

UCLA Luskin School of Public Affairs

Luskin Center

FOR INNOVATION



SPRING 2013

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FROM THE DIRECTOR

GREETINGS,

Now in its fourth year, the UCLA Luskin Center for Innovation is undergoing exciting growth. We have formed new research partnerships with the National Science Foundation, U.S. Forest Service, California Governor's office, California Energy Commission and California Air Resources Board to spur innovation in green financing, electric vehicles, nanotechnology and more.

We are proud of our recently completed "Southern California Plug-In Electric Vehicles Readiness Plan," which has been recognized by the American Planning Association as an excellent best practice. The American Planning Association also honored the "Parklet Toolkit" and "Model Design Manual for Living Streets," both which provide guidance for transforming streets into places for people to achieve a balanced and vibrant built environment.

Next year we will roll out our new Digital Technologies initiative, led by professor John Villasenor. This initiative will explore impacts of innovations on social media, entertainment and other information technology-based businesses. We invite you to learn more about our initiatives at: innovation.luskin.ucla.edu.

Please share your ideas and continue to engage with the Luskin Center.

Warm regards,

J.R. DeShazo
Director and Professor of Public Policy

Colleen Callahan
Deputy Director

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Lusk Center board of directors meeting: Front left to right, Susan Woodward, Hilary Godwin, Manuel J. Gouveia, Colleen Callahan, Renee Lusk, Meyer Lusk, William Ouchi, David Nahai, Back Left to Right: Teresa Lara, Mary Leslie, Jacob Lieb, J.R. DeShazo, Brett Williams and Daniel Maldonado

THE LUSKIN CENTER'S IMPACT

RESEARCH

- o Helped secure nearly two million dollars in research grant funding within seven initiative areas.
- o Collaborated with more than 20 scholars from a variety of disciplines on research that connects science to policy and bridges academia with lawmakers and other leaders.

COMMUNITY ENGAGEMENT AND PUBLIC AFFAIRS

- o Hosted monthly lectures and a half a dozen major conferences that engaged government officials, community and business stakeholders, faculty and students.
- o Briefed dozens of policymakers as well as received hundreds of media hits.

STUDENT SUPPORT

- o Provided research funding to 60 students while supporting the education experience of hundreds more.



CONNECTING STUDENTS TO ENVIRONMENTAL OPPORTUNITIES

The Luskin Center engages with hundreds of students each year, kicking it off this year by hosting the What's Bruin? Graduate Student Networking Event at the UCLA Luskin School of Public Affairs' newly renovated student lounge. The event brought together students from across the university interested in environmental sustainability and energy, providing them with a one stop shop to learn about campus resources, academic programs and research opportunities. Speakers included:



J.R. DeShazo,
Luskin Center



Glen MacDonald,
Institute of the Environment
and Sustainability (IoES)



Charles Corbett,
Anderson School of
Management



Magali Delmas,
Leaders in Sustainability



Felicia Federico,
La Kretz Center



Cara Horowitz,
School of Law



Nurit Katz,
Chief Sustainability Officer



Saira Gandhi,
GSA Sustainable
Resource Center



From left: Meyer Luskin, Mary Leslie, J.R. DeShazo, Renee Luskin,
Gavin Newsom and Franklin D. Gilliam, Jr.

LT. GOVERNOR GAVIN NEWSOM ON GETTING CA BACK TO BUSINESS

Lieutenant Governor Gavin Newsom spoke to an intimate gathering at UCLA for the event California: Getting Back to Business. The Dean's Associates program of the UCLA Luskin School of Public Affairs hosted the event in October, bringing together donors and other invited guests.

Franklin D. Gilliam, Jr., dean of the Luskin School, moderated a discussion in which Lt. Gov. Newsom stressed the importance of government, business and academic partnerships to spur innovation and job growth. "Universities have a major role in industries like renewable energy, in creating a framework of evidence that can be scaled for the rest of the country," said Newsom.

J.R. DeShazo, director of the Luskin Center, and Mary Leslie, president of the Los Angeles Business Council (LABC), joined Newsom on stage with examples of public private partnerships involving their organizations. They explained, for instance, that UCLA provided the research, and LABC organized the broad coalition, for a rooftop solar energy program in Los Angeles, now the largest of its kind in the country. UCLA and LABC are also advising the state on how to maximize benefits from the \$2.5 billion that will go to improve energy efficiency and advance renewable energy generation in California, via Proposition 39. ■



CASS SUNSTEIN ON THE FUTURE OF REGULATION

Cass Sunstein, one of America’s leading public intellectuals and recent head of the White House Office of Information and Regulatory Affairs, opened his Luskin Center-hosted lecture in December with an image of Brad Pitt from the movie “Moneyball.” Noting that “Moneyball” underscores how we make decisions based on one of two systems, Sunstein differentiated System 1 as automatic and intuitive while System 2 is deliberative and statistical. As Brad Pitt’s character focused on baseball batting statistics, Sunstein explained that government should also focus on numbers, in this case to ensure high-benefit and low-cost policies and regulations. ■

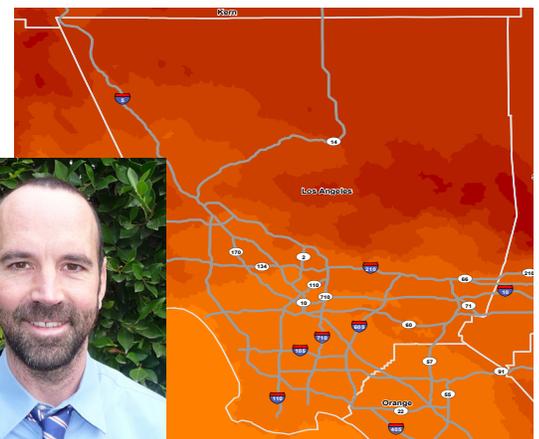


PARTNERING WITH TED ON ELON MUSK PANEL

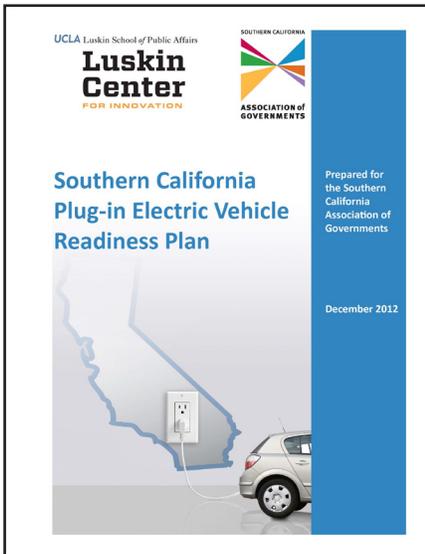
The UCLA Luskin School co-hosted the UCLA Anderson TED TalksWeek in February. J.R. DeShazo participated on an expert panel discussing solar industry trends, electric vehicles, the role of government in accelerating these innovations and other topics raised by Elon Musk, chairman of Tesla Motors and SolarCity and founder of SpaceX and PayPal, in his lecture immediately preceding the panel hosted by UCLA. ■

ALEX HALL ON WHAT CLIMATE CHANGE MEANS FOR THE LA REGION

The Luskin Center co-hosted an event on May 31 for policymakers and community leaders featuring Alex Hall’s newly released projections about climate impacts at the neighborhood level in the Los Angeles region. “Adaptation is inevitable, but it isn’t enough” was a key message from Hall, UCLA professor of Atmospheric and Oceanic Sciences. IoES Director Glen MacDonald moderated a panel, which included J.R. DeShazo of the Luskin Center, responding to what the findings mean for climate policy and specific adaptation and mitigation strategies for Southern California. ■



DEBUT OF THE LANDMARK PLUG-IN ELECTRIC VEHICLE PLAN AND ATLAS FOR SOUTHERN CALIFORNIA



Every day, more and more plug-in electric vehicles (PEVs) can be spotted on the roads of Southern California. High gasoline prices, state zero emission vehicle programs, federal fuel economy and vehicle emissions standards, improved battery technology, and concerns over climate change and energy security have created a growing market for PEVs.

Planners have a key role to play in facilitating the transition to PEVs as one of many sustainable modes of transportation. By helping create opportunities to charge at drivers' daily destinations, such as home, work and retail centers, planners will lead the way in making PEV charging convenient and cost-efficient.



*Hasan Ikhmeta,
executive director,
Southern California
Association of Governments*

To guide local governments in meeting demand for PEV charging in Southern California, the UCLA Luskin Center has published the "Southern California Plug-in Electric Vehicle Readiness Plan" and "PEV Atlas." Funding

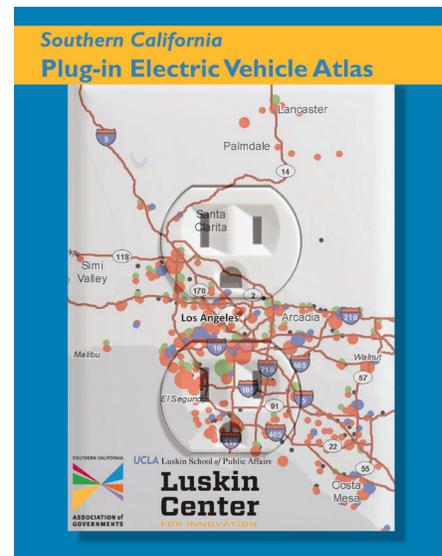
for both the Plan and the Atlas were provided by the Southern California Association of Governments, the South Coast Air Quality Management District and the U.S. Department of Energy.

The Plan develops methods for tailoring PEV readiness efforts to local land use opportunities; prioritizing the siting of charging stations; and assessing the pricing and cost-effectiveness of charging opportunities for site hosts and drivers. The Plan also describes how the cost of PEV charging can be driven down by reforming permitting processes, building codes, zoning and parking regulations.



*Barry Wallerstein,
executive director,
South Coast Air Quality
Management District*

The Atlas provides maps that characterize PEV ownership by neighborhood and predict PEV ownership growth by council of government and utility service area. Using a regional travel model, the Atlas also estimates time-of-day proximity of PEVs to charging opportunities at workplaces and retail centers. ■





*Ayala Ben-Yehuda,
project manager,
plug-in electric vehicle readiness,
Luskin Center*

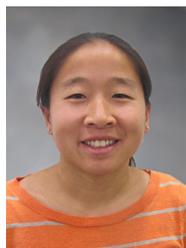
AMERICAN PLANNING ASSOCIATION HONORS PEV PLAN AND ATLAS

The American Planning Association (APA), Los Angeles section, has chosen to honor the Luskin Center's "Southern California Plug-in Electric Vehicle Readiness Plan" and "PEV Atlas" with the 2013 Planning Excellence Award for Best Practice.

The award is given annually to a planning tool or project that represents a significant advancement to a specific type of planning practice. The Plan and Atlas were selected on criteria including originality and innovation, transferability, effectiveness, quality of analysis and graphic design. The award will be presented at the APA Los Angeles section ceremony June 13 in San Gabriel, CA.

The Luskin Center's J.R. DeShazo, Ayala Ben-Yehuda, Susan Woodward and Brett Williams contributed to the Plan and Atlas along with Norman Wong of the UCLA Lewis Center for Regional Policy Studies and a team of graduate and undergraduate students. ■

GRADUATE STUDENT RESEARCHERS



Vicky Hsu



Michael Sin



Alex Turek

STUDENT RESEARCH

UCLA Luskin School of Public Affairs

Luskin Center
FOR INNOVATION

UCLA Anderson
School of Management

**Financial Viability Of
Non-Residential
Electric Vehicle
Charging Stations**



Daniel Chang
Daniel Erstad
Ellen Lin
Alicia Falken Rice
Chia Tzun Goh
An-An (Angel) Tsao

August 2012

UCLA Luskin School of Public Affairs

Luskin Center
FOR INNOVATION

**Increasing
Electric Vehicle
Charging Access in
Multi-Unit Dwellings in
Los Angeles**



By:
Judith Balmin
Greg Bonett
Megan Kirkeby

July 2012



Governor Jerry Brown

GOVERNOR'S SUMMIT ON ZERO TAILPIPE EMISSION VEHICLES

The Luskin Center's J.R. DeShazo, director, and Brett Williams, EV and alternative fuels program director, were invited participants in a multi-agency roundtable hosted by the Governor's Office to accelerate the Zero Emission Vehicle (ZEV) market in California. The summit took place on September 28 in Sacramento, CA. ■

PLUG-IN ELECTRIC VEHICLE COLLABORATIVE

The California Plug-In Electric Vehicle (PEV) Collaborative, a multi-stakeholder public-private partnership, is working together to ensure a strong and enduring transition to a plug-in electric vehicle market in California. The Collaborative embodies all key California PEV stakeholders including elected and appointed officials, automakers, utilities, infrastructure providers, environmental organizations, research institutions and others.

J.R. DeShazo and Brett Williams are participating in PEV Collaborative working groups that are addressing challenges to PEV charging in multi-unit dwellings and workplaces. These two settings hold great potential for accelerating the adoption of PEVs. Luskin Center research is providing stakeholders with tools to support the viability of charging at these locations. ■



Christine Kehoe,
executive director,
PEV Collaborative

STATEWIDE PLUG-IN ELECTRIC VEHICLE INFRASTRUCTURE WORKSHOP



Leslie Baroody,
EV program manager,
California Energy Commission

J.R. DeShazo presented at the statewide workshop on Plug-In Electric Vehicles (PEV) Infrastructure Planning held on January 30. This workshop was held by the California Energy Commission in coordination with the Governor's Office and the Air Resources Board.

The workshop brought together key stakeholders from across the state to discuss collaborative actions that can accelerate the PEV market regionally in California through the development of a statewide PEV Infrastructure Plan. Participants included: local and regional governments, auto manufacturers, infrastructure companies, consumer groups, workforce experts, state government leaders and many more important voices. The workshop provided a "roll up your sleeves" opportunity to align local and regional strategies with the State in its effort to build out charging infrastructure. ■

ADVISING THE U.S. DEPARTMENT OF ENERGY ON “EV EVERYWHERE” GRAND CHALLENGE

The Luskin Center’s J.R. DeShazo, director, and Brett Williams, EV and alternative fuels program director, participated in an invite-only workshop to help the U.S. Department of Energy (DOE) develop its “EV Everywhere” Grand Challenge for plug-in electric vehicles.

The stakeholder input provided will help DOE in its quest to enable U.S. companies to be amongst the first in the world to produce PEVs that are as affordable and convenient for the average American family as today’s gasoline-powered vehicles — and to do so within the next 10 years. ■



David Sandalow,
assistant secretary of policy and
international affairs,
U.S. Department of Energy

UP-TO-DATE PLUG-IN ELECTRIC VEHICLE SALES TRENDS AND ANALYSIS



By Brett Williams

Are EV sales really disappointing? That may be a matter of expectations. But what are the facts so far? Soon there will be over 100,000 plug-in electric vehicles (PEVs) on U.S. roads. And by some measures, PEVs are off to a much better start than gasoline-only hybrids were a decade ago. U.S. PEVs represent \$3 billion in gross revenues (and the Volt alone \$1.3 billion). Learn more from a new Luskin resource, to be updated monthly, characterizing PEV sales from December 2010 to the present. The resource is available at: innovation.luskin.ucla.edu/content/market-dynamics



FIRST COMPREHENSIVE STUDY OF NOISE LEVELS AT TRANSIT IN LOS ANGELES

A Luskin Center report examines the noise levels at all 16 roadway-centered transit stations in the Los Angeles area, and the factors affecting noise levels. This study found that Gold Line stations are generally the quietest, while the Green Line stations suffer the most from noise. Exposure to high levels of noise can potentially have harmful health effects. The report recommends how transit agencies could reduce noise exposure for their riders. ■

PARKLET TOOLKIT DEBUTS, RECEIVES PLANNING AWARD

The American Planning Association (APA), Los Angeles section, selected Reclaiming the “Right-of-Way: A Toolkit for Creating and Implementing Parklets” to receive the 2013 Academic Award of Excellence. The toolkit, a collaboration between UCLA’s Luskin Center, Lewis Center and the Institute of Transportation Studies, provides a guide for creating parklets. Parklets are small parks in urban areas created from the conversion of parking spots and other underutilized spaces for cars into places for people.

Containing best practices from cities across the U.S. and Canada that have implemented parklet projects, the toolkit also encourages users to tailor plans to their own community. It explores a range of designs options and introduces the concept of “active parklets,” which include simple exercise equipment to provide an opportunity for active recreation within the parklet.

Associate Dean of the Luskin School Anastasia Loukaitou-Sideris, Complete Streets Initiative Manager Madeline Brozen and Luskin Center Deputy Director Colleen Callahan authored the toolkit on the heels of the Los Angeles City Council vote approving the construction of a series of parklets.

The toolkit is part of a three-phase effort, made possible by a \$75,000 grant from The Rosalinde and Arthur Gilbert Foundation. During the second phase, the UCLA team in partnership with the Downtown Los Angeles Neighborhood Council installed two active parklets in Downtown that opened in early 2013. The ongoing third phase is an evaluation of the parklets, conducted in collaboration with Parklet Studies. Data will be provided to the LA City Planning Department for reporting to City Council. ■





This parklet on Spring Street, between 6th and 7th in downtown LA, is now open to the public.

LUSKIN HELPS OPEN PARKLETS

In a ribbon-cutting ceremony in February, two “parklets” were officially opened in downtown Los Angeles and the UCLA Luskin School of Public Affairs had a hand in creating the new spaces.

“This parklet is the first in the nation that is an active recreation parklet,” said Anastasia Loukaitou-Sideris, associate dean of the UCLA Luskin School, who spoke at the ceremony. The parklet features bike equipment and a foosball table along with seating and vegetation.

The two parklets on Spring St. were designed by the Downtown LA Neighborhood Council with support from Councilmember Jose Huizar and the LA Department of Transportation. The UCLA Luskin Complete Streets Initiative worked with these partners throughout the project phases and supported construction with a grant from The Rosaline and Arthur Gilbert Foundation.

The two parklets are part of a larger roll-out of parklets this year in Los Angeles. The local parklet movement is guided by UCLA’s parklet toolkit. ■



Madeline Brozen,
manager, UCLA Complete Streets
Initiative, Lewis and Luskin Centers

MODEL DESIGN MANUAL FOR LIVING STREETS RECEIVES NATIONAL AWARD

The American Planning Association (APA) has awarded the National Planning Achievement Award for Best Practice to the “Model Design Manual for Living Streets.” Ryan Snyder Associates, the Los Angeles County Department of Public Health, and UCLA’s Luskin Center and Lewis Center produced this manual with dozens of experts from across the country to provide guidance for cities seeking to update their existing road standard manuals with sustainable techniques and concepts. These techniques seek to ensure that all users of the streetscape, including pedestrians, cyclists and transit riders, can travel safely and comfortably. The manual also includes concepts for thinking holistically and sustainability about streetscape designs and retrofits. Colleen Callahan, deputy director of the Luskin Center, managed the section with tips and tools for creating streetscape ecosystems that are socially vibrant, economically strong and environmentally sustainable. ■

CENTER FOR CIVIL SOCIETY SUPPORTS FIRST EVER ECONOMIC IMPACT ASSESSMENT OF CICLAVIA



The UCLA Center for Civil Society awarded the Luskin Center a grant to conduct the first ever economic assessment of CicLAvia. CicLAvia is a free public event that brings over 100,000 participants to select Los Angeles streets on certain Sundays, creating a car-free, park-like environment for Angelenos and visitors to enjoy. Participants walk, skate, ride bikes, socialize and patronize local businesses. There have been six CicLAvias since 2010. The study focuses on the CicLAvia on June 23, 2013.

Researchers are visiting businesses along this CicLAvia route, including the diverse communities of Downtown Los Angeles, MacArthur Park and Koreatown, to collect sales revenue information on a Sunday before and the Sunday of the CicLAvia event. UCLA researchers will then analyze the sales revenue data, using economic modeling tools to predict a full suite of economic and fiscal impacts. UCLA and partners will share the research findings with policymakers and other stakeholders who are considering whether to expand CicLAvia into a more regular occurrence.

J.R. DeShazo, director of the Luskin Center, is the faculty lead on this project. Colleen Callahan, Madeline Brozen and Benton Heimsath are providing research support. The non-profit organizations CicLAvia Inc. and the Los Angeles Sustainability Collaborative are partnering with UCLA on this project, with support from The California Endowment and the Liberty Hill Foundation, in addition to the grant from the UCLA Center for Civil Society. ■



*Benton Heimsath,
graduate student researcher,
Luskin Center*

AIR RESOURCES BOARD AWARDS GRANT TO UCLA

The California Air Resources Board awarded UCLA a \$360,000 grant for the research project “Identifying Urban Designs and Traffic Management Strategies for Southern California that Reduce Air Pollution Exposure.”

This study comes at an important time as California policies, such as SB 375, incentivize greater residential density near transit to reduce air pollution and greenhouse gas emissions by encouraging less driving. But greater density along transportation corridors may lead to the unintended effect of greater pedestrian and residential exposure to roadway air pollutants. The problem may be especially acute at public transit stops deliberately located on high-volume roadways to increase passenger connectivity, accessibility and multi-modal travel.

The UCLA led study seeks to help minimize these exposures by advancing our understanding of factors controlling spatially-variable pollutant concentrations around roadways. The primary focus is on features that urban planners and transportation planners can control such as traffic lights and building height, spacing and setbacks from the road, as illustrated in the below figure.



Suzanne Paulson,
professor of Atmospheric and
Ocean Sciences, UCLA



Akula Venkatram,
professor of Mechanical
Engineering, UC Riverside
Mechanic Engineering



Lisa Wu,
graduate student researcher,
Luskin Center

IDENTIFYING URBAN DESIGN AND TRAFFIC MANAGEMENT STRATEGIES TO REDUCE AIR POLLUTION EXPOSURE

This illustration characterizes the built environment of a cross-sectional transect identifying: building height, setbacks, street trees, street parking, opposing traffic flows, a bus stop and an open parking lot. ■



PARTNERING WITH FOREST SERVICE ON CLIMATE CHANGE VULNERABILITY FRAMEWORK

Climate change will affect human and ecosystem health in complex and dynamic ways. The U.S. Forest Service’s Pacific Southwest Research Station, as part of their Urban Ecosystem and Social Dynamics Program, entered into a cooperative agreement with the Luskin Center to examine health vulnerability to climate change and help develop a framework that also includes ecological, institutional, socio-economic and environmental justice dimensions.

The objective is to more fully understand the pathways to climate vulnerability and to identify points of leverage that could inform adaptation measures to increase resiliency. The geographic focus is Southern California and specifically the divergent communities of Brentwood and Sun Valley.



Neal Halfon,
director, UCLA Center for
Healthier Children, Families
and Communities; professor of
Pediatrics and Public Policy



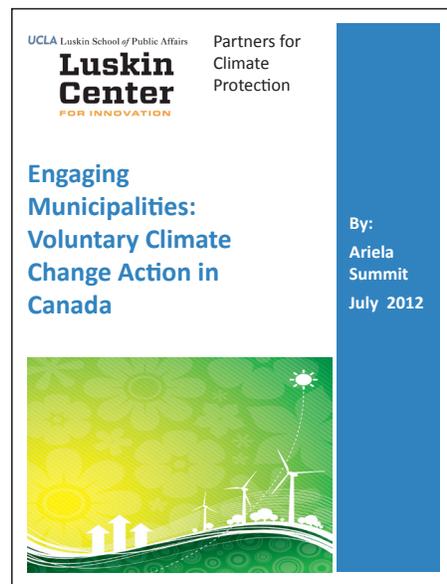
Tamanna Rahman,
graduate student researcher,
Luskin Center

The Luskin Center will convene a workshop with experts in 2013 to reflect on the draft framework and to further refine a model to help reduce risk to those most vulnerable to the effects of climate change.

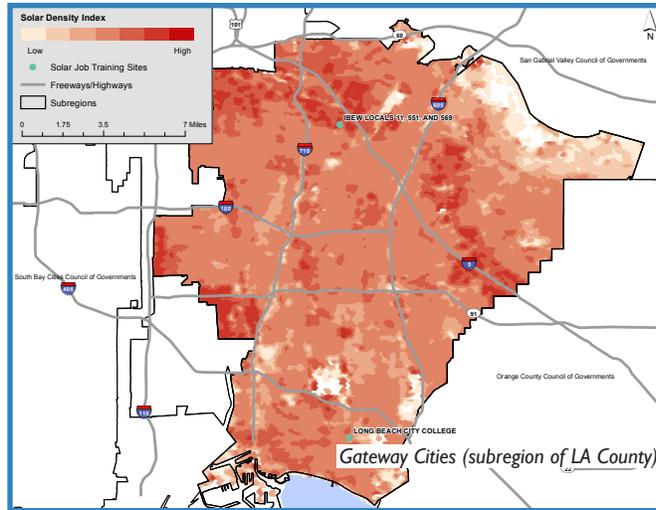
Professors J.R. DeShazo and Dr. Neal Halfon are co-principal investigators, with project management by Colleen Callahan of the Luskin Center. Professor Gary Evans of Cornell University and Tamanna Rahman, doctoral student in public health at UCLA, also contributed significantly to the white paper on climate-health vulnerability. ■

ENGAGING MUNICIPALITIES: VOLUNTARY CLIMATE CHANGE ACTION IN CANADA

Voluntary municipal programs are advancing local carbon reduction in the wake of weak national commitments to climate change mitigation. While the potential for action at a local level is huge, participation varies widely among municipal members, with significant capacity remaining under-utilized. A Luskin Center supported study examines a subgroup of the Partners for Climate Protection Program (PCP) in Canada that have joined a network to reduce emissions. Authored by Ariela Summit, the report identifies specific barriers these municipalities face in taking actions to combat climate change, and recommends strategies for better support moving forward. ■



MAPS EMPHASIZE CLEAN ENERGY INVESTMENT POTENTIAL IN DISADVANTAGED COMMUNITIES



Partnering with the Environmental Defense Fund, the Luskin Center profiled the potential for clean energy investments in state senatorial districts and sub-regions across Los Angeles County. The objective is to help legislators and other stakeholders identify high capacity for solar energy (as illustrated in this example map) and energy efficiency investments, and the benefits of tapping into this capacity. Benefits include capitalizing on state and local funding while creating jobs and increasing community resilience to environmental health threats that climate change will exacerbate.



*Norman Wong,
GIS program manager,
UCLA Lewis Center*

California has an unprecedented opportunity to realize these benefits. Proposition 39's Clean Energy Jobs Fund will result in \$2.5 billion to improve energy efficiency and expand clean energy generation. The profiles map potential recipients of Proposition 39 funding, such as schools and green job training sites. The maps also identify disadvantaged communities, which will be prioritized for funding from the Greenhouse Gas Reduction Fund. ■



*Colleen Callahan,
deputy director,
Luskin Center*

FRAMEWORK FOR EVALUATING ENVIRONMENTAL JUSTICE



In a first-of-its-kind report, the Luskin Center introduced a framework for evaluating environmental justice programs to maximize results. The U.S. Environmental Protection Agency (EPA) shared this framework internally and with their grantees, researchers and community members interested in the effective design and implementation of policies and programs to reduce environmental disparities. The report is a primer on evaluation and puts the subject in an environmental justice context.

The framework grew out of discussions at Closing the Environmental Justice Gap: Workshop on Advancing Evaluation Methods. Hosted at UCLA by the Luskin Center and the EPA, this gathering brought together 100 environmental justice (EJ) leaders from across the nation to kick-start the field of EJ policy and program evaluation. The objective of the workshop was to support the development of concrete objectives, metrics and benchmarks by which to monitor and measure progress towards defined EJ goals and allow for the strategic selection of policies and programs to achieve such goals. ■



Senator Kevin de León,
California Senate 22nd District



Senator Nancy Skinner,
California Senate 15th District



Tom Steyer,
co-chair, Prop 39 Campaign



Mary Leslie,
president, Los Angeles Business Council

REVOLVING LOAN FUND WOULD QUADRUPLE PROP 39'S CLEAN ENERGY INVESTMENTS

Using a revolving loan fund to finance clean energy and energy efficiency projects could dramatically increase the economic impact of Proposition 39 compared to using grants and rebates, according to a new report by the Luskin Center. The report was commissioned by the Los Angeles Business Council Institute.

California voters passed Proposition 39, the California Clean Energy Jobs Act, in 2012. The measure requires businesses operating in multiple states to calculate their state income tax liability based on the percentage of their sales in California. The funds are to go toward improving energy efficiency and expanding renewable energy generation.

Researchers analyzed several models for investing Proposition 39 funds: a traditional grants program, a revolving loan fund capitalized with only public funds and a fund that utilized a 50-50 public-private capital split. A revolving loan fund is a source of money from which loans are made and then repaid, thus replenishing monies and creating a long-term, self-sustainable source of funding.

The study concluded that when compared to a grants program, the revolving loan fund would quadruple total investment and job creation benefits. These benefits would be even further multiplied if private capital was invested.

“With a total allocation of \$250 million, for example, the public revolving loan fund could reap an investment of \$1.06 billion over 30 years, compared to \$250 million from a basic grants program,” said report co-author J.R. DeShazo, director of the Luskin Center. This investment quadrupling would be due to loan repayments replenishing and preserving Proposition 39 public capital. And, an investment of \$1.06 billion for energy efficiency and clean energy would result in 11,000 to 21,000 job-years.

Such a fund could leverage public capital with private capital, resulting in additional resources and thus more investment and jobs. A fund with \$250 million in public funds and \$250 million in private funds, for example, would result in approximately \$1.87 billion and between 19,600 and 37,500 job years.

The Luskin Center is advising state legislators to consider budgeting \$50 to \$125 million a year for five years from Proposition 39 funds (10% to 25% of total per year) to capitalize a new or existing revolving loan fund.

L.A. HOME TO LARGEST ROOFTOP SOLAR ENERGY PROGRAM IN THE U.S.

Los Angeles Department of Water and Power (LADWP) customers are now able to sell solar energy produced on their rooftops and parking lots under a pioneering program approved by LADWP commissioners in early 2013. As reported by the *Los Angeles Times*, the vote clears the way for the largest urban rooftop solar program of its kind in the nation, and represents a major win for the Los Angeles Business Council (LABC) and its CLEAN LA Solar Coalition.

The Luskin Center partnered with the LABC to conduct research and provide an intellectual framework for the CLEAN LA (Feed-in Tariff) program. In its first five years, the program could do the following.

- Create 4,500 jobs in LA;
- Power 34,250 typical LA households while offsetting 2.25 billion tons of carbon emissions;
- Generate more than \$500 million dollars in private investment and leverage \$300 million in federal tax credits for LA businesses; and
- Place half of the installations into the areas of LA that have both the highest solar potential and the highest economic need.

This could be just the beginning, as the program could serve as a model for the next generation of local solar programs for the nation. ■



Mayor Antonio Villaraigosa



Ron Nichols,
general manager,
Los Angeles
Department of Water
and Power

METRO TEAMS WITH UCLA AND MAJOR UTILITIES TO SAVE ENERGY



Arthur Leahy,
CEO, Los Angeles
Metropolitan
Transportation Authority



Cris Liban,
Los Angeles County
Metropolitan
Transportation Authority

To increase energy efficiency and become an even greener agency, the Los Angeles County Metropolitan Transportation Authority (Metro) has formed the Metro Energy Blue Ribbon Collaborative (Energy BRC), an unprecedented venture for a transit agency. The effort seeks to double Metro's annual savings on utility expenditures. The Energy BRC consists of executives from Metro, Los Angeles Department of Water and Power, Southern California Edison, Southern California Gas Company and Luskin Center Director J.R. DeShazo.

Metro currently saves Los Angeles County taxpayers nearly \$2 million a year as a result of recently completed sustainability projects, including retrofitting the lighting at bus divisions. Yet as the Metro system expands with new transit projects, Metro's energy expenditures are expected to increase nearly 50 percent. The Energy BRC is a proactive move by Metro to meet these challenges and further curb energy use. ■

PROVIDING A RESEARCH FOUNDATION TO SUPPORT PORT ENERGY EFFICIENCY AND RENEWABLE ENERGY ADVANCEMENTS

The Port of Los Angeles and the Port of Long Beach (the Ports) face energy related challenges and opportunities that impact competitiveness, national security, job creation and environmental goals. These issues will be amplified as regulations, environmental health concerns, technological advancements and other factors drive further electrification of port equipment and ships at berth. To address these energy issues, the Aquamarine Institute commissioned the Luskin Center to study electricity consumption and evaluate energy management strategies for the Ports. The study is the first of its kind to describe aggregate electricity consumption across all users at the Ports.

The resulting framework is a decision support tool for terminal operators and Port administrators to learn the costs and benefits of engaging in specific energy efficiency and local energy generation options. This first step could serve as a foundation for and inform comprehensive and collaborative energy management planning for the Port of Los Angeles and the Port of Long Beach.



*Ryan Matulka,
project manager,
Luskin Center*

J.R. DeShazo presented results from the report, which he authored with Ryan Matulka and Colleen Callahan, at the Energy Management Workshop for Terminal Operators on June 3, 2013. This workshop featured keynote speakers Mayor Robert Foster of the City of Long Beach and Mayor Antonio Villaraigosa of the City of Los Angeles, and was organized by the Aquamarine Institute, in partnership with the Luskin Center, the Port of Long Beach and the Port of Los Angeles.

The workshop kicked off a process that could result in collaborative and comprehensive energy management planning to realize the following benefits.

- Increased port competitiveness, through reduction of operating costs and increased reliability;
- Increased national security, supply chain resiliency and grid independence in the event of an outage;
- Jobs creation through the installation and maintenance of new energy management systems; and
- Improved ability to cost-efficiently comply with environmental mandates and goals. ■

Electricity costs throughout the San Pedro Bay Ports likely total at least \$50 million a year. More energy efficient lighting could alone save \$8 million per year.

ADVANCING WATER REUSE

Aging water infrastructure, population growth and climate change are constraining existing centralized water systems. Water reuse is emerging as a promising approach to overcome these constraints and complement water use efficiency and conservation measures.

A recent study, to be published in the journal *Water Environment Research* and sponsored by the Luskin Center, examined the policy barriers and incentives for water reuse, focusing on graywater. Graywater is domestic wastewater not originated from toilets. Depending on where in the U.S. you live, it can be captured, treated and reused for non-portable water application, such as irrigation.

Authored by Zita L.T. Yu, Anditya Rahardianto, J.R. DeShazo, Michael Stenstrom and Yoram Cohen, the study identified regulations in 29 U.S. states that promote safe graywater reuse. The review suggested a growing realization of graywater, but also underscored a lack of full acceptability among regulators of graywater as a separate wastewater stream that can be reused at the point-of-generation. Researchers concluded that greater acceptance of graywater reuse in urban environments will require demonstration projects for proof-of-concept.

The UCLA Water Technology Research Center (WaTeR Center) designed and built a low cost and mobile wetland treatment system (named the Gray2Blue Mobile Wetland System) that aims to provide such a proof-of-concept. WaTeR Center Director Yoram Cohen, professor of Chemical and Biomolecular Engineering, and Zita L.T. Yu, a Chemical Engineering Ph.D. candidate, are piloting the technology in Los Angeles with support from the Luskin Center. Results from this demonstration project will be released in 2014. ■



Zita L.T. Yu,
graduate student researcher,
Luskin Center



Michael Stenstrom,
professor of
Civil and Environmental
Engineering



J.R. DeShazo,
director,
Luskin Center

ADVISING ON FUTURE OF GROUNDWATER RECHARGE IN LOS ANGELES

UCLA faculty served on the Advisory Panel providing expert peer review of technical, scientific, regulatory and policy aspects for the City of Los Angeles' Groundwater Replenishment (GWR) Project. The Panel was sponsored by the Los Angeles Department of Water and Power and administered by the National Water Research Institute, a nonprofit with water research and education programs.



ELIZABETH BERYT JOINS LUSKIN CENTER

Elizabeth Beryt has joined the Luskin Center and UC CEIN as a nanotechnology policy fellow. Elizabeth is conducting research and outreach focused upon existing and potential governance policies related to engineered nanomaterials. The research integrates policy concerns and opportunities with emerging science and industry practices in the area.

Elizabeth previously worked as a project manager at the Luskin Center, conducting research to help the State of California implement Proposition 39, the California Clean Energy Jobs Act. She received her JD from the UCLA School of Law, focusing her studies on environmental law and policy, and holds a BS in mathematics from UC Irvine. ■

NANOTECHNOLOGY ENVIRONMENTAL HEALTH AND SAFETY

In partnership with the UC Center for Environmental Implications of Nanomaterials (UC CEIN) and Timothy Malloy of the UCLA School of Law, the Luskin Center has embarked on a study of regulatory approaches to engineered nanomaterials (ENMs) and new or existing policy models that could help regulatory agencies take a nimble response to ENMs through the use of the latest science. A key element is the integration of the science concerning health and safety of nanomaterials into the regulatory arena.

ENMs are tiny particles that have special properties stemming from their nanoscale dimensions. ENMs are poised for use in everything from organ-targeting cancer therapy to affordable solar power. ■

DEVELOPING A 21ST CENTURY SCIENTIFIC AND POLICY FRAMEWORK FOR INDUSTRIAL CHEMICALS

UCLA convened national-level leaders in January for the workshop *Alternative Testing Strategies for Carbon Nanotubes and Other Modes of Nanomaterial Toxicity: Developing a 21st Century Scientific and Policy Framework for Industrial Chemicals*. This event highlighted opportunities to develop a predictive paradigm for toxicity testing.

The traditional approach to testing the toxicity of chemicals has left an enormous backlog of untested chemicals. And now with the emergence of engineered nanomaterials (ENMs)—quickly transforming industries as diverse as medicine and consumer products—society needs new approaches to chemical testing that can more effectively and efficiently assess toxicity and thus evaluate chemical risk. This information can inform and safeguard environmental health and safety while allowing innovation of new materials and products.



*André Nel,
director, UC Center for
Environmental Implications of
Nanotechnology*



*Hilary Godwin,
professor of Environmental
Health Sciences; and
Luskin Center scholar*



*Timothy Malloy,
professor of Law, and director,
UCLA Sustainable Technology
and Policy Program*

Event participants, consisting of science and policy experts from industry, government and academia, engaged in a moderated discussion about using carbon nanotubes as a case study for the utility of emerging testing methods. They also considered the opportunity to use a predictive toxicological approach to testing for other industrial chemicals more broadly.

A forthcoming publication will highlight salient points discussed at workshop, including how these strategies can be used for decision making in industrial, regulatory, policy and academic settings. ■

CYBERINFRASTRUCTURE FOR ENVIRONMENTAL NANOINFORMATICS

The UC Center for Environmental Implications of Nanotechnology (UC CEIN) and the National Science Foundation iPlant Collaborative hosted a workshop on May 7 to address the need to leverage currently available cyberinfrastructure capabilities to expand access to data and modeling tools across disciplines including nanotechnology, biology, plant science and the environment.

Yoram Cohen, a Luskin Center scholar, presented his work on environmental decision-analysis for nanomaterials. The workshop brought together experts in the field to: (1) review the state-of-the-art implementation of cyberinfrastructure for environmental nanoinformatics; (2) discuss/propose guidelines for the development/hosting of open-source nanoinformatics tools; (3) introduce computational and informatics tools; (4) explore synergistic activities and identify collaborative opportunities across disciplines. ■



From left: Nirav Merchant, faculty advisor of the iPlant Collaborative and director of bio computing at the University of Arizona; Yoram Cohen, UCLA professor of Chemical and Biomolecular Engineering; and André Nel, director of the UC Center for Environmental Implications of Nanotechnology

SCIENTIFIC ADVANCES TOWARD REDUCING COMPLEXITY IN NANO ENVIRONMENTAL HEALTH AND SAFETY



Jo Anne Shatkin, CEO of CLF Ventures, and J.R. DeShazo, director of the Luskin Center

UC CEIN hosted a conference on recent advances in environmental health and safety of ENMs on May 8. The focus of the conference was the use of alternative testing strategies for ENMs to inform decisions on potential environmental health and safety hazards. André Nel and Yoram Cohen, partners of the Luskin Center, presented an overview of the state of the science and an introduction to UC CEIN research on the use of alternative test strategies in nanomaterial environmental health and safety. Timothy Malloy, also a partner of the Luskin Center, moderated a panel on legal aspects and regulatory considerations for nanomaterials. Elizabeth Beryt, nanotechnology policy fellow at the Luskin Center, presented a poster on her work related to the possible use of predictive toxicology methods within the Toxic Substances Control Act. ■



John Villasenor,
UCLA professor of Electrical Engineering
and Public Policy; nonresident senior fellow,
The Brookings Institution; and scholar,
Luskin Center

ENHANCING THE ROLE OF INFORMATION AND COMMUNICATIONS TECHNOLOGIES IN THE 21ST CENTURY

The Luskin Center is rolling out a new initiative that examines the complex policy and legal questions raised by rapidly evolving digital technologies. Plummeting storage and communications costs, increasingly capable mobile devices and the growth of the cloud are making anytime, anywhere access to information a reality for billions of people around the world. In addition to providing innumerable benefits, these changes are raising new challenges impacting privacy, the role of digital media, cybersecurity, intellectual property and many other areas. Researchers with the Luskin Center are helping to develop national and international policy frameworks that are better matched to current and emerging digital technologies. Professor John Villasenor is leading the initiative. ■

VILLASENOR PROVIDES CONGRESSIONAL TESTIMONY

John Villasenor, Luskin Center scholar, provided testimony at a May 17 congressional hearing on “drones” and privacy. The hearing, which was held by the House Judiciary Committee, considered privacy from overhead observations in light of the Constitution, existing statutes and pending legislation. Read the introduction to his testimony, below.

“UAS [unmanned aerial systems], often referred to as “drones,” can be employed in an endless variety of civilian applications, the overwhelming majority of them beneficial. However, like any technology, UAS can also be misused. The most common concern regarding domestic UAS relates to their potential impact on privacy. This is a legitimate concern. Existing laws and jurisprudence provide an important foundation, but they also leave many questions unanswered.

“For non-government operators, determining when UAS use violates privacy involves the tension between First Amendment freedoms and common law and statutory privacy protections. With respect to government-operated UAS, the Fourth Amendment is of course central to the privacy question. While the Supreme Court has never explicitly considered warrantless observations using UAS, a careful examination of Supreme Court privacy jurisprudence suggests that the Constitution will provide a much stronger measure of protection against government UAS privacy abuses than is widely appreciated. The Fourth Amendment has served us well since its ratification in 1791, and there is no reason to suspect it will be unable to do so in a world where unmanned aircraft are widely used.

“This does not mean that there is no need for additional statutory UAS privacy protections. However, when drafting new laws it is critical to adopt a balanced approach that recognizes the inherent difficulty of predicting the future of any rapidly changing technology. Although unmanned aircraft pose real and increasingly well-recognized privacy concerns, they also offer real and much less widely understood benefits. A dialog conducted with full awareness of this balance will be much more likely to lead to positive policy outcomes.”

Complete testimony, part of the Congressional Record, is available at: l.usa.gov/14cAucl. ■





SMART PANEL SERIES 2013



*Natalie Knight,
graduate student researcher,
Luskin Center*

The Luskin Center will host a series of panel sessions in the fall of 2013 to address the future of digital media. Each session in this SMART (Social Media And Revolutionary Technologies) series will involve an expert panel of speakers. An advisory board of thought leaders are providing input on the development of the SMART series, with support from Natalie Knight, graduate student researcher from the UCLA Luskin School and School of Law.

DIGITAL MEDIA IN THE AGE OF THE CLOUD

The move to cloud computing is one of the defining technology trends of the early 21st century. By decoupling the concepts of location and information access, the cloud is upending traditional assumptions regarding media creation, dissemination and consumption. While this creates many new opportunities, it also raises challenges for business models and international trade frameworks that evolved in the pre-cloud era.

THE FUTURE OF DIGITAL MUSIC DELIVERY

Music distribution is undergoing a fundamental shift. While in the pre-Internet era consumers accessed music primarily through over-the-air AM/FM broadcasts and purchases of physical media such as records, today an increasing amount of music is delivered digitally using the Internet or wireless networks. In addition, there is a far wider range of choices available to consumers who wish to customize their content. Artists have also benefited from the ability of digital distribution to reach expanded audiences, and to enable interaction with those audiences in novel ways.

THE DEMISE OF OWNERSHIP: DIGITAL CONTENT IN THE AGE OF LICENSING

Traditionally, sales of music, books and movies involved the purchase of works embodied in material objects such as a CD, printed book or DVD. Today, however, what are often called content “purchases” are in fact generally licenses that can leave consumers with significantly less control over content than in the past. This significantly alters the dynamics of markets, which have long benefited from the circulation of used works.

CROWDSOURCING, PAYWALLS, AND THE FUTURE OF NEWS

The Internet and social networks have dramatically changed how news is acquired and delivered. Far more people than in the past are able participate in the newsgathering process. In addition, news consumers can also become news disseminators through the use of social networks to propagate links to timely stories. Consumer expectations regarding news have changed as well, with people often expecting nearly immediate information, particularly when there are breaking news events. Against this backdrop, traditional media organizations are working to identify business models that can allow them to maintain profitability while also maximizing audience in an increasingly cluttered news landscape. ■



Photo by Barry Levine, Inc.

LOS ANGELES BUSINESS COUNCIL'S 7TH ANNUAL SUSTAINABILITY SUMMIT

Luskin Center research was featured at the Los Angeles Business Council's Sustainability Summit in April. Director J.R. DeShazo gave insights and highlights from this research, conducted in partnership with LABC, to support solar energy policy in Los Angeles and the strategic implementation of the California Clean Energy Jobs Act. ■

IOES/LUSKIN CENTER RESEARCH SEMINARS

Luskin scholar Magali Delmas leads the Institute of the Environment and Sustainability (IoES)/Luskin Center monthly lunch seminar. They provide an opportunity for UCLA professors to discuss their research findings.

- 1) **Climate engineering: challenges to international law and potential responses**
Ted Parson, School of Law
- 2) **Glacial climate**
Aradhna Tripathi, Institute of Geophysics and Planetary Physics, Department of Earth and Space Sciences and Department of Atmospheric and Oceanic Sciences
- 3) **Corporate sustainability and employee productivity**
Magali Delmas, IoES and Anderson School of Management
- 4) **Managing the invasion: genomics of western tiger salamanders**
Bradley Shaffer, School of Law
- 5) **The future of plug-in electric vehicles**
J.R. DeShazo, Luskin Center, Department of Public Policy and IoES
- 6) **The myth of isolates: ecosystem ecologies in the nuclear pacific**
Elizabeth DeLoughrey, IoES and Department of English
- 7) **Smart water systems for water sustainability: incentives and impediments**
Yoram Cohen, Department of Chemical and Biomolecular Engineering and IoES
- 8) **Mitigating climate change by sequestering carbon in wetlands: scientific and policy issues**
Richard Ambrose, IoES and Department of Environmental Health Sciences

MARY NICHOLS IN TIME'S 100 MOST INFLUENTIAL PEOPLE IN THE WORLD



Mary Nichols, chair of the California Air Resources Board and board member of the Luskin Center, was profiled in *TIME* magazine as one of the world's 100 most influential people. She was recognized for "her decades of service in which the changes she pushed in California and D.C. — to boost vehicle fuel economy, cut acid rain and reduce greenhouse gases — have become global standards." ■

AWARDS FROM THE AMERICAN PLANNING ASSOCIATION

The American Planning Association honored three pieces of collaborative work involving the Luskin Center. At an awards ceremony in Chicago in April, "The Model Design Manual for Living Streets" received the National Planning Achievement for Best Practice. The American Planning Association, Los Angeles section, also awarded

the Luskin Center's "Southern California Plug-in Electric Vehicle Readiness Plan" and "PEV Atlas" with the 2013 Planning Excellence Award for Best Practice, while "Reclaiming the Right-of-Way: A Toolkit for Creating and Implementing Parklets" received the 2013 Academic Award of Excellence. ■

WALL STREET JOURNAL COVERAGE

The Wall Street Journal noted the release of a Luskin Center and Los Angeles Business Council report. The article highlighted that a revolving loan fund would quadruple investment and job creation, from the initial \$2.5 billion that will result from Proposition 39, to advance energy efficiency and expand clean energy generation. ■

LUSKIN STUDENT RECEIVES SWITZER FELLOWSHIP



The Switzer Environmental Foundation awarded a Fellowship to Miriam Torres, Urban Planning student and recipient of a Graduate Research Grant from the Luskin Center. ■

PLUG-IN 2012 CONFERENCE & EXPOSITION

Brett Williams, program director of electric vehicles and alternative fuels, spoke at the Plug-In 2012 Conference & Exposition. His panel covered future directions for battery technology, secondary use and battery recycling. ■



SOUTHERN CALIFORNIA SUSTAINABILITY FORUM AND MOBILITY 21

Ayala Ben-Yehuda, EV readiness project manager, spoke on the panel Electric Vehicles Are Coming: What Local Governments Need to Know, at the 2012 Southern California Sustainability Forum. Ayala also presented in the Mobility 21 transportation infrastructure conference. ■

ALTCAR CONFERENCE

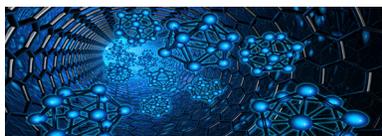
J.R. DeShazo spoke at the 2012 AltCar Expo & Conference on the topic of EV common sense for HOA common areas, preparing for plug-in electric vehicles in multi-family, high rise apartments and condos/townhomes. ■

SMART CITY WEEK



Brett Williams was invited to Yokohama, Japan to address Smart City Week 2012, an international conference and exhibition. Dr. Williams' talk was on Plug-In-Vehicle Battery Secondary Use: Vehicle-to-Grid and Distributed Energy-Storage Value. ■

GOVERNANCE OF EMERGING TECHNOLOGIES: LAW, POLICY AND ETHICS



Elizabeth Beryt, nanotechnology policy fellow, presented at the first annual Conference on Governance

of Emerging Technologies: Law, Policy and Ethics held in Chandler, AZ on May 20-21.

Elizabeth's presentation focused on her article, co-authored by professor Timothy Malloy, which examines the potential opportunities for and constraints on the use of the new predictive toxicology paradigm by regulators, specifically with regards to section 4 of the Toxic Substances Control Act. ■

ENVIRONMENTAL ECONOMICS, POLICY AND MANAGEMENT SEMINARS



UCLA's Luskin Center, Institute for the Environment and Sustainability (IoES), Center for Climate Change Solutions and Anderson School of Management co-host a new monthly seminar, since January 2013, that creates a forum to discuss the latest research on environmental economics, policy and management.

- 1) **Commercial building electricity consumption: the role of structure quality, management and contract incentives**
Matthew Kahn, IoES, Department of Economics and Department of Public Policy
- 2) **Energy efficiency in small and medium-sized manufacturing firms: order effects and the adoption of process improvement recommendations**
Charles Corbett, Anderson School of Management
- 3) **Sustainability and competitiveness in Mexico**
Dennis J. Aigner, UC Irvine and EGADE Business School, Tecnológico de Monterrey
- 4) **Climate engineering: implications for global versus partial climate cooperation**
Ted Parson, School of Law
- 5) **Restricting driving for better traffic and cleaner sky: did it work in Beijing?**
Rui Wang, Department of Public Policy, Department of Urban Planning and Chinese Planning Professional Training Program
- 6) **Emission standards with trading: evidence from Alberta's GHG regulation**
Deepak Rajagopal, IoES and Department of Urban Planning

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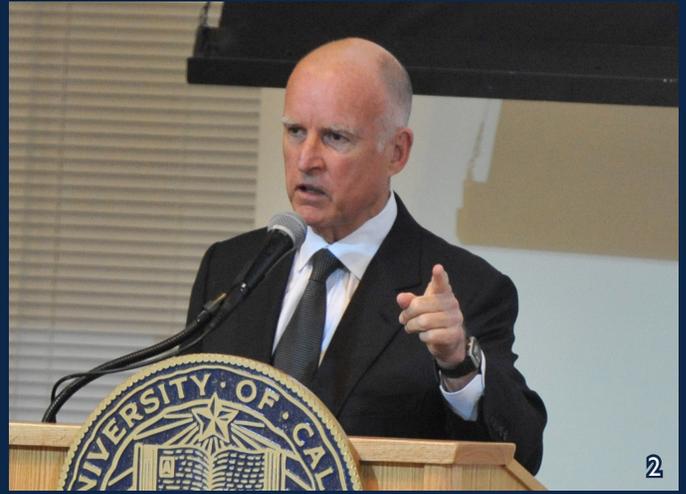
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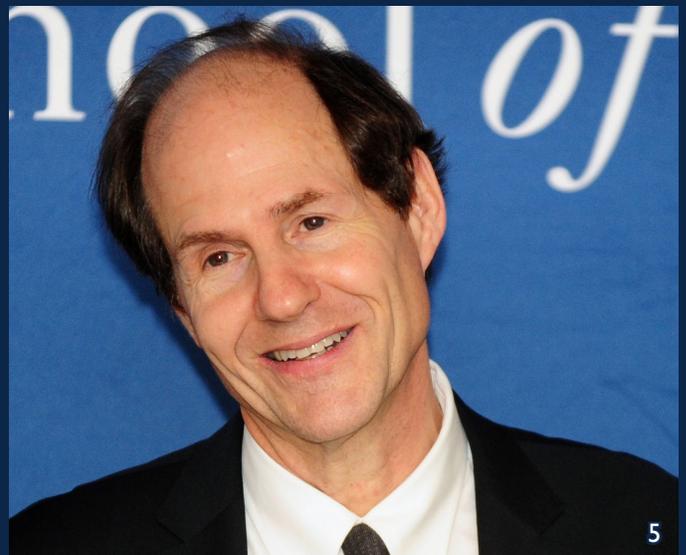


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- 2) Governor Jerry Brown
- 3) Mayor-elect Eric Garcetti
- 4) Wendy Greuel, Chancellor Gene Block and J.R. DeShazo
- 5) Cass Sunstein
- 6) Janette Sadik-Khan