pass, the first movers will have an advantage.”

Gore emphasized that this generation ought to see this challenge as “a great privilege” and “confront it with joy in our hearts” because few generations have ever had responsibility for decisions that will affect all future generations. “The fact that that challenge falls to us should cause us to feel like we have the great joy of doing work in our lives that is worth our best efforts. And you are in a position to direct the flows of capital that will make that happen.”



Al Gore, 2007 Nobel Peace Prize winner; Former Vice President of the United States; Chairman, Generation Investment Management

OPPORTUNITIES FOR ECONOMIC GROWTH AND JOB CREATION

John J. Sweeney, President of AFL-CIO gave a labor perspective on the climate challenge and the opportunities presented by investments in clean and efficient energy.

Sweeney noted that the AFL-CIO has been part of Ceres' groundbreaking work since Ceres was founded almost 20 years ago. Sweeney expressed pride that the global labor movement was among those who called for decisive action at the December 2007 UN climate talks in Bali. "We hear again and again that we must choose between having a stable climate and having a strong global economy. This is a false choice."



John Sweeney, AFL-CIO

The "colossal challenge" of dealing with energy scarcity and global warming can mean enormous opportunities for developed and developing countries, for investors across asset classes, and for workers. Sweeney suggested that the global nature of the economy and of climate impacts requires global rules. "We need common rules for all of us—worker protections, investor protections and environmental protections." He also emphasized that we need "strategies that work for all of us" at the national and global levels to combat climate change and to create and share wealth.

Executing strategies to combat climate change "requires deploying our current human and financial capital to secure a future we want to live in. Much of that capital is workers' retirement funds." In the U.S. alone, he said, \$5 trillion is invested on behalf of union members. "These deferred wages of working people are the capital that can fuel the energy economy of the future." This is not an issue of trading off investment returns for environmental protection; rather, if we want healthy long term investment returns, we must solve the energy and the environmental crisis. Sweeney observed that "for investors, the development and deployment of new energy technology that does not emit carbon is a fantastic old-fashioned opportunity to make money—to be in on the ground floor of the future."

Sweeney urged investors not to wait for governments to act. He encouraged them to look at investments in solar, wind, geothermal, hydro, nuclear, and carbon capture and sequestration—suggesting that a 10-year program to bring 18,500 megawatts of renewable energy on line annually could generate 2 million full-time equivalent jobs. He also supported increasing energy efficiency, including green buildings and a smart grid. He emphasized the need for scale and speed. And he declared that "the AFL-CIO is committed to a continuing effort to inform the stewards of our members' money about the investment opportunities in energy transformation."

Sweeney also urged investors to demand the information necessary to hold corporations accountable for taking responsibility for and seizing the opportunities created by the climate crisis. He applauded the pension funds that led the effort to ask the SEC for mandatory disclosure of climate risks, "but while we wait for an SEC ready to act, investors can use our power, our voice, to get companies to make these disclosures."

Collaboration between investors, labor, and government will be essential; for instance, labor needs business and government partners to ramp up advanced job training and education.

Sweeney urged investors to join with labor and environmentalists to demand that government act to accelerate the pace of change, as “we all win when government finally puts the needed public investment into mass transit, advanced automotive technology, and carbon emissions control technology.”

And Sweeney painted a stark picture of a world that chooses to do nothing about global warming. “It leads to a planet of radical inequalities of wealth and power. It leads to global economic instability. To governments each looking to their armies to pursue the hopeless mission of seizing the world’s dwindling supplies of energy. And all the while all of us will face the unstoppable, unknowable consequences of radical, accelerating global climate change.” But he expressed hope that this would not be the course pursued, maintaining that we can build a world with a stable climate, sustainable energy sources, and an expanding middle class.

“Investors can lead, and make money by leading,” he concluded. “The labor movement expects those who have been entrusted with our members’ money to do just that.”

INVESTING IN THE FACE OF CLIMATE CHANGE

Mindy Lubber, President of Ceres and Director of INCR, introduced four panelists to discuss investing in the face of climate change: Abby Joseph Cohen, Chief U.S. Investment Strategist, Goldman Sachs; Richard S. Cohen, Managing Director in the Strategic Investments Group & Head of Environmental Strategic Investments, Bank of America; Kevin Parker, Global Head of Asset Management, Deutsche Bank; and Arlene Rockefeller, Executive Vice President & Global Equities CIO, State Street Global Advisors.



Mindy Lubber, President, Ceres and INCR Director; Arlene Rockefeller, State Street Global Advisors; Kevin Parker, Deutsche Bank; Abby Joseph Cohen, Goldman Sachs

Goldman Sachs' Actions and Plans

Ms. Cohen observed that since the 2003 Summit progress has been made to encourage more investors to analyze company behavior and enable companies that act proactively on climate change to be rewarded.

Goldman Sachs has undertaken a range of actions, including issuing an environmental statement, setting aside as a protected preserve a huge tract of land in South America, building LEED-certified buildings, and funding scientific research. In terms of Goldman's role as investment banker and broker, the company trades carbon, finds clean tech opportunities in private equity and venture capital, provides information and basic research on what companies are doing, and organizes conferences on science, policy, and investment opportunities. Cohen explained Goldman's belief in integrating the analysis of environmental, social and governance (ESG) factors with the assessment of whether a client should buy or sell: "The analysis on ESG or sustainability is most effective when it

is embedded, not separated, from the rest of the investment process." She lamented the lack of access to quality data and noted that Goldman is seeking to build efficacious databases, asking its industry experts to identify and track a small number of critical variables.

Cohen stated that the sectors at risk include "the usual suspects" like industries that are energy intensive, but also include electronics manufacturing, financial firms, and others. The corollary is that there are many sectors that also have opportunities. One area where Goldman can be effective is in gathering capital for environmentally sensitive investment—a category that will likely generate good returns going forward.

Deutsche Bank's Initiatives

Parker asserted that "asset managers should really get out in front on this issue" because they have a fairly self-evident role to play in educating investors and bringing awareness to retail and institutional clients. Many institutional investors are not aware of climate change risks. Deutsche Bank has found that its retail clients are increasingly interested in the subject. Asset managers can mobilize capital to invest in companies involved in mitigation and adaptation. Parker emphasized that for the business of climate investing to be successful, asset managers must deliver returns for investors.

Parker predicted that statements at the Summit from insurance companies and recent landmark decisions from banks concerning coal-fired power plants would impact asset managers greatly going forward. He acknowledged "a seminal change in Wall Street's recognition of this issue" in "really putting its money where its mouth is."

Asset managers have much work to do to address climate change, though Parker pointed out that the mutual fund industry has about \$66 billion globally in about 256 specific climate-related investment funds—this figure does not include socially responsible investment (SRI) funds, private equity funds, or hedge funds, which are also very engaged in climate issues. Only 10% of this investment is domiciled and managed in the United States; most of the concern and mobilization is in other countries.

Rather than waiting for governments to act or for the U.S. client base to wake up to the issue, Deutsche Bank has identified climate risk as a mega-trend in its business. Deutsche Bank incorporated climate change into the way it looks at equities and fixed income securities, seeing climate change as an issue for all industries. Deutsche Bank's retail fund business has about \$11 billion in assets under management in climate change activities and launched its first climate change mutual fund in September 2007 (which contains about \$50 million to date). Parker emphasized the disparity in interest in climate change in the United States versus overseas.



Richard Cohen, Bank of America

Bank of America's Commitments

In March 2007 Bank of America announced a \$20 billion 10-year environmental commitment, bringing to bear the bank's strengths of financial acumen, access to capital, a huge infrastructure, and a huge customer base. Just before the 2008 Summit, CEO Ken Lewis announced the creation of a strategic environmental investments team—a cross-functional team bringing together resources from private equity, strategic investments, capital markets, policy, and other divisions.

The goal of the team is to identify, analyze, structure, and execute strategic environmental investments for Bank of America—putting the Bank's capital to work. The two specific goals are to earn appropriate risk adjusted returns on the capital being committed and to look at strategic benefits for the Bank and its customers. Richard Cohen emphasized that the bank sees the environment as strategic for the company and its customers. He noted the ability of the team to work across the entire institution—wealth management, infrastructure, key customers, and capital markets.

As the new effort grows, Bank of America will be actively seeking out partnerships and common ground with other like-minded corporations, government agencies, and other bodies. "We have to act collectively where we can," Cohen said.

State Street Global Advisors' Strategies

Ms. Rockefeller declared that climate change is a major issue that has the potential for both huge risks and opportunities. State Street is working with its clients to position their portfolios to avoid the risks and to use the opportunities to gain value. She agreed that there has been more interest among clients outside the United States, particularly in Australia, which is experiencing a serious drought and takes climate change very seriously. "We are converting all of our funds that are for Australian clients...to ESG portfolios; if we don't do this, we will not have any Australian clients." She also noted interest from European clients and from some endowments and foundations in the United States.

In major market trends, investors can profit most if they are in a trend from the beginning. Rockefeller stated her firm belief that it is not too late to come into this trend. State Street has a fundamental strategy based on analysts who look at the past and anticipate the future. She acknowledged challenges on the quantitative side and the continuing search for more information on the environment and governance. State Street has not yet found a strong relationship between positive returns and environmental concerns, but Rockefeller emphasized that this does not mean it is not a sound way to invest; it simply means it has not taken hold yet, and "that is exactly where you want to be able to place your money going forward."

Deploying Capital

Lubber asked panelists what it will take to reduce emissions to the levels needed to avoid catastrophic climate change.

Ms. Cohen suggested that once you get to the threshold of companies seeing benefits from environmentally sensitive initiatives, "so many other barriers begin to come down." Professional investors have responsibilities to get good returns, and if we are at the point that we are beginning to see better returns from companies paying attention to mitigating long-term liabilities and enhancing revenues, that becomes a positive snowball effect, attracting more capital and liquidity into the area.

He expressed amazement that oil prices, copper, etc. are widely publicized daily, but the price of carbon is not on the minds of most investors every day.

INCR ACTION PLAN TO MANAGE CLIMATE RISK & CAPTURE OPPORTUNITIES

California Treasurer Bill Lockyer, presented the INCR Action Plan, endorsed by over 50 leading U.S. and European institutional investors managing more than \$1.75 trillion in assets. The plan builds on the success of INCR Action Plans released at the 2003 and 2005 Investor Summits. Signatories include state treasurers, controllers, pension fund and labor leaders, asset managers, foundations, and other leaders in investing worldwide. *Please refer to Appendix A for complete text and list of signatories.*

Treasurer Lockyer encouraged other investors to sign on to the 2008 INCR Action Plan. “We are determined to create a world economy that is clean, green, and sustainable,” he said.

He reviewed the key elements of the plan, divided into three categories—Managing Our Investments; Engaging Companies, Investors, and Others; and Supporting Policy Action—each containing three goals.

Noting that climate change presents both material risks and significant opportunities, the investors pledged to collectively invest \$10 billion in clean technology opportunities over the next two years and to incorporate green building standards into their investment decisions. Calling energy efficiency “one of the fastest, easiest and cheapest ways to significantly reduce emissions and improve the bottom line,” the signatories pledged to reduce energy use in core real estate holdings by 20 percent over the next three years. Other goals include:

- Require and validate that investment managers, investment consultants and advisors report on how they are assessing climate risks in their portfolios, whether from new carbon-reducing regulations, physical impacts or competitive risks.
- Encourage Wall Street analysts, rating agencies and investment banks to analyze and report on the potential impacts of foreseeable long-term carbon costs, in the range of \$20 to \$40 per metric ton of CO₂, particularly on carbon-intensive investments such as new coal-fired power plants, oil shale, tar sands and coal-to-liquid projects.
- Push the SEC to issue guidance leading to full corporate disclosure of climate risks and opportunities.
- Push Congress for a mandatory national policy to reduce national greenhouse gas emissions in accordance with the 60–90 percent reductions below 1990 levels by 2050 that scientists suggest is urgently needed to avoid the worst and most costly impacts from climate change.

Treasurer Lockyer then introduced three signatories to the INCR Action Plan to give brief remarks: Randall Edwards, Treasurer of the State of Oregon; Jack Ehnes, CEO of the California State Teachers’ Retirement System (CalSTRS); and Thomas DiNapoli, Comptroller of the State of New York.

Edwards declared that “states are simply leading the way” because they are tired of waiting for federal action. He emphasized that financial officers have a seat at the table and can make a difference. He described their duty and



Bill Lockyer, State of California Treasurer



Thomas DiNapoli, New York State Comptroller



Randall Edwards, Oregon State Treasurer

responsibility to invest in sustainable businesses and emerging technology and to encourage sustainable business practices. He asserted that financial officers have a national voice, which they will be taking to Congress, to the SEC, and to Wall Street.

CalSTRS CEO Ehnes stated that one of the lessons from the Action Plan is that “there are opportunities for all of us in the room.” He urged the involvement of other investors in shareholder resolutions, declaring that “the power of the proxy is probably as strong as it has ever been.” CalSTRS has taken a comprehensive approach to its portfolio, with its investment staff from all asset classes looking for risks and opportunities from mega-trends and looking to seize opportunities when the competitive landscape changes. CalSTRS has double bottom line goals of returns and environmental performance in global equity, undertakes regular screening of its portfolios, and seeks to incorporate climate change into all models. Ehnes urged investors to look at their real estate holdings for opportunities for risk mitigation and efficiency, announcing that in 2008, the CalSTRS real estate team will make a \$100 million commitment to a high-performance green fund (e.g., office buildings certified by the Leadership in Energy and Environmental Design (LEED) system). In clean tech, Ehnes described CalSTRS’ \$250 million in alternative energy investments. Ultimately, he maintained that “this Action Plan is an excellent menu of options...a portfolio of approaches for investors to use depending upon your resources and your strategies.”

New York State Comptroller DiNapoli expressed New York’s pride and excitement in signing onto the Action Plan, declaring that as important as legislation is, “this kind of a comprehensive action plan really can do so much more than some of the legislative strategies.” New York is looking at its portfolio with “a green perspective” to create new opportunities, including putting together a new green investment fund and exploring an in-state investment program to grow environmentally sensitive ventures. DiNapoli emphasized the importance of corporate governance, praised Connecticut Treasurer Denise Nappier for her work and guidance on the issue, and encouraged filing shareholder resolutions when the board is not being responsive. He also emphasized the need for coalition-building to push legislation at the federal level, noting the severe lack of leadership out of Washington. DiNapoli further described New York’s efforts to “model the behavior that we’re expecting individuals [and corporations] to buy into”, looking internally at energy efficiency, renewable power, green building retrofitting, and other environmental practices. “For every risk that’s out there,” he said, “there are at least two opportunities.”



Jack Ehnes, California State Teachers' Retirement System (CalSTRS)

CONCLUSIONS AND NEXT STEPS

Mindy Lubber, President of Ceres and Director of INCR, thanked all the Summit participants for attending. Highlighting the leadership of the signers of the 2008 INCR Action Plan, she declared that “it is our job to make sure we’re executing on...every one of those items.”

Timothy Wirth summarized the key steps described during the Summit to be taken next:

- Putting a price on carbon
- Working towards a more constructive role for the U.S. Securities and Exchange Commission (SEC), with the Commission being supportive of the requests of investors in INCR
- Changing the existing rules for utilities, recognizing the important role of state public utilities commissions (PUCs)
- Getting the national rules right on fuels and energy efficiency

“This is transformational, and it is an opportunity,” he concluded. “Those are the bookends of what we want to do. So we have a great deal of work to do.”

APPENDIX A: 2008 INCR ACTION PLAN & SIGNERS

Capitalizing the New Energy Future: Minimizing Climate Risks, Seizing Opportunities

Given the sweeping nature of climate change, climate risks are embedded in every investment portfolio. As fiduciaries entrusted with trillions of dollars of fund assets, we remain firmly convinced that climate change presents both material risks and significant opportunities for investment portfolios.

Since the last Investor Network on Climate Risk (INCR) action plan in 2005, more investors have been taking steps to engage companies and reduce climate risks in their portfolios. More businesses, responding to investor concern, have started to disclose their climate risks and account for the impacts of climate change on their financial performance and competitiveness. More investors and companies have called on political leaders to enact legislation that would provide greater regulatory certainty, provide incentives for climate solutions, and minimize the risks that climate change poses to businesses, investors, and the economy. But greater efforts are needed.

As fiduciaries and long-term investors, we see significant short and long-term risks from climate change to the value and security of our investments and capital markets more broadly. And we recognize that the impacts of climate change will continue to be multi-dimensional – affecting corporations’ abilities to secure the full range of necessary resources such as energy and water. At the same time, we also see opportunities presented by the transition to a low-carbon future.

Prudence, common sense, and fiduciary duty compel us to renew our efforts to examine and address the financial ramifications of climate change and to respond to climate challenges and opportunities. Accordingly, we hereby state our intentions to manage our investments; to engage companies, investors, and others; and to support policy action to the best of our abilities, in line with the following agenda:

Managing Our Investments

- 1. Require that our asset managers, consultants, and financial advisors consider climate risks and opportunities.*** To ensure that our investments are managed by firms and individuals that are aware of the financial threats presented by climate change, it is important that we evaluate the ability of investment consultants, advisors, and managers to assess climate risks and opportunities. Accordingly, we will:
 - Require and validate that relevant investment managers currently managing or seeking to manage our fund assets, as well as investment consultants and advisors, report on how they are assessing the risks and opportunities associated with climate change. Such a requirement can be accomplished through Requests for Proposals (RFPs), by making climate risk assessment a required part of regular manager reviews, by requiring managers to use a sustainability or climate risk screen, or by other methods.
- 2. Invest capital in companies developing and deploying clean technologies.*** We believe investments in clean, climate-friendly technologies—such as energy efficiency and renewable energy—represent significant opportunities and will ultimately enhance and sustain the long-term viability of corporate assets and shareholder value by broadening and deepening the range of tools available to help the world avoid the worst impacts of climate change. Accordingly, we will:
 - Seek investment opportunities in all appropriate asset classes to support clean technology efforts. Our goal is to deploy \$10 billion collectively in additional investment over the next 2 years.

-
- 3. Improve the energy performance of real estate portfolios and investments.** Studies demonstrate that enormous opportunities exist to improve building energy efficiency while enhancing the value of real estate assets. Accordingly, we will:
- Aim for a 20% reduction over a three-year period in energy used in core real estate investment portfolios, using standardized units of measurement, performance baselines, and regular reporting on measures taken and actual energy performance.
 - Incorporate green building standards (such as LEED and Energy Star) as a factor in making investment decisions.

Engaging Companies, Investors, and Others

- 4. Urge comprehensive corporate responses to climate risks.** As investors in publicly-held companies in the auto, electric power, coal, oil & gas, insurance, real estate, construction, financial, forestry, and many other sectors, we desire greater information and action from companies on climate risks and opportunities, recognizing the broader sustainability context. Accordingly, we will:
- Urge companies to elevate climate change as a governance priority, using the Ceres “Climate Change Governance Checklist.”
 - Urge companies to provide better disclosure about the financial and material risks posed by climate change and to explain how they are factoring carbon costs into operational and capital-planning decisions. Such disclosure should follow the Global Reporting Initiative (GRI) guidelines and the Global Framework on Climate Risk Disclosure.
 - Support appropriate shareholder resolutions, company engagements, and other efforts to encourage companies to reduce their carbon footprint, seize new market opportunities, and ask corporate suppliers to disclose and reduce greenhouse gas emissions and energy use.
- 5. Help investors evaluate and address corporate climate risks.** Investors often need additional information and guidance to better evaluate and engage companies on climate risks and opportunities. Accordingly, we will:
- Urge companies to adhere to best practices in corporate governance on climate risk by producing and distributing through the Investor Network on Climate Risk (INCR) a new “Corporate Governance and Climate Change” report evaluating and scoring 100 leading global companies on their governance practices and responses to the risks and opportunities from climate change.
 - Produce and distribute through INCR a report evaluating how climate change is exacerbating water scarcity and evaluating how water-intensive sectors are managing water-related risks.
 - Develop and promote proxy voting guidelines that encourage support for reasonable shareholder proposals on climate risk.
- 6. Expand climate risk scrutiny and collaboration by investors, stock market analysts, and others in the finance sector.** Investors around the world must work together to address the climate risks and opportunities that exist in every market and every asset class, and debt and equity analysts and others in the finance sector must start incorporating climate risk and opportunity into their routine financial analysis and company and portfolio valuation. Accordingly, we will:
- Encourage debt and equity analysts, ratings agencies, and investment banks to incorporate climate risks and opportunities as part of their investment and valuation analysis, including analyzing and reporting on the potential impacts of foreseeable long-term carbon costs (in the range of \$20–\$40 per metric ton of CO₂eq.), particularly on carbon-intensive investments such as new coal-fired power plants, oil shale, tar sands, and coal-to-liquids projects.
 - Encourage debt and equity analysts, ratings agencies, and investment banks to incorporate climate risks, opportunities, and carbon costs into their analysis of a new category of

investment funds—infrastructure—including transportation, water, and other projects needed to support the growth of cities and the transition to a low-carbon economy.

- Engage with mutual funds, hedge funds, private equity firms, and others to promote increased understanding of, and actions in response to, climate risk.
- Support global information-sharing and collaboration by the growing number of institutional investors and organizations around the world concerned about climate risk.

Supporting Policy Action

7. *Push for guidance from the Securities and Exchange Commission (SEC).* Climate-related shareholder resolutions and new SEC guidance are each critical to improving corporate disclosure of climate risks and opportunities. Accordingly, we will:

- Continue to engage the SEC and members of Congress on requiring companies to disclose material climate risks as part of their regular securities filings. Towards this end, we will ask investors and members of Congress to support the September 2007 Investor Petition to the SEC for “Interpretive Guidance on Climate Risk Disclosure.”
- Continue to call on the SEC to recognize shareholders’ right to vote on resolutions related to climate change and to enforce existing rules requiring disclosure of material risks.
- Call on the SEC to develop expertise on climate change risks, as well as other environmental and social issues that pose material financial risks to corporations and investors.

8. *Encourage companies and investors to support government action on climate policy.* As fiduciaries and leaders in the investment community, we recognize the need for policies that establish regulatory certainty, minimize climate risks, and provide strong incentives for investment in clean technology and other climate change solutions. Accordingly, we will:

- Continue to call for a mandatory national policy to contain and reduce national greenhouse gas emissions economy-wide, making sizable, sensible, long-term cuts in accordance with the 60–90% reductions below 1990 levels by 2050 that scientists and climate models suggest are urgently needed to avoid the worst and most costly impacts from climate change.
- Continue to call for the realignment of incentives and other state and national policies to achieve climate objectives, including a range of energy and transportation policy measures to stimulate research, development, and deployment of new and existing clean technologies at the scale necessary to achieve greenhouse gas reduction goals.
- Call for strong U.S. leadership in the international negotiations for a successor to the Kyoto Protocol, including a binding target to reduce emissions significantly in the United States.

9. *Support policies to maximize energy efficiency.* As fiduciaries and long-term investors, we recognize that getting more use out of the energy we already produce is one of the fastest, easiest, and cheapest ways to significantly reduce emissions and to improve the bottom line of many companies in which we invest, especially with demand for energy increasing. Accordingly, we will:

- Call for policies at the local, state, and national levels that promote a doubling of the historic rate of energy efficiency improvements in developed countries (to 2.5% per year) and significant energy efficiency improvements in rapidly industrializing and other major energy-using countries.

Investors Signed on to 2008 Action Plan (as of April 15th):

Assets Under Management: \$1.75 trillion

State Treasurers, State/City Comptrollers, Pension Funds, Labor

John Chiang, California State Controller

Rob Feckner, Board President, California Public Employees' Retirement System (CalPERS)

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

Bill Lockyer, California State Treasurer

Denise L. Nappier, Connecticut State Treasurer

Alex Sink, Florida Chief Financial Officer

General Robert Milligan, Executive Director, Florida State Board of Administration (SBA)

Michael Goetz, Chairman of the Board, Illinois State Board of Investment

Nancy K. Kopp, Maryland State Treasurer

Tim Cahill, Massachusetts State Treasurer

Orin S. Kramer, Chair, New Jersey State Investment Council

William C. Thompson, Jr., New York City Comptroller

Thomas P. DiNapoli, New York State Comptroller

Richard Moore, North Carolina State Treasurer

Randall Edwards, Oregon State Treasurer

Robin L. Wiessmann, Pennsylvania State Treasurer

Frank T. Caprio, Rhode Island General Treasurer

Andrew Stern, President, Service Employees International Union

Bruce Raynor, President, UNITE HERE

Jeb Spaulding, Vermont State Treasurer

Financial Services Firms, Asset Managers, Other Leaders in Investing

Geeta Aiyer, President, Boston Common Asset Management

Barbara J. Krumsiek, President and CEO, Calvert Group, Ltd.

Michael Johnston, Executive Vice President, The Capital Group Companies *

Jeff Skoll, Chairman, Capricorn Management LLC

Allan Emanuelsson, Head of Socially Responsible Investing, DnB NOR Asset Management

Amy L. Domini, Founder and CEO, Domini Social Investments LLC

Don Rolfe, President and CEO, Ethical Funds

Karina Litvack, Director, Head of Governance & Sustainable Investment, F&C Management Ltd.

Peter Knight, President, Generation Investment Management, US

Vinod Khosla, Founder, Khosla Ventures

Jonathon S. Naimon, CEO, Light Green Advisors

Mark Schwartz, Co-Founder and Chairman, MissionPoint Capital Partners

L. John Doerr, Partner, Kleiner Perkins Caufield & Byers

Stephen Dodson, Chief Operating Officer, Parnassus Investments

Joe Keefe, CEO, Pax World Funds

Rev. William Somplatsky-Jarman, Presbyterian Church (U.S.A.)

Michael Crosby, OFM Cap., Province of St. Joseph of the Capuchin Order, Milwaukee

Joan Bavaria, President, Trillium Asset Management

Timothy Brennan, Treasurer, Unitarian Universalist Association

Tim Smith, Senior Vice President, Walden Asset Management

Jack Robinson, President, Winslow Management Company

* = firm name listed for identification purposes only

Foundations

Diane Edgerton Miller, President and CEO, Blue Moon Fund

Denis Hayes, President and CEO, Bullitt Foundation

Edith T. Eddy, Executive Director, Compton Foundation

Eric Heitz, President, The Energy Foundation

Jesse Fink, Co-Founder, Betsy and Jesse Fink Foundation

Jenny D. Russell, Executive Director, The Merck Family Fund

Lance E. Lindblom, President & CEO, Nathan Cummings Foundation

Dave Beckwith, Executive Director, The Needmor Fund

Stephen A. Foster, President and CEO, The Overbrook Foundation

Stephen B. Heintz, President, Rockefeller Brothers Fund

Richard Woo, CEO, The Russell Family Foundation

Sally Osberg, President, Skoll Foundation

Timothy E. Wirth, President, United Nations Foundation

Wren W. Wirth, President, The Winslow Foundation

Supporters in Principle:

Assets Under Management: \$6.5 trillion

Rob Lake, Head of Sustainability, ABP investments

Donald MacDonald, Trustee, British Telecommunications Pension Scheme (BTPS)

Kevin Parker, CEO, Deutsche Asset Management & Member Group Executive Committee, Deutsche Bank

Peter Dunscombe, Chairman, Institutional Investors Group on Climate Change (IIGCC)

Howard Jacobs, Trustee, Universities Superannuation Scheme (USS)

APPENDIX B: PARTICIPATING ORGANIZATIONS

ABN AMRO	Church of Sweden	Glass, Lewis & Co. LLC
ABP Investments	Citi	Global Reporting Initiative
Access International	Clean Energy Asset Management, LLC	Goldman Sachs
Acuity Investment Management Inc.	Clearbridge Advisors	Gonzalez Saggio & Harlan LLP
AFL-CIO	Climate and Energy Funders Group	Google
AIG Global Investment Group	Climate Change Capital	Google.org
Albright Group	Climate Cooler	Goucher College
AllianceBernstein	Climate Group	Green Atlantic Partners/D1 Oils Plc
Allianz Global Corporate & Specialty AG	Co-op America	HamptonHedges LLC
Amalgamated Bank	Commonwealth of Massachusetts	Harvard University
AP7	Commonwealth of Pennsylvania Department of the Treasury	Heinz Center for Science, Economics and the Environment
Ariel Capital Management	Con Ed	Heinz Family Office
Bank of America	Connecticut Office of the State Treasurer	Heinz Family Philanthropies
Bank of New York	Cornell University	Helius Energy
Barclays Global Investors	Corporate Library	Henry Crown & Co.
Baupost Group	David Gardiner & Associates	Hermes Investment Management LTD
Bear, Stearns & Co., Inc.	Deloitte	HSBC Bank USA, N.A.
BlackRock, Inc.	Deutsche Asset Management	IFC
Bloomberg	Deutsche Bank	Illinois State Board of Investments
Borough President of Manhattan	District of Columbia	Innovest Strategic Value Advisors
British Telecom Pension Scheme	Domini Social Investments	Interfaith Center for Corporate Responsibility
Brown-Forman	Doris Duke Charitable Foundation	International Chamber of Commerce
Cahill Pataki Partners	DWS Scudder America	International Energy Agency
Caisse de dépôt et placement du Québec	Earth School Foundation	International Fund for China's Environment
California State Assembly Committee on Jobs, Economic Development, and the Economy	Elliot Capital	JPMorgan Chase
California State Controller	Embassy of Zambia	Kansas Insurance Department
California State Treasurer's Office	Emerald Technology Ventures	Kasina
CalPERS	Emily Hall Tremaine Foundation	Kennedy School of Government, Harvard University
CalSTRS	Environment Capital Group	Khosla Ventures
Calvert Group, Ltd.	Environmental Grantmakers Association	Kolibri Group
Camco	European Climate Foundation	Landon Butler & Company
Canadian Institute of Chartered Accountants	Evangelical Lutheran Church in America-Board of Pensions	LAPF Forum
Capital Group Companies, Inc.	Exelon Corp.	Lazard Freres & Co. LLC
Carbon Disclosure Project	F&C Asset Management	Legg Mason
Carbon Trust	Fair Trade Foundation	Lehigh University Endowment Fund
Carthage Group	Fenwick & West	Lehman Brothers
Ceres	Florida Democratic Party	Loomis Sayles & Coompany, L.P.
CFA Institute Centre for Financial Market Integrity	Florida Department of Financial Services	Lux Research Inc.
Change to Win Investment Group	Florida State Board of Administration	Man Group
Cherokee Investment Partners, LLC	Flywheel Ventures	Manulife/John Hancock Life Insurance Company
Chicago Climate Exchange	Fred Alger Management/Spectra Funds	Marsh Inc.
Chicago Equity Partners, LLC	Generation Investment Management	Maryland State Retirement Agency
Christopher Reynolds Foundation	Georgetown University	

APPENDIX B: Participating Organizations (continued)

Maryland State Treasurer	Peterson Partners LP	State Street Global Advisors
McCabe & Associates	Pew Center on Global Climate Change	STEEL Valley Authority
McKinsey & Co.	Pew Charitable Trusts	Suntech
McKinsey Global Institute	PG&E Corporation	Surdna Foundation
Mercer Investment Consulting, Inc.	PGGM	Sustainable Endowments Institute
Merck Family Foundation	Piper Jaffray	Swiss Re
Merrill Lynch & Co.	Presbyterian Church USA	Thetford Capital Advisors
Mertz Gilmore Foundation	Prime Buchholz Investments	TIAA-CREF
MetLife	Principles for Responsible Investment	Travelers Insurance
Michigan Municipal Employees Retirement System	Province of St. Joseph, Capuchin Order	Tri-State Coalition for Responsible Investment
Millstein Center for Corporate Governance and Performance	Proxy Governance	Trillium Asset Management
Mission Point Capital	Putnam Investments	Trust Company of the West
Mitsubishi UFJ Trust and Banking Co.	RBC Asset Management Inc.	Turner Enterprises, Inc.
Morgan Stanley	Reinhart Institutional Investor Services	UBS Global Asset Management
Munich Re	Reinsurance Association of America	Unitarian Universalist Association
Nand & Jeet Khemka Foundation	Responsible Endowments Coalition	United Food and Commercial Workers International Union
Nathan Cummings Foundation	Rhode Island State Treasurer	United Methodist Church General Board of Pensions
National Energy Management Institute	Right Bank Partners	United Nations Department of Economic and Social Affairs
National Grid	RiskMetrics Group	United Nations Department of Public Information
Nephila Capital	Robert Trent Jones II, LLC	United Nations Environment Programme
New Energy Finance	Rockefeller & Co., Inc.	United Nations Foundation
New Jersey Division of Investment	Rockefeller Brothers Fund	United Nations Fund for International Partnerships
New Jersey State Treasurer's Office	Rockefeller Family Fund	United Nations Joint Staff Pension Fund
New Mexico State Treasury	Rockefeller Financial Services	United Nations Office for Partnerships
New York City Comptroller's Office	Rockefeller Philanthropy Advisors	Universities Superannuation Scheme
New York City Department of Environmental Protection	RogersCasey	US State Department
New York State Comptroller	SAC Capital Management	V. Kann Rasmussen Foundation
New York State Teachers Retirement System	Saunders Hotel Group of Boston	Vermont Office of the State Treasurer
Norges Bank Investment Management	Scherman Foundation	Walden Asset Management
North Carolina Department of State Treasurer	Science First	West Yorkshire Pension Fund
Northern Trust	Service Employees International Union	WilderShares, LLC
Open Society Institute	Sheet Metal Workers' National Pension Fund	Williams Capital Group, L.P.
Optima Fund Management	Shell US	Wisconsin Insurance Commission
Oregon State Treasurer's Office	Sierra Club	Wolf Popper LLP
Overbrook Foundation	Skoll Foundation	Woodcock Foundation
Pacific Corporate Group	Social Risks Inc.	World Bank
Parnassus Funds	Spectra Funds	World Economic Forum
Pennsylvania Treasurer's Office	Spotlight Capital Management, LLC	World Pension Forum
Pensions and Investment Research Consultants Limited	Standard & Poors	World Resources Institute
	Stark Investments	
	State of Maryland Treasurer's Office	
	State Street Corporation, Public Funds Division	

APPENDIX C: ABOUT THE INVESTOR NETWORK ON CLIMATE RISK (INCR)



Investor Network on
CLIMATE RISK a project of **Ceres**

INCR in Brief

The **Investor Network on Climate Risk (INCR)** is a network of institutional investors and financial institutions that promotes better understanding of the financial risks and investment opportunities posed by climate change.

INCR is coordinated by **Ceres**, a coalition of investors and environmental groups working to advance sustainable prosperity.

For More Information:

Chris Fox
617-247-0700 x15
fox@ceres.org

www.incr.com

The **Investor Network on Climate Risk** was launched at the first Institutional Investor Summit on Climate Risk at the United Nations in November 2003. INCR's membership has since grown from 10 investors managing \$600 billion in assets to more than 60 investors managing \$5 trillion of assets. Members include asset managers, state and city treasurers and comptrollers, public and labor pension funds, foundations, and other institutional investors. INCR leverages the collective power of these investors to promote improved disclosure and corporate governance practices on the business risks and opportunities posed by climate change. INCR has achieved dramatic results, including:

- ◆ **Mobilized a Call to Action**, in March 2007 by 65 corporations and institutional investors managing \$4 trillion in assets urging Congress to enact strong federal legislation to curb greenhouse gas emissions and requesting the Securities and Exchange Commission (SEC) to clarify what companies should disclose to investors on climate change in their regular financial reporting.
- ◆ **Organized more than two-dozen institutional investors**, managing more than \$1.5 trillion of assets, to file a petition in September 2007 calling on the U.S. Securities and Exchange Commission (SEC) to require publicly-traded companies to disclose the financial risks of global warming in their securities filings.
- ◆ **Spearheaded dozens of breakthrough achievements with companies**, such as: Bank of America launching a \$20 billion initiative to support the growth of environmentally sustainable business activity to address global climate change; Dell Inc. committing to reduce its greenhouse gas emissions by 15 percent by 2012 and press its top suppliers for annual reports on their own greenhouse emissions; and ConocoPhillips announcing it will incorporate carbon costs in capital spending plans and earmark \$300 million on biofuels and other low-carbon research.
- ◆ **Brought together over 450 investor, financial and corporate leaders at the United Nations** in February 2008 to address the growing financial risks and opportunities posed by climate change. Nearly 50 leading U.S. and European institutional investors managing over \$1.75 trillion in assets released a 9-point climate change action plan that will boost investments in energy efficiency and clean energy technologies and require tougher scrutiny of carbon-intensive investments that may pose long-term financial risks.
- ◆ **Published cutting-edge research reports to help investors better understand the implications of global warming.** Among those: a January 2008 report, *Corporate Governance and Climate Change: The Banking Sector*, analyzing how 40 of the world's largest banks are addressing the business challenges from climate change; an October 2007 report, *From Risk to Opportunity: Insurer Responses to Climate Change*; and a January 2007 report, *Climate Risk Disclosure by the S&P 500*.
- ◆ **Established the Global Framework for Climate Risk Disclosure**, a standardized set of guidelines for improving corporate disclosure on the risks and opportunities for climate change. The framework was developed in collaboration with investors worldwide.

OPPORTUNITIES FOR INVESTORS TO FOLLOW-UP ON THE 2008 INVESTOR SUMMIT ON CLIMATE RISK

The Investor Network on Climate Risk (INCR) working groups can be a resource for investors interested in following up on the ideas and implementing the goals discussed at the 2008 Investor Summit on Climate Risk. INCR working groups are facilitated by Ceres staff and aim to help investors address the risks and opportunities posed by climate change.

Through INCR working groups investors can share information and expertise about specific topics such as deploying capital in clean energy, enhancing the energy performance of real estate portfolios, improving corporate governance on climate risk through shareholder resolutions and dialogues, and engaging with the SEC, Congress and other policy makers.

Since 2005 much progress has been made already in these and other areas. A new plan of action was launched at the Summit (see 2008 INCR Action Plan—Appendix A). INCR working groups will help investors implement the goals of the 2008 INCR Action Plan.

Investors are encouraged to contact the coordinator of each working group listed below to learn more about opportunities to get involved. Ideas for new working groups and initiatives are also welcome. If you have questions about INCR or Summit follow-up please contact Chris Fox at fox@ceres.org

Current INCR working groups and coordinators are as follows:

- 1. Fiduciary Training Working Group** assists plan sponsors (e.g. pension funds, endowments) with training their trustees and staff on the risks and opportunities related to climate change. Contact Ariane van Buren at vanburen@ceres.org
- 2. Clean Energy Investment Working Group** allows institutional investors to develop and share strategies for investing in the clean energy space. This working group is coordinated jointly by Ceres and the Clean Energy Group. Contact Dan Bakal at bakal@ceres.org
- 3. SEC / Climate Risk Disclosure Working Group** seeks to improve disclosure of climate risks in SEC filings. Members engage with SEC staff and commissioners and members of Congress to push for SEC action on climate risk disclosure. This group also promotes use of the Global Framework for Climate Risk Disclosure. Contact Jim Coburn coburn@ceres.org
- 4. Policy Working Group** updates investors on energy and climate change policy developments and facilitates investor engagement in the policy debate. Contact Chris Fox at fox@ceres.org
- 5. Real Estate Working Group** helps investors improve the energy performance of real estate portfolios and investments. Contact Betsy Boyle at boyle@ceres.org
- 6. Industry Sector Working Groups:**
 - **Auto / Transportation Sector Working Group** coordinates investor engagement with auto / transport sector companies on climate risk and opportunities, and publishes research. Contact Carol Lee Rawn at rawn@ceres.org
 - **Electric Power & Coal Sector Working Group** coordinates investor engagement with electric and coal companies on climate risk and opportunities, and publishes research. Contact Dan Bakal at bakal@ceres.org
 - **Insurance Sector Working Group** coordinates investor engagement with the insurance industry and insurance regulators, and publishes research on the nexus between climate change and insurance. Contact Andrew Logan at logan@ceres.org
 - **Oil Sector Working Group** coordinates investor engagement with the oil industry and publishes research reports. Contact Andrew Logan logan@ceres.org
 - **Other sector working groups** coordinate investor engagement with companies on climate change in the following industries: **airlines, banking/financial services, buildings, forestry and manufacturing**. For more information on these working groups or other industries, contact Rob Berridge at berridge@ceres.org



INCR Membership Information

The Investor Network on Climate Risk was launched at the first Institutional Investor Summit on Climate Risk at the United Nations in November 2003. INCR’s membership has since grown from 10 investors managing \$600 billion in assets to more than 60 investors managing over \$5 trillion of assets. Members include asset managers, state and city treasurers and comptrollers, public and labor pension funds, foundations, and other institutional investors. INCR leverages the collective power of these investors to promote improved disclosure and corporate governance practices on the business risks and opportunities posed by climate change. For more information, please visit www.incr.com

Invitation to Join INCR

INCR welcomes institutional investors and financial institutions that are interested in learning about climate risk to become INCR Members. There are two categories of INCR Members:

- ◆ INCR General Members (plan sponsors, pension funds, treasurers, comptrollers, labor unions, foundations, endowments, and religious funds are eligible) and
- ◆ INCR Sustaining Members (asset managers and other financial services firms are eligible).

INCR Membership Benefits

- ◆ Invitation to send representatives to INCR conferences, briefings, and meetings
- ◆ INCR member-only newsletter and other INCR publications
- ◆ INCR research services/products and access to experts on climate risk and sustainability issues
- ◆ Coordination with other investors and participation in INCR working groups
- ◆ Ceres staff support in coordinating media/press events on climate risk and sustainability issues
- ◆ Ceres staff support for investor engagement with companies and government agencies (e.g. SEC) including supporting shareowner letters, proposals and company dialogues
- ◆ Eligibility for additional fee-for-service benefits if desired (e.g. trustee/staff training programs)

INCR Members are expected to support INCR through the following:

- ◆ Participating in INCR meetings and working groups as appropriate
- ◆ Annual financial support based on INCR Membership Fee Scale (see attached) – please note that options for how INCR members can participate financially and cover annual fees include dues, sponsoring INCR meetings/conferences/reports, or contributing to INCR research program

Please note that institutions that are interested in becoming INCR General Members or INCR Sustaining Members must submit a written application. Applications for membership will be reviewed and voted on by the INCR executive committee.

INCR Annual Membership Fee Scale

INCR General Members

(Plan sponsors, pension funds, treasurers, comptrollers, labor unions, foundations, endowments, and religious funds are eligible)

Assets under \$1 billion =	\$500
Assets of \$1 billion - \$49.99 billion =	\$2,500
Assets of \$50 billion - \$99.99 billion =	\$5,000
Assets of \$100 billion and over =	\$7,500

INCR Sustaining Members

(Asset managers and other financial services firms are eligible)

Assets under \$1 billion =	\$2,000
Assets of \$1 billion - \$49.99 billion =	\$5,000
Assets of \$50 billion - \$99.99 billion =	\$7,500
Assets of \$100 billion and over =	\$10,000

To learn more about getting involved in INCR, please contact Chris Fox (fox@ceres.org) or 617-247-0700 ext. 15.

SPONSORS OF THE 2008 INVESTOR SUMMIT ON CLIMATE RISK

We thank the following organizations for their generous support:

Corporate Underwriters

Lead Underwriters

Bank of America
Deutsche Asset Management
State Street / State Street Global Advisors
Swiss Re

Supporting Underwriter

Kolibri Group

Participating Underwriters

AIG Investments
Alliance Bernstein
HSBC
Northern Trust
Spectra

Associate Underwriters

Acuity Investment Management
BlackRock
ClearBridge Advisors
Mercer
Putnam Investments
UBS Global Asset Management

United Nations Conveners

United Nations Fund for
International Partnerships (Co-Host)
United Nations Department
of Economic and Social Affairs
United Nations Development Programme
United Nations Environment Programme
United Nations Industrial
Development Organization
United Nations Global Compact
United Nations Joint Staff Pension Fund

Foundation Summit Supporters

United Nations Foundation (Co-Host)
Blue Moon Fund
Doris Duke Charitable Foundation
Energy Foundation
John Merck Fund
Marisla Foundation
Nathan Cummings Foundation
Pew Charitable Trusts
Rockefeller Brothers Fund
Skoll Foundation
Surdna Foundation
V. Kann Rasmussen Foundation

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