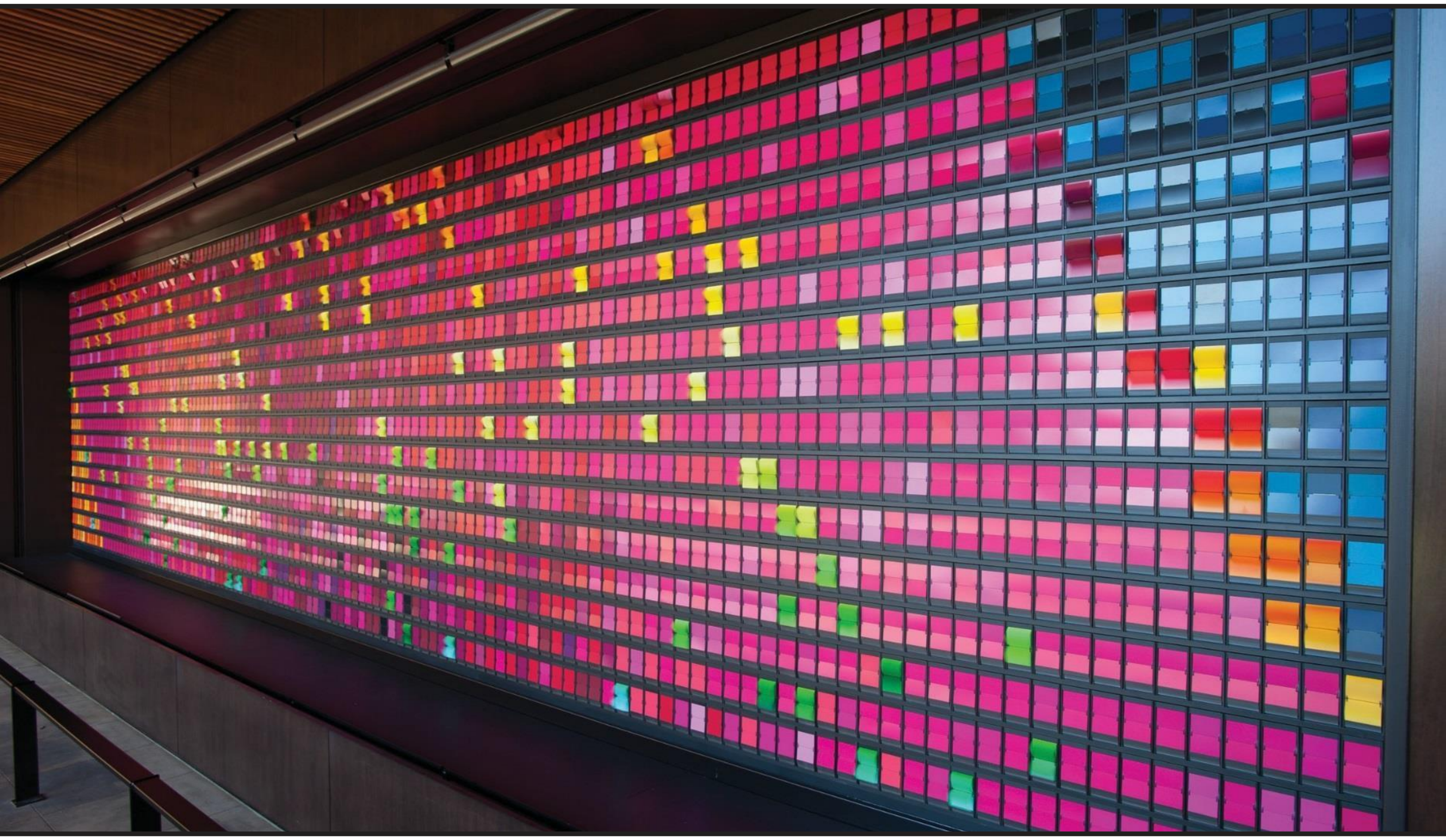
INVESTING IN A NEW CLIMATE



Monument to Change as it Changes – Stanford Graduate School of Business

A ROUNDTABLE FOR UNIVERSITY ENDOWMENT INVESTORS

DECEMBER 7 - 8, 2016

Stanford University

Stanford | Steyer-Taylor Center for Energy Policy and Finance

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December 7th and 8th, 2016

Agenda

Wednesday, December 7, 2016
Location: Stanford Energy System Innovations, 506 Oak Rd, Stanford, CA

2:30-3:00 pm **Arrival and Registration**

3:00-3:30 pm **Welcome and Introductions**
Alicia Seiger, *Deputy Director, Stanford Steyer-Taylor Center for Energy Policy and Finance*

3:30-4:00pm **Setting the Stage: Climate Science for Investors**
Noah Diffenbaugh, *Professor Earth System Science, Affiliate, Stanford Precourt Institute for Energy*

4:00-5:00pm **Dan's Favorite Triangle – Technology | Policy | Finance**
Transitioning to a low-carbon economy will require massive deployment of existing and new technologies. The policy landscape will have a tremendous impact on how quickly and cost-effectively the US and the rest of the world can finance the transition. This conversation will explore the questions: 1) What is the relationship between energy technology, policy and finance? 2) What does an effective policy toolkit look like? And 3) what do endowment investors need to know about global climate finance?

David Danielson, *Stanford Precourt Energy Scholar*
Arun Majumdar, *co-Director, Stanford Precourt Institute for Energy, Professor of Mechanical Engineering and Materials Science and Engineering*
Dan Reicher, *Executive Director, Stanford Steyer-Taylor Center for Energy Policy and Finance*

5:00-6:00pm **Tour of Stanford Energy System Innovations**

6:30-8:00pm **Cocktails, Networking, and Dinner**

8:00-8:30pm **Keynote**
Rick Needham, *former Director, Energy & Sustainability at Google* in conversation with ***Dan Reicher***, *Executive Director, Stanford Steyer-Taylor Center for Energy Policy and Finance*

Thursday December 8, 2016
Location: Stanford Faculty Club, 439 Lagunita Dr., Stanford, CA

8:00-8:30am	**Arrival and Breakfast**
8:30-10:00am	**Understanding and Addressing Climate Exposure in a Portfolio** A prudent fiduciary must consider risks to investment portfolios from the physical impacts of climate change, the effects of climate policy, and sudden technological shifts in the transition to a low-carbon economy. Divestment and implementation of ESG principles are, in many respects, inappropriate tools for managing the risks associated with fossil fuels and climate change that run across sectors and geographies. This session will explore portfolio strategies to actively manage climate risks by 1) defining the extent and nature of the risk, 2) identifying the sources of exposure across a portfolio and 3) designing strategies to limit those risks. ***Donna Bebb***, *Research Fellow, Stanford Steyer-Taylor Center for Energy Policy and Finance* ***Kate Gordon***, *Vice Chair of Climate and Sustainable Urbanization, Paulson Institute, Co-leader of "Risky Business Project"*
10:00-10:30am	**Coffee Break**
10:30-11:30am	**Resource Revolution: How to Capture the Biggest Business Opportunity in a Century** Global, unavoidable risk? Or opportunity of a lifetime? A Stanford Professor and former McKinsey Partner will discuss prospective disruptive changes and capital deployment potential. ***Stefan Heck***, *Consulting Professor, Stanford Precourt Institute for Energy, Stanford University*
11:30-12:15pm	**Lunch Break**
12:15-1:30pm	**Governance and Incentive Structures for Long-Term Portfolios** What governance tools and tactics should endowments consider to successfully integrate climate change considerations into their investment strategy? How high on the priority list must the consideration of such risks be placed? What are the lessons to be learned from those who have taken the lead in stepping up to this challenge? ***Ashby Monk***, *Executive Director, Stanford Global Projects Center, Senior Advisor to the Chief Investment Officer of the University of California* ***Daniel Siciliano***, *Faculty Director, Stanford Law School, Rock Center for Corporate Governance*
1:30 – 2:00 pm	**Wrap-up and Next Steps**

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Speaker Presentations

Some of our speakers used slides to build a foundation for discussion. Below are links to those presentations.

Noah Diffenbaugh on The Climate-Energy-Equity Challenge – **slides**.

Dan Reicher on US energy policy and finance – **slides**.

Kate Gordon on From Risk to Return: Investing in a Clean Energy Economy – **slides**.

Donna Bebb on Understanding and Addressing Climate Exposure in a Portfolio – **slides**.

Stefan Heck on the Resource Revolution – **slides**, **video** (from a previous roundtable in Feb 2015), and **book**.

Recommended Readings

Below is a curated list of recommended readings to better prepare participants for the roundtable and to provide a useful reference guide following the discussion. This briefing book contains reprints of our prioritized selections along with references to additional materials.

Climate Science for Investors

"Risky Business: The Economic Risks of Climate Change in the United States." A Climate Risk Assessment for the United States. June 2014.

"Economic Implications of Climate Risk." Summary Notes from Swiss Re, *Closing The Gap.* 2015.

"Global Non-Linear Effect of Temperature on Economic Production." Marshall Burke, Solomon M. Hsiang, and Edward Miguel. Nature. November 2015.

Energy Technology and Finance: Policy Implications

"Global Landscape of Climate Finance 2015." Dario Abramskiehn, Barbara Buchner, Federico Mazza, Chiara Trabacchi, and David Wang. Climate Policy Initiative. November 2015.

"Setting the Climate Agenda For the Next President: Toward a More Effective Federal Clean Energy Toolkit." Dan Reicher. Prepared for The Climate Implementation Project Conference Series. September 2016.

"Aligned Innovations: Opportunity for a Sustainable and Secure Energy Future with No America Left Behind." Arun Majumdar. Prepared for The Climate Implementation Project Conference Series. September 2016.

Climate Exposure

"Recommendations of the Task Force on Climate-related Financial Disclosures." Financial Stability Board Task Force on Climate Related Financial Disclosures. December 2016.

"Climate Change: The Fiscal Risks Facing the Federal Government." Executive Office of the President of the United States of America. November 2016.

"Adapting Portfolios to Climate Change: Implications and Strategies for All Investors." Blackrock Investment Institute. September 2016.

"Comments on Concept Release S7-06-16 - Business and Financial Disclosure Required by Regulation S-K." Letter from Four Twenty Seven Climate Solutions to Brent J. Fields, Secretary United States Securities and Exchange Commission. July 2016.

"Comment Letter from Henry M. Paulson, Robert E. Rubin, and George P. Shultz on S7-06-16." July 2016.

"Inside Stanford's Coal Divestment Decision." Alicia Seiger. Steyer-Taylor Center for Energy Policy. Institutional Investor. May 2014

Investment Strategies

"From Risk to Return: Investing in a Clean Energy Economy." Risky Business Project. December 6, 2016.

"Navigating the Sustainable Investment Landscape." (Pre-Release). Elizabeth Lewis, Ariel Pinchot, and Giulia Christianson. World Resources Institute. October 2016.

"Risks and Opportunities from the Changing Climate: Playbook for the Truly Long-Term Investor." Liqian Ma. Cambridge Associates. 2015.

"Executive Perspective: Thematic Investing Challenges Modern Portfolio Theory." Scott Jacobs and Truman Semans. Sustainability. October 2016.

Thoughts on Governance

"Introduction to Institutional Investor Fiduciary Duties." Keith L. Johnson. International Institute for Sustainable Development. February 2014.

"Fiduciary Duty in the 21st Century - U.S. Roadmap." Generation Foundation. 2016.

"ESG's Relationship to Fiduciary Duty - From Counter to Crucial." Megan Starr. Steyer-Taylor Center for Energy Policy and Finance. May 2015.

Additional Readings

"All Swans Are Grey in the Dark: Exploring the 3-5 year Horizon of Financial Analysis and Barriers to Long-Term Risk-Assessment." Generation Foundation and 2 Degrees Investing Initiative. September 2016.

"Climate Exposure Impact on Equity Valuation: Case Study of Vail Resorts." Donna Bebb. Steyer-Taylor Center for Energy Policy and Finance. 2015.

"It's Not You, It's E: Why Relative Return Managers Need to Separate E from ESG." Donna Bebb. Steyer-Taylor Center for Energy Policy and Finance. 2016.

"Is Green Always Good? A Closer Look at Green Bonds." Donna Bebb. Steyer-Taylor Center for Energy Policy and Finance. December 2016.

"Mind the Risk: A Global Ranking of Cities Under Threat from Natural Disasters." Lukas Sundermann, Oliver Schelske, and Peter Hausmann. Swiss Re. 2014.

"The Road to Resilience: Managing and Financing Extreme Weather Risks." Marsh & McLennon Companies and Swiss Re Corporate Solutions. World Energy Council. 2015.

"The Valley of Opportunity: Rethinking Venture Capital for Long-Term Institutional Investors." Jagdeep S. Bachher, Gordon L. Clark, Ashby H.B. Monk, and Kiran S. Sridhar. Alternative Investment Analyst Review. Spring 2014.