

Stanford launches \$100 million initiative to tackle energy issues

January 13 2009

Recognizing that energy is at the heart of many of the world's tribulations—economic, environmental and political—Stanford is establishing a \$100 million research institute to focus intently on energy issues, President John Hennessy announced today. The \$100 million in new funds will enable the hiring of additional faculty and support new graduate students, in addition to the more than \$30 million in yearly funding now spent on energy research.

The new Precourt Institute for Energy will draw on deep scientific expertise from across the campus and around the world. From the minuscule—materials scientists prying loose more electricity from sunshine through more efficient photovoltaic cells—to the national effort to develop sustainable energy and the global search for ways to reduce atmospheric levels of carbon, the new institute will be at the forefront.

The institute is being brought to life through the generosity of donors, led by founding donors Jay Precourt and the husband-and-wife team of Thomas Steyer and Kat Taylor. Precourt is an energy executive; Steyer is a Stanford trustee and managing partner of Farallon Capital Management, and Taylor is active in a variety of public benefit and philanthropic ventures. They are all Stanford alumni.

"Universities such as Stanford need to focus their full talent on the greatest challenges facing the world today," Hennessy said. "Energy is certainly one of those issues, posing a threat to our economy, to national

security and, through the use of fossil fuels, to our environment. Addressing the challenge of energy will require research on a wide range of issues, from energy efficiency to development and deployment of renewable sources, to reducing the effect of fossil fuels."

Other donors include Douglas Kimmelman, senior partner, Energy Capital Partners; Michael Ruffatto, president, North American Power Group, Ltd.; and the Schmidt Family Foundation.

In an interview, Precourt said he was drawn to the project for a number of reasons, including the chance to help reduce carbon emissions and their negative effects on global climate. But he is interested in energy security as well. "I'm quite concerned, having been in the energy business my whole life, with the fact that we are importing energy from insecure, unreliable sources who are, in many cases, not friends of the United States," he said.

Precourt holds bachelor's and master's degrees in petroleum engineering from Stanford and an MBA from Harvard University. He has spent his career in the energy industry, holding president and/or CEO positions at Hamilton Oil Co.; Tejas Gas Corporation, subsequently a Shell Oil Co. subsidiary; and ScissorTail Energy and Hermes Consolidated, gatherers, transporters and processors of natural gas, crude oil and refined products.

He is convinced that Stanford research can influence national energy policy for the better. "The wonderful resources that are available at Stanford, and the multidisciplinary approach they have to developing working solutions, are really attractive in terms of making things happen," he said.

On a personal level, Precourt said, "Stanford made a huge impact on my life, as I look back on it. It was a superb education and I made some

wonderful friends that I've taken with me for my lifetime." Precourt donated \$50 million to the energy institute that bears his name.

A \$40 million gift from Steyer and Taylor will create a new research center as part of the institute, the TomKat Center for Sustainable Energy.

The global financial meltdown profoundly shaped Steyer's views on the need for sustainable energy, Taylor said. "He does not believe we will transform our economy and also address serious foreign policy and national security issues, as well as obvious environmental concerns, unless we address energy," she said. "We really need a new paradigm about energy." Part of that paradigm, she said, is finding a way to change energy policy while avoiding the political distortion created by campaign contributions.

"If the real cost of gas were included in our market—for example, environmental damage, foreign policy implications, foreign wars—if all of those things were fully included into the price of a gallon of gas, it would have already made alternative fuels more attractive," she said. "We believe that Stanford is uniquely positioned to change our nation's attitudes and capability as it concerns energy. What our university did for the information revolution, it must now do for the energy revolution," said Steyer.

Steyer founded Farallon in 1986. He is also managing director of Hellman & Friedman, a San Francisco-based private equity firm. He previously worked for Goldman Sachs and Morgan Stanley & Co. He is a graduate of the Stanford Graduate School of Business. Taylor earned a joint JD/MBA degree from the Stanford Law School and the Stanford Graduate School of Business.

"We really have the philosophy that you can only be truly happy when

everyone is prospering, and you must help make that a reality. No man is an island," Taylor said of the gift to Stanford.

"The biggest renewable resource is the sun," said Lynn Orr, who has been named overall director of the new institute, which will function as an independent laboratory reporting to the dean of research. "But we need to lower the cost of converting sunlight into electricity and supplying it through a much improved electric grid. The new center will allow us to expand significantly our effort to develop new nanostructured materials for solar energy and energy storage and to work on the host of social, market and policy issues involved in the needed transition to energy systems with significant fractions of renewables."

Orr is a professor in energy resources engineering. He has been the director of Stanford's Global Climate and Energy Project (GCEP), where researchers are involved in more than 40 research projects to find ways to reduce greenhouse gas emissions associated with energy. GCEP's research portfolio includes the science of materials used to convert solar energy to electricity, biomass energy conversions, advanced batteries, fuel cells, advanced combustion, and carbon capture and storage.

GCEP, launched in 2002, will become a part of the new institute, as will the 2-year-old Precourt Institute for Energy Efficiency (renamed the Precourt Center for Energy Efficiency), an organization dedicated to finding ways to wring more energy savings out of buildings, cars, the electricity grid and basic human behavior.

The Precourt Institute for Energy will be housed in the Jerry Yang and Akiko Yamazaki Environment and Energy Building, commonly known as Y2E2, a structure that showcases green construction. "It uses about half the energy of a typical Stanford lab building and 90 percent less water," Orr said. The Precourt researchers will share the building with

Stanford's Woods Institute for the Environment, a campus-wide hub for interdisciplinary research, education and action on the environment and sustainability.

The big question—how to provide for energy needs while protecting the planet—is just the sort of challenge that Stanford "should attack with all the intellectual horsepower we can muster," Orr said.

Seed funding to push forward research into new ideas will be available. "Stanford faculty and students are brimming with ideas that, with some initial support, can be brought to the point that external support can be obtained," Orr said.

On the main campus, the multidisciplinary effort will involve faculty from Engineering, Earth Sciences, and Humanities and Sciences, along with the Program on Energy and Sustainable Development in the Freeman Spogli Institute for International Studies.

Researchers from the SLAC National Accelerator Laboratory will join in, as well, through the Stanford Institute for Materials and Energy Science, a collaboration between Stanford and the U.S. Department of Energy.

The institute also will work with departments and teaching programs to coordinate an improved undergraduate and graduate energy curriculum across the university.

Seven or eight new faculty positions will be created, as well as fellowships to attract the brightest graduate students and postdoctoral scholars from around the world.

Hennessy announced the founding of the new institute at a gathering in Stanford's Memorial Auditorium. The announcement was followed by an

energy discussion that included noted venture capitalist John Doerr, a partner at Kleiner Perkins Caufield & Byers; Google CEO Eric Schmidt; Jane Woodward, president of MAP, a private firm focused on royalty interests from natural gas and renewable energy; Jim Sweeney, director of the Precourt Center for Energy Efficiency; and Sally Benson, director of GCEP.

On the web:

- [Precourt Center for Energy Efficiency](#)
- [Global Climate and Energy Project](#)
- [Y2E2 building](#)

Source: Stanford University

Citation: Stanford launches \$100 million initiative to tackle energy issues (2009, January 13)
retrieved 26 April 2024 from
<https://phys.org/news/2009-01-stanford-million-tackle-energy-issues.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.