



Catch Our Full State of Green Business Coverage

Search

Login

About Us

BROWSE

- Energy & Climate
- Design &
- Packaging
- Marketing &
- Communications

- Business Operations
- Resource Efficiency
- Small Business

ENGAGE

News, Blogs, Careers/Jobs, Events, Newsletters, Webcasts, Videos, Hot Topics, Podcasts

RESEARCH

Reports, Tools, Bookstore, Organizations, Professional Services

Featured Sponsor



Blogs

E-NEWSLETTER

RSS

TWITTER

The Race to be the World's Top Cleantech Innovator

By [Thomas P. Lyon](#) and [Peter Adriaens](#)

Published March 08, 2011

More Stories On: [Business Operations](#), [Clean Tech](#), [More...](#)

[Email](#) | [Print](#) | [Multiple Page View](#)



It has been said that economic growth in China was driven by cheap labor from the mid '80s to the mid '90s, by cheap capital for the next decade, and by indigenous innovation from 2005 on. This shift mirrors the increasing unease in the relationship between China and the U.S., as China moved in two decades from a manufacturing hub for U.S. companies, to a cash-rich innovation-driven economy.

0 tweets

tweet

6

in Share

This economic transition appears to have caught us off guard. This, even as China's leadership outlined its future growth strategy and emphasis on

innovation to the U.S. National Academy of Engineering now half a decade ago. The country invested in institutions of higher education, advanced technology parks, and in rapidly scalable entrepreneurial ventures. At the same time, it controlled its currency to fuel domestic economic growth, and developed an emerging middle class. A remarkable feat indeed.

Clearly, its rapid emergence as a global economic power presents challenges and opportunities for the U.S.-China relationship. Stirring words were uttered by President Barack Obama in his recent State of the Union Address in which he called for America to "out-innovate, out-educate, and out-build the rest of the world." The president made quite clear who he sees as our competition in this endeavor -- the country presenting "our generation's Sputnik moment" -- and that country is China.

A key part of the president's vision to win the future revolves around encouraging American innovation. As far as competitive advantages go, leadership in innovation is America's to lose. The president said it best, "We're the nation that put cars in driveways and computers in offices; the nation of Edison and the Wright brothers; of Google and Facebook. In America, innovation doesn't just change our lives. It is how we make our living."

But there is a difference between the dot-com era and today: Whereas the U.S. was perhaps the best market in the 1990s for the launch of the Internet, China is arguably the best market today for deployment of clean technology. Not only does the country have the financial and political power necessary to overhaul cheaper, legacy technologies, but China is acting faster than anyone else adding energy production capacity, cars on the road and new cities.

The U.S. needs to green its economy, but it may not happen fast enough. Updating infrastructure (another element of the president's strategy) requires massive government spending, and it is a slow process. Reforming our energy policy could help immediately, but a divided voter base is ensuring that new energy policy is even further away than new infrastructure. Yet, the U.S. can still retain its premier status as the home of cleantech innovation, fueled by its experienced venture capital industry, corporate strategic investments in

Advertisement

GREEN & SUSTAINABILITY JOB BOARD



Find the green job that's right for you. GreenBiz.com's [green & sustainability job board](#) has jobs in energy efficiency, protecting ecosystems, research and development, green building, administrative, and more. Employers can post jobs and internships for free. [» Find jobs](#)

FEATURED RESOURCES

> SEE ALL



How Dirty is Your Data?

This report attempts to shed light on the state of the cloud's energy footprint by...



Carting Away the Oceans: April 2011

What retailer has the most sustainable seafood?...



Climate Capitalism: Capitalism in the Age of Climate Change

Whether you're the head of a household or the CEO of a multinational corporation,...



The 2011 SustainAbility Survey

GlobeScan Incorporated and SustainAbility Ltd.

early stage startup companies and entrepreneurial inventor base.

The next step is for U.S. researchers, inventors and entrepreneurs to reflect on how we can profit from the market in China while preserving the country's innovation lead.

It's an issue we have explored since the University of Michigan's Clean Tech Symposium in December, which was sponsored by the [Erb Institute for Global Sustainable Enterprise](#) and the Zell-Lurie Institute for Entrepreneurial Studies. Based on those symposium discussions, we believe that the U.S. and China are well matched in bringing together the supply and demand for cleantech innovation.

According to keynote speakers Peggy Liu of the [Joint U.S.-China Collaboration on Clean Energy](#) and Professor C.S. Kiang of Beijing University, China is hungry for innovation to address ballooning energy demand and to mitigate rampant environmental degradation. They also described a shift in the country's mindset towards greater acceptance of foreign innovation -- to supplement the indigenous innovation campaign of the past decade.

These changes add up to a potentially new form of collaboration between the U.S. and China on clean technology. A new model would certainly be welcome in the U.S. China's relentless drive for innovation has relied on policies that emphasize the appropriation of foreign technology through joint ventures, something many U.S. partners resent. Recently, China has expanded its R&D and market activities in the U.S., as exemplified by the investment of GoldWind, a wind turbine manufacturer, resulting in political upheaval and a media storm. It would be tremendously helpful to find a new business model in which Chinese investors flush with cash could legitimately invest in U.S. R&D, in a way that both sides find beneficial.

It is exactly such a new model of U.S./China collaboration that Liu proposed at the UM Clean Tech Symposium. She called for allowing Chinese State-Owned Enterprises to invest in University R&D, in exchange for which they would acquire joint rights to the associated intellectual property rights.

While joint-ventures between U.S. and Chinese companies are nothing new, efforts such as the U.S.-China Clean Energy Research Centers show that there is interest in new types of collaboration at the highest levels of government. One of the key challenges is to fully articulate the new model for collaboration where Chinese SOEs would invest in project-specific research at U.S. universities or commercial entities. The model has the potential to bring positive trade flow into the U.S. from China and create an array of associated research jobs, as well as help the U.S. bypass historic IP infringement issues in China.

To many who hear it, the idea sets off an onslaught of questions related to trust, national security, long-term impact on jobs, and entrepreneurial opportunities. A research team at the University of Michigan has set out to answer these questions. Led by the two of us, a team of graduate students will analyze a broad range of IP sharing models and meet with a diverse group of stakeholders to identify the strengths and weaknesses of each, and opportunities to develop innovative business models and collaboration platforms.

Creating new online collaboration platforms is an intended goal of the project, which will be accomplished through a partnership with [OnGreen.com](#), a web platform that connects investors with cleantech patents, experts and entrepreneurs from around the world in order to foster innovation and adoption of green technologies. By partnering with OnGreen.com we hope to see the impact of the project translated into real-world investment activity, hopefully over the course of the research.

It's encouraging to see the president focusing on a competitive, innovative America, though we certainly have a lot of work to do before we'll know how much promise this idea really holds.

Photo illustration from images CC licensed by Flickr users [IssacMao](#) and [Beverly & Pack](#).

 Like  37 likes. [Sign Up](#) to see what your friends like.



Tom Lyon is the director of the [Erb Institute for Global Sustainable Enterprise](#) and Peter Adriaens, a professor of entrepreneurship, at the University of Michigan.

[Read more from Thomas P. Lyon and Peter Adriaens](#)



RELATED NEWS & BLOGS

surveyed 559 sustainability experts from a...



TOOL



PODCAST



VIDEO



BOOK



ORGANIZATION



REPORT

PROFESSIONAL SERVICES DIRECTORY

Find great professional service providers who specialize in green business. GreenBiz.com's [Professional Services Directory](#) lists great resources in sustainability strategies, energy efficiency, marketing, supply chain, recruiting and HR, and many more.



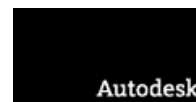
Advertisement

AUTODESK: SPONSORED CONTENT



ADEPT Airmotive
ADEPT Airmotive used Autodesk® Inventor® to develop a lighter, more fuel-efficient general aviation engine. [Click here to learn more.](#)

SITE SPONSORS



SPONSORED LINKS

[Download free groundbreaking consumer research on hygiene practices and business owner attitudes regarding environmentally responsible business operations. Click here for details.](#)

[Sustainability Metrics Tracking Software - Track, Analyze & Report Your Business Sustainability Metrics in Real-Time with Intelx's Web-Based Software. Free Trial Access!](#)

[Sustainability Without Borders: How to Reduce Your Risks and Achieve Compliance Across Your Supply Chain.](#)

[See how the J.R. Simplot \(\\$4.5 billion company\), data center management team improved energy efficiency to meet corporate green initiatives. Learn how they increased IT rack density, troubleshoot equipment more efficiently and](#)



Earth Day 2011: Soda Bottle Suits, Energy Star Hospitals



At 41, Earth Day's Maturity Varies by Company



Earth Day 2011: What Works, and What Doesn't, to Engage Employees



What is Your Company Doing for Earth Day 2011?

employ systems to manage potential risks.

Learn best practice in managing a responsible supply chain and how to confront the challenges of a sustainable tomorrow from the Director Operation, Global Human Rights of Phillips-Van Heusen and other industry experts.

UL DQS provides business solutions for management systems that streamline processes, optimize resources and improve bottom-line results.

With compute loads - and operating costs - on the rise, eBay established a four-year data center plan with an ambitious goal: To cut power costs in half, double compute performance while gaining greater operational agility and increased reliability. See how they succeeded...

White Paper: Increasing the Strategic Value of EH&S. Download white paper to learn how to comply with regulations, improve processes, & reduce the cost of compliance.

Get free whitepapers on ways to make your data centers more energy efficient and solve many related problems. Registration not required.

Sustainability Without Borders:

How to Reduce Your Risks and Achieve Compliance Across Your Supply Chain

A Free **GreenBiz.com** Webcast Moderated by Paul Baier

Sponsored by  **enablon**
Enabling the Sustainable Company

April 28, 2011 at 2pm ET