

Sustainable Enterprise QUARTERLY

Reinventing Today's Business for the Challenges of Tomorrow

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The Role of Innovation in the Future of Energy

By Dr. Carol A. Seagle

While Spring delivered much anticipated relief from an extraordinarily harsh winter, two tragedies this April brought debate about our nation's energy future back to center stage: the country's worst coal mine disaster in 40 years occurred in West Virginia on April 6th claiming the lives of 29 miners and the oil spill from the Deepwater Horizon drilling rig off the coast of Louisiana on April 20th which injured 17 and killed 11. As efforts are made to limit the environmental and economic damage caused by the spill, Senators John Kerry (DEM-MA) and Joseph Lieberman (IND-CN), on May 12, unveiled the "American Power Act" which aims to limit greenhouse gas emissions, reduce the import of foreign oil, and promote the production of renewable energy. For over a decade, proactive businesses have been reducing their greenhouse gas emissions, turning to renewable energy sources, and investing in a clean energy future spurred by policies in the global marketplace and a desire to reduce costs and minimize risk.

UNC Kenan-Flagler's recent conference, Global Innovations in Energy: How Business is Addressing Climate Change highlighted strategies implemented by some of these innovators and thought leaders in the field. Speakers included representatives from S&P 500 companies such as Citigroup, Duke Energy, GE, Progress Energy, and Wal-Mart, and from small-to-mid-sized and entrepreneurial companies such as AgriTech Producers, Community Energy, IDEO, Sensus, SJF Ventures, United Solar, and Windlift. Broadly speaking, these companies are working to slow the pace of climate change by reducing greenhouse gas emissions through (1) the promotion of energy efficiency, (2) the production of renewable energy, and (3) supporting the transformation of the energy industry via investments.

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“...consumers are not necessarily economically rational; rather, they may be ‘optimally lazy’...”

Tilak Doshi, Energy Studies Institute of the National University of Singapore

During a panel focused on energy efficiency, Tilak Doshi, Chief Economist and Principle Fellow at the Energy Studies Institute of the National University of Singapore, asserted that one of the main challenges to the adoption of energy efficient practices is that consumers are not necessarily economically rational; rather, they may be “optimally lazy” and consequently not motivated to proactively undertake money- and energy-saving actions that are perceived as inconvenient. Ted Howes, of the product and innovation design consultancy IDEO, elaborated saying “weatherization is just not sexy” and that unlike behavior change to improve health, wellness, or financial security, energy efficiency does not have an ego-centric driver and therefore is not at the top of consumers’ minds. To overcome this challenge, Howes suggests companies find opportunities to build on what people already care about—emotional motivators such as family, aesthetics, community—that drive purchase decisions. According to Howes, transition points such as when people move into a new home, get married, or have a child represent points of entry for creating a new way of thinking and promoting the adoption of energy efficiency.

Under the leadership of former CEO Lee Scott, retail giant Wal-Mart began to leverage its influence on consumers by promoting the purchase of products that are energy efficient and that have a lower

environmental impact. Nate Hurst, Director of Sustainability at Wal-Mart, cited the example of Wal-Mart’s promotion of compact fluorescent light bulbs (CFLs). Through an aggressive public education campaign, Wal-Mart surpassed its 2007 goal of selling 100 million CFLs by nearly 40% and has since sold 350 million CFLs which Hurst says translates to a savings of \$7 billion in energy costs for consumers. While Wal-Mart has achieved success in promoting the purchase of sustainably harvested seafood, organic cotton, and produce and has reduced packaging for a diverse array of products, Hurst believes an even greater challenge will be to influence consumer purchase of weatherization materials that would further decrease energy consumption. Hurst also shared that Wal-Mart believes it must lead by example and reduce its greenhouse gas emissions by improving its operations, for example by increasing its U.S. fleet efficiency by 60% since 2005 and its commitment to purchase renewable energy.

While perhaps best known for its ecomagination campaign and production of wind turbines, GE has also taken on the challenge of promoting energy conservation by developing efficient home appliances and smart grid technologies. Smart grid technology promotes conservation and can lower greenhouse gas (GHG) emissions by providing consumers and utilities information about energy

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consumption and use patterns. Manoj Bhatia, Director of GE Smart Grid Alliances, emphasized the importance of establishing two-way communication between consumers and utilities and effectively leveraging this information to reduce consumption particularly during hours of peak demand when electricity providers turn to less efficient plants to meet demand. Also speaking about the role of smart grid technology was Peter Mainz, CEO and President of Sensus. With expertise in advanced metering, tools for controlling peak energy demand, distribution automation, and home-area networking, Sensus has achieved a leadership position advancing smart grid solutions by focusing on building strong partnerships grounded in a sound understanding of what each party brings to the collaboration and a commitment to fostering trust in service of the goal of conservation.

Recognizing that business attempts to alter consumer behavior, improve energy efficiency, and promote conservation will not suffice as a means to avert the worst consequences of climate change, economist Doshi asserted that it will be necessary to transition to low-carbon and renewable energy sources. Jim Rogers, CEO of Duke Energy, addressed the challenges associated with this transition citing the capital intensiveness of the energy industry. Under the leadership of Jim Rogers, the approach of Duke Energy, the 3rd largest commercial emitter of CO₂ in the US and 12th largest emitter in the world, has been to replace its aging, less efficient power plants with



“...companies find opportunities to build on what people already care about – emotional motivators such as family, aesthetics, community.” Ted Howes, IDEO

less polluting coal-fired power plants and to increase its capacity to produce electricity from wind, solar, and biomass, as well as nuclear and hydropower. Rogers highlighted cost, reliability, and storage as key issues that must be addressed for renewable energy to achieve widespread utilization and spoke about the importance of getting the right public policy and regulations in place at the federal and state levels. Rogers voiced support for a cap-and-trade system such as that proposed in the Waxman-Markey bill and had a favorable view of the legislation developed under the leadership of Senators Kerry, Lieberman, and Graham.

Rising to meet the challenge of providing energy from renewable resources and also present at the Energy Conference were Martha Dugan of United Solar Ovonic, a leading global manufacturer of thin-film flexible solar laminate products; Robert Creighton, founder and CEO of Windlift, creators of an airborne wind-energy

technology; and Joe James, founder of AgriTech Producers, a start-up that aims to be the world's first producers of commercial-grade torrefaction machines for biomass production. Like Jim Rogers, each of these business leaders agreed that there are technological, pricing, and legislative challenges remaining.

Martha Dugan spoke of three requirements for sustainable markets for renewable energy: certainty in the form of long-term, institutionalized tax and energy policy; transparency so that investors have the clarity needed to hedge risk and plan for the future; and long-term contracts that will guarantee the purchase of power generated by renewable sources. Currently, United Solar based in Michigan and operating out of a converted automobile manufacturing plants, exports nearly 80% of the solar laminates it manufactures to Europe, where, according to Dugan, there are transparent, certain, and long-term policies that provide support for the development of renewable energy markets.

AgriTech's alternative energy solution, torrefaction, is a thermal-chemical process that converts biomass into a more energy intensity product that can be combusted in addition to or as an alternative to coal. In partnership with engineers from North Carolina State University and equipment designer, manufacturer, and fabricator, Kusters Zima Corporation, AgriTech aims to promote economic development in poor rural communities in the U.S. and abroad. Windlift's tethered air-borne devices (high-tech super kites) are

being developed to generate 12 kilowatts of power during peak production and are uniquely adapted to provide a low-infrastructure source of renewable energy to locations not serviced by an existing energy grid such as forward-operating military bases and emergency relief operations.

Also focused on providing energy solutions to areas lacking reliable energy infrastructure are Eco-Asia and dissigno. Eco-Asia has developed and financed clean energy projects including hydro-power, biogas, biomass, and solar installations in rural communities throughout Asia, including the Himalayas, Southeast Asia, and China. dissigno has implemented solar energy projects in Tanzania and Haiti. Jeff Dickinson of Eco-Asia emphasized the importance of helping banks and financial institutions address issues of risk and scale inherent in renewable energy projects as compared to investments in the established technologies of oil and gas.

[... link to full story ...](#)

CSE Year in Review

The Center for Sustainable Enterprise and the Sustainable Enterprise program at UNC Kenan-Flagler had an outstanding year in 2009–10, marked by exciting new courses, deeper student engagement and new business and cross-campus partnerships. Highlights of our year included:

Bringing thought leaders in sustainability to campus:

- Matt Kistler, Sr. VP of Sustainability at WalMart and Professor Kellie McElhaney, UC Berkeley Haas School of Business and adjunct professor at Kenan-Flagler.
- Rob Watson, “a founding father of LEED” and Dennis Quaintance, owner of Proximity Hotel.
- Over 30 thought leaders in energy as part of the “[Global Innovations in Energy conference](#)”, including Jim Rogers, CEO and President, Duke Energy and Henry Kelly, Principal Deputy Assistant Secretary of Energy, Office of Energy Efficiency and Renewable Energy, Department of Energy.
- Experts on a range of topics including social business, microfinance, green building, leadership and innovation, and international development for the Brown Bag Speaker Series.

Enhancing course offerings and enrollment:

- Enrollment in Sustainable Enterprise courses in the BSBA, MBA and EMBA programs totaled 825 seats, up from 668 last year.
- Added two new electives: Financial Management for Non-profit Organizations and a capstone Sustainability Leadership Immersion course for hand selected top MBA students.
- 50 students, 19% of the MBA Class of 2010, graduated with the Sustainable Enterprise Concentration.

Expanding experiential learning opportunities:

- Enrolled 15 entrepreneurial members in the Business Accelerator for Sustainable Entrepreneurship (BASE) program and engaged 8 BSBA and 8 MBAs as student consultants.
- Selected 5 outstanding MBA students to work on CSE Consulting projects with J&J, Progress Energy, Walt Disney Imagineering, Unique Places and a renewable energy investment fund.

Extending the reach of MBA enrichment activities:

- Connected 32 MBA students with a career coach through the CSE Career Coaching program.
- Developed 6 TASC (Teams Achieving Sustainable Careers) groups of 10 or less, to keep SE students focused on the non-traditional job/internship search.
- Ellen Weinreb of Sustainability Recruiting gave a Sustainable Careers 101 talk to over 60 students, followed by 5 smaller group webcast sessions with students around individual searches.
- Sponsored the 5th annual Sustainable Venture Capital Investment Competition (SVCIC), hosted by the MBA Net Impact chapter.
- Co-hosted with Duke University Fuqua School of Business 11th annual SE Career Fair. Over 440 UNC and Duke students signed up to meet with 30 companies.

Developing award-winning sustainability content:

- Assistant Professor Lisa Jones Christensen and CSE Managing Director Jessica Thomas co-authored a sustainability case that won 4th place in the 2009 Oikos Case Writing Competition.
- CSE Director of Research Dr. Carol Seagle’s course “Environmental Strategy” was awarded honorable mention in the Dr. Alfred N. and Lynn Manos Page Prize for Sustainability in Business Curricula.

Thanks to Dean James W. Dean, Sr. Associate Dean Jay Swaminathan, Associate Deans Jean Elia and Dave Hofmann, professors Al Segars, Lisa Jones Christensen, Nick Didow, Dave Roberts, Peter Gallo, Carol Seagle, Peter Brews, Paige Ouimet, and Jim Johnson; CSE staff members Anna Koltchagova, Tracy Triggs-Matthews, Kelly Boone, Beverly Howarth, and Jessica Thomas; Kenan Institute staff Jack Kasarda, Raymond Farrow, Thomas Stith, Patti Harrison, Karen Stone, Karen McFarland, Julia Kruse, and Marybeth Lavrakas, CMC Staff Mike Lowenthal, Jennifer Brooks, and Carrie Leonhardt; CSE Fellows: Annie Evans, Michael Skena, Justin Sabrsula, and Matias Solari; BASE fellows: Caroline Kleinhappel Mateus Hejazi and Nick Beeson; CSE Consultants: Ken Allinson, Michael Chasnow, Lysandra Gibbs, Soo Kyung Kim, and Sarah Vendt; and the many other faculty, staff and students who worked with our Center this year!

Sustainable Enterprise Concentrators

The following 50 graduating MBA students successfully completed the Sustainable Enterprise Concentration:

- | | | | | |
|--------------------|---------------------|------------------------|----------------------|----------------------|
| • John Akeroyd | • Jason Crawford | • Caroline Kleinhappel | • Jon Parise | • Anne Stoehr |
| • Carina Alberelli | • Patrick Crawford | • Mateus Hejazi | • Hulya Pasaogullari | • Lynne Strickler |
| • Michael Alden | • Michael Ferraro | • Brandon Little | • Colin Pistell | • Sumeth |
| • Kathleen Andrews | • Laura Green | • Jessica Lusakueno | • Stephanie Poole | • Suwanpusaporn |
| • Majed Ardati | • Ben Hill | • Michel Lusakueno | • Steven Rodriguez | • Michael Talplacido |
| • Mark Ashida | • Heath Hill | • Suzi Mahrt | • Maxwell Rondon | • Guillermo Villar |
| • Ravi Ayer | • Mark Hilpert | • Brandi Morales | • Michael Rossi | • Napoleon Wallace |
| • Don Baker | • Hidetaka Ishihara | • Irene Morvey | • Jacquelyn Rowley | • Eric Whitney |
| • Wanwisa Baker | • Cedric Johnson | • Koji Nishida | • Dan Sowder | • Levar Woods |
| • Nicole Bankhead | • Megan Johnson | • Nicole Steck | • John Steinegger | • Masaki Yamada |
| • Utopia Best | | | | • Jay Ye |

Brazil GIE Fellowship Winners

In March 2010, seventeen students participated in the Global Immersion Elective (GIE) to Brazil. GIEs are an opportunity to engage in short-term study abroad for academic credit. Each GIE combines timely business issues with discussions on how to do business abroad. The Brazil GIE focused on sustainable enterprise for the second year in a row and highlighted some of the most innovative sustainable businesses in Brazil including Natura, a cosmetics company, Santander, a financial services company and Tivoli, an eco-resort.

“The GIE was my first time out of the country and I milked every opportunity to learn about and experience the culture. You haven’t lived until you’ve seen the sunrise over the horizon on Copacabana Beach. I enjoyed every bit of the immersion from



the companies we visited to the people, food, and awesome landmarks. I grew as a student, professional, and person. This immersion was truly life changing!”

- Anthony J. Lewis (MBA '10),
GIE Fellowship Winner

“The Sustainable Enterprise Brazil GIE was an incredible learning experience and extremely rewarding. I enjoyed meeting students from the other MBA programs and strengthening relationships with my classmates. The insightful company visits complemented my sustainability education at Kenan-Flagler very well.”

- Sarah Vendt (MBA '11),
GIE Fellowship Winner

Student Spotlight:

Lysandra Gibbs, MBA 2011

by Annie Evans, MBA 2011

For Lysandra Gibbs, the president of the Kenan-Flagler MBA Net Impact Chapter, sustainability isn’t only a career interest or a subject she is studying at Kenan-Flagler, it is a lifestyle. Just ask any of her classmates, family or friends about Lysandra’s personal commitment to sustainability, and they’ll probably start telling you about her worms. Yes, worms. Lysandra is a dedicated composter, and the happy owner of red wiggler worms, which were made famous during her first year at Kenan-Flagler when they escaped from under her sink at home while she was at school one day. The obvious humor of the situation provided a platform for Lysandra to educate her friends about the benefits and potential hiccups, of composting, a sustainable method of waste management. As a result, the worms have become infamous, and Lysandra’s name is now synonymous with sustainability education at Kenan-Flagler.

Lysandra’s initial interest in sustainability stemmed from practicing waste management a number of years ago while she was picking up trash at the campsite where she and her boyfriend, Adam, had spent a weekend enjoying the outdoors. While applying the “leave things better than you

found them” mantra that her mother taught her at a young age, it dawned on Lysandra just how much work it was to collect up and carry out every scrap of food and trash that they had packed in for their stay. Lysandra recounted, “I started thinking about how much work it was to make sure we left it better than we found it, and I thought about how people don’t understand that we need to live our lives that way in order to leave the Earth better than we

found it. And that’s when I realized I wanted to focus on sustainability.”

Originally from Lansing, Michigan, Lysandra received her undergraduate degree at the University of Pennsylvania, before moving to New York to pursue a career in brand management at Brooklyn Brewery, a sustainable beer brewer and distributor. During her time at the brewery, she learned that being a green company doesn’t mean you are green in everything that you do. Brooklyn Brewery is well known for its dedication to wind energy, which it uses to power much of its brewing process.



“We need to live our lives in a way to leave the Earth better than we found it.”

[... read more about Lysandra ...](#)

CSE Program News

In celebration of CSE's 10-year anniversary Kenan-Flagler hosted the [Global Innovations in Energy: How Business Is Addressing Climate Change](#) conference, on April 20 and 21, 2010, here in Chapel Hill, North Carolina. The two-day invitation-only conference was co-hosted by CSE, the Center for International Business, Education and Research (CIBER) and the OneMBA Program. The event brought together 100 business and thought leaders from around the world to share innovations in energy and to stimulate opportunities for collaboration. The conference also was webcast in real-time providing an online forum for dialogue.

Dr. Carol Seagle's course "Environmental Strategy" was awarded honorable mention in the [Dr. Alfred N. and Lynn Manos Page Prize for Sustainability in Business Curricula](#). The University of South Carolina's Moore School of Business administers the competition to promote excellence in the development of sustainability-focused curriculum in business schools.

The UNC Kenan-Flagler MBA Net Impact chapter received a Silver rating from [Net Impact](#). Silver chapters are outstanding chapters in the Net Impact Network. They go above and beyond minimum requirements and are active participants in cross-chapter exchange and local chapter activities.

A team from the University of Oxford, Said Business School won the 5th annual [Sustainable Venture Capital Investment Competition \(SVCIC\)](#) hosted by UNC Kenan-Flagler March 19–20. The SVCIC is the only MBA competition in which students evaluate business plans that incorporate financial profitability, environmental integrity and social equity from entrepreneurs actively seeking venture capital funding.

UNC Kenan-Flagler Business School was named on the List of Excellence for the [Shanghai 2010 Award](#). "Urban Retrofit Solutions: Enabling Energy Efficiency" by Michael Chasnow (MBA '11), Hao Zhang (MBA '11), and Joel Thomas (MBA '11) ranked in the top 14 Excellent Contributions by the Jury.



Spring 2010 Issue of UNC Business Magazine features Kenan-Flagler's Sustainability Program

CSE was pleased to co-host in partnership with the North Carolina Triangle Chapter of the U.S. Green Building Council, Rob Watson, "a founding father of LEED" and Dennis Quaintance, Owner of Proximity Hotel as part of the CSE Leaders in Sustainability Series, March 19. Watson and Quaintance spoke about the future of green building to about 200 MBA students and community members.

CSE has added four new articles to the [CSE Knowledge Bank](#):

- *Electric Utility Policy and Carbon Emissions* by Majed Ardati, Don Baker, Juliana Glassman, Koji Nishida, and Dan Sowder
- *The Effects of Climate on the Food Industry* by Denise Emerson, Sam Greenwood, Carol Hejazi, Lynne Strickler
- *Developing a Corporate Carbon Strategy for Bacardi Limited* by Kristel Dorion
- *Integrating Carbon Footprint Reduction into IT: Intel and Climate Change* by Kristel Dorion

MBA Careers in Sustainable Enterprise Update

UNC MBA Class of 2010 Full-Time Positions

- Bank of America, Corporate Workplace – VP Senior Analyst (3)
- Booz Allen Hamilton – Associate
- Dream Incubator, Inc. Japan – Business Producer
- Duke Energy – Commercial Associate
- Divine Chocolate – Business Development and Sales Associate
- Grubb Properties – Associate
- Hope International – Financial Associate
- Johnson & Johnson – Marketing Controller
- Self Help Credit Union – Special Assistant to the CEO
- The Procter & Gamble Company – Assistant Brand Manager
- Walton Family Foundation – Education Associate Program Officer

... among many others

UNC MBA Class of 2011 Summer Internships

- B Lab – Summer Auditing Associate
- Bank of America, Corporate Workforce – MBA Senior Analyst Summer Intern
- City Interests – Summer Intern
- Cotton Inc. – Global Marketing and Supply Chain Associate
- DHIC, Inc. – Real Estate Development Intern
- EDF Climate Corp – Fellow
- GE – Renewable Energy Leadership Program
- SJF Ventures – MBA Summer Associate (2)
- Southern CA Edison – Associate
- Strategic Technology Institute – Associate
- WalMart Sustainability Department – MBA Leadership Intern

... among many others

News from Around the World

C.K. Prahalad 1941–2010

It is with great sadness that CSE notes the passing of pioneering management scholar C.K. Prahalad. He was best known for his theory about “the fortune at the bottom of the pyramid,” a concept that is followed by many emerging market corporations.

Progress Energy Presents \$30,000 Grant to Central Carolina Community College

Carolina News Wire - The Progress Energy Foundation has awarded a \$30,000 grant to Central Carolina Community College for its growing energy efficiency/green building and renewable energy programs.

Duke Energy to Buy Blue Wing Solar Farm

Triangle Business Journal - A Duke Energy Corp. subsidiary plans to buy a 14-megawatt solar project in San Antonio, Texas, the utility holding company announced. Duke Energy Generation Services will acquire the Blue Wing Solar Project from Juwi Solar Inc. of Boulder, Colo. When complete, the facility will contain 214,500 ground-mounted solar panels.

Electric Bikes Develop into a Global Industry

WBCSD - Millions of people around the world are taking part in an accidental transportation upheaval, the growing popularity of electric bikes as an alternative to cars. Jiang Ruming, a marketing manager, owns a van, but for many errands he hops on a futuristic-looking contraption that lets him weave rapidly through Shanghai's messy traffic. He rides an electric bicycle.

Bill Gates Sinks \$4.5M into ‘Transparent’ Climate Change Research

Environmental Leader - Bill Gates is investing at least \$4.5 million of his own money into geoengineering research, aimed at combating global climate change, with an emphasis on transparency, reports *Wired*. At the same time, in light of the hacked climate e-mails, a former Commander of the Pacific fleet is asking President Obama Administration to establish an independent panel to evaluate the link between climate change and security.

How to Use 12 Principles of Permaculture to Grow Sustainable Organizations

GreenerDesign - How many times have you felt stymied in helping yourself and your colleagues to advance toward a common goal, and do so in a sustainable way, whether because of commitment, communication patterns or other reasons? In looking at systems that function effectively — whether businesses, communities, nations, or ecosystems — what leaps are several common principles.

Study Shows White-Roofed Buildings can Drive Down Emissions and Urban Temperatures

WBCSD - White roofs can significantly cool down buildings, make cities more pleasant and reduce the impact of global warming by saving on energy costs, according to a new study by the National Center for Atmospheric Research.

Levi Considers Sustainably Sourced Cotton

Environmental Leader - Levi Strauss is working on a pilot program to locate the source of cotton used in its clothing, and eventually determine if the cotton was sustainably and ethically sourced, reports the *San Francisco Business Times*.

Cree, Dow, GE Get Millions in Tax Credits for Cleantech, Green Building Products

WBCSD - Cree Inc., Dow Chemical Company, GE, CalStar Products and Serious Materials are among the more than 100 firms receiving \$2.3 billion in tax credits for cleantech manufacturing that's expected to create thousands of U.S. jobs while producing advanced technology and equipment to generate, efficiently use and manage energy.

Patent Office Announces Pilot Program in Green Technology

The United States Patent and Trademark Office (USPTO) is implementing the Green Technology Pilot Program in which an applicant may have an application advanced out of turn for examination, for applications pertaining to green technologies including greenhouse gas reduction.

Local Events

Net Impact Professional Chapter Happy Hour

July 20, 6:30–8:30pm
The Crunkleton
Chapel Hill, NC

GreenNC Conference and Exposition

September 9, 2010
Raleigh Convention Center
Raleigh, NC

SJF Summit on the New Green Economy: Accelerating Growth and Impact

September 14–15, 2010
Durham Marriott
Convention Center
Durham, NC

Water and Health: Where Science Meets Policy

October 25–26, 2010
The University of North Carolina
at Chapel Hill
Chapel Hill, NC

Global Events

EPIC: Sustainable Living Expo (Dubai)

Dubai, UAE
October 1, 2010

Energy Solutions 2010

London, UK
October 6–7, 2010

Climate Change and Impact Assessment

Aalborg, Denmark
October 25–26, 2010

2010 Net Impact Conference

University of Michigan, USA
October 28–30, 2010



Notes from the Field

The Star-News featured the Business Accelerator for Sustainable Entrepreneurship (BASE) in “[First Bank profit falls, help for green businesses.](#)” (Feb. 9)

Fast Company cited the Center for Sustainable Enterprise in “[Making a Sustainability Perspective Second Nature in Education.](#)” (Feb. 10)

Delta Sky Magazine featured the Center for Sustainable Enterprise and quoted CSE managing director Jessica Thomas in “[Sustainable Education.](#)” (March)

The News & Observer featured David Kirkpatrick (EMBA '91) in [Biden lifts up Cree as energy role model](#) highlighting Vice President Biden's visit to RTP. (March 19)

The News & Observer featured Beth Richardson (MBA '08) in “[Beyond the Bottom Line.](#)” (March 20)

Modern Baking featured and quoted BASE (UNC Business Accelerator for Sustainable Entrepreneurship) members Liliana Valle and Randy Delgado (MBA '09), founders of Mistti in “[Bakeries make strides in sustainability.](#)” (April 01)

The News & Observer featured Henry McKoy (BSBA '95) in “[A mission to do well and do good.](#)” (April 2)

The Financial Times credited UNC Kenan-Flagler for the investment strategy for sustainability seminar courses that look at how managers can integrate environmental, social and corporate governance factors into portfolio strategies and investment analysis in “[The class is not always greener.](#)” (April 4)

The Chapel Hill News featured an upcoming speech by Duke Energy CEO James Rogers as part of the Dean's Speaker Series and the CSE's [Global Innovations in Energy Conference](#) in “[Duke Energy CEO to speak.](#)” (April 14)



Marc Gunther, *Fortune* contributing editor and GreenBiz.com senior writer, featured the Global Innovations in Energy Conference on his blogs in “[How to be a HIP Investor](#)” (April 20), “[The Sayings of Chairman Jim \(Rogers\)](#)” (April 20), “[Fighting poverty and global warming in Africa](#)” (April 21) and “[Wind power gets high.](#)” (April 25)

The Herald-Sun cited the UNC Kenan-Flagler conference on sustainable business innovation, “[Innovate Carolina,](#)” in “[Seminar on green innovation.](#)” (April 23)

Bloomberg featured UNC's commitment from administrators to stop using coal for campus heat and power within a decade in “[Students Pressure University of North Carolina to Abandon Coal.](#)” (May 4)

The Chapel Hill News featured a letter to the editor by Marisa Niemczyk (MBA '11) titled “[Freedom House betters the whole community.](#)” (May 12)

The Center for Environmental Farming Systems (CEFS) featured the Center for Sustainable Enterprise in “[Farm to Fork: A Guide to Building North Carolina's Sustainable Local Food Economy.](#)”

The Berkshire Encyclopedia of Sustainability: The Business of Sustainability, Volume 2 features a chapter on the aviation industry written by Ben Hill (MBA '10).

Resources

GIIRS

Global Impact Investing Ratings System (GIIRS) developed by B Lab that provides comparable and transparent ratings about the social and environmental performance of enterprises seeking investment capital.

DOE Green Energy Knowledge Base & Project Portal

The U.S. Department of Energy, Office of Scientific and Technical Information portal providing access to green energy results from thousands of DOE-sponsored research and development projects.

What You Need to Know About Energy

Interactive website from the National Academies' presenting the status of U.S. energy in 21st-century, main sources of energy, energy demand vs. supply, energy efficiency and emerging technologies.

The HIP Investor

By R. Paul Herman—introduces a systematic approach for investors that is designed for more attractive profits and positive human, social, and environmental impact. (April 2010)

LawForChange

The Lex Mundi Pro Bono Foundation launched a new legal resource for people and organizations dedicated to improving lives and bringing about positive social change. (May 2010)

Carbon Disclosure Project - Supply Chain Report 2010

GreenBiz report showing climate change risk awareness strategies and emission reduction goals and actions for the 700+ suppliers in the Carbon Disclosure Project. (February 2010)

The Sustainable MBA: The 2010-2011 Guide To Business Schools That Are Making a Difference

The Aspen Institute Center for Business Education overview of leading MBA programs and how they are integrating social, ethical and environmental impact into their academic and extracurricular offerings. (October 2009)