### UCLA Luskin School of Public Affairs

# Luskin Center



SPRING 2012

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### Greetings,

In the pages that follow, we share news about research findings, opinion pieces by thought leaders, and news of the policy and technology impacts achieved by the Luskin Center in the 2011-2012 academic year.

Some of these highlights included hosting the Governor's Conference on Local Renewable Energy Resources, which has helped advance California's goals for locally generated renewable energy, as well as supporting the Los Angeles Department of Water and Power design the CLEAN LA solar program. As part of our newly expanded Sustainable Mobility Initiative, the Luskin Center also supported implementation of state legislation on electric

vehicles. This included Senate Bill 880 that helped remove barriers to installing electric vehicle charging stations in multiunit residential buildings. We were also proud to co-host the Future of Water in Southern California Summit, where leaders articulated a framework for a more self-sufficient water future for the region.

As we enter our third year with the center, we look forward to the challenges and opportunities ahead as we continue to bring the latest research, technology, and science to civic leaders to inform policy and advance environmental sustainability. In the coming year, we expect rapid growth in our initiative areas of Sustainable Mobility and Green Chemistry. We invite you to learn more about our initiatives at www.luskin.ucla.edu. Please share your ideas and continue to engage with the Luskin Center.



Left to right: Colleen Callahan with Lisa Jackson, administrator of the U.S. Environmental Protection Agency, and J.R. DeShazo

Warm regards,

Colleon Colline.

J.R. DeShazo, Director

Colleen Callahan, Deputy Director

# OVERVIEW

### THE LUSKIN CENTER'S **IMPACT** BY NUMBERS IN THE PAST YEAR

#### RESEARCH

- Conducted research in six initiative areas, providing or securing funding for 25 research projects.
- Submitted 20 research grant proposals.

#### COMMUNITY ENGAGEMENT AND PUBLIC AFFAIRS

- Hosted five major conferences and a dozen lectures.
- Briefed and facilitated discussions with over 150 local and national leaders.

#### STUDENT SUPPORT

- Supported and advised 30 students.
- More than 150 students volunteered at Luskin Center conferences and other events.
- Approximately 400 students participated in our events.

#### MEDIA

• Received over 200 media hits, including from the Los Angeles Times, New York Times, Atlantic Monthly, NBC Newsroom, Southern California Public Radio, Silicon Valley Mercury News, KPCC, KQED, and the blogosphere.



Left to right: J.R. DeShazo, director of the Luskin Center; Franklin D. Gilliam, Jr., dean of the Luskin School of Public Affairs; Los Angeles Mayor Antonio Villaraigosa; Renee and Meyer Luskin, benefactors; Chancellor Gene D. Block; and Scott Waugh, executive vice chancellor, at the Meyer and Renee Luskin School of Public Affairs Dedication Ceremony

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1) Benefactors Renee and Meyer Luskin 2) Governor Jerry Brown 3) Professor Geoffrey Cowan, University of Southern California; State Senator Fran Pavley; UCLA Chancellor Gene D. Block 4) Assistant Vice Chancellor Keith S. Parker; J.R. DeShazo, Luskin Center; Los Angeles Mayor Antonio Villaraigosa; and Executive Vice Chancellor Scott Waugh 5) Assistant Vice Chancellor Keith S. Parker; Chancellor Gene D. Block; and Governor Jerry Brown 6) State Senate President pro Tempore Darrell Steinberg; Madelyn Glickfeld, UCLA Institute of the Environment and Sustainability; and J.R. DeShazo, Luskin Center

### A YEAR OF LEADERSHIP AND COLLABORATIVE PROBLEM SOLVING















7) Los Angeles City Controller Wendy Greuel 8) Vernice Miller-Travis, National Environmental Justice Advisory Council ; and Professor Rachel Morello-Frosh, UC Berkeley 9) J.R. DeShazo and Los Angeles City Council Member Eric Garcetti 10) H. David Nahai, David Nahai Consulting Services 11) Timothy Brick, Metropolitan Water District of Southern California 12) Dean Franklin D. Gilliam, Jr., UCLA Luskin School of Public Affairs 13) Mary Leslie, Los Angeles Business Council 14) Jeffrey Kightlinger, Metropolitan Water District of Southern California 15) Hasan Ikhrata, Southern California Association of Government 16) Chairman Mary Nichols, California Air Resources Board

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### **ELECTRIC VEHICLES**

### LEADING ELECTRIC VEHICLE READINESS PLAN FOR SOUTHERN CALIFORNIA

The Luskin Center is developing a Plug-In Electric Vehicle (PEV) Readiness Plan for the Southern California Association of Governments and at the subregional levels for the Western Riverside Council of Governments and the South Bay Cities Council of Governments. This involves a full regional market needs assessment and development of a PEV infrastructure plan.



### **ELEVEN PERCENT OF NEW VEHICLES IN 2020** WILL BE ELECTRIC, PREDICTS UCLA STUDY

Los Angeles will be a US leader in electric vehicle adoption, according to the study "Realizing the Potential of the Los Angeles Electric Vehicle Market" published by the Luskin Center and conducted by the UCLA Anderson School of Management. "This offers the city the opportunity to reduce the local and global environmental impacts of vehicle travel, as most Angelenos rely on an automobile for much of their travel," said Luskin Center project director Juan Matute.

The research project identified the locations of early plug-in electric vehicle (PEV) adopters, adoption rates, and barriers to market expansion. This study, replying on direct survey data from over 2,000 respondents, estimated that PEVs

> would compose 9 percent of total car sales in 2015 and 11.7 percent in 2020. However, the study found that incentives will have little effect as long as supply constraints persist.

One of the key constraints identified was access to home-based charging units for residents of multiunit dwellings.





David Peterson and Juan Matute



### OVERCOMING CHALLENGES TO ELECTRIC VEHICLE CHARGING IN MULTIFAMILY RESIDENTIAL BUILDINGS

Apartment buildings and condominiums face physical, procedural, and financial challenges to installing EV charging units. Luskin Center Researcher David Peterson produced a report, "Addressing Challenges to Electric Vehicle Charging in Multifamily Residential Buildings," that explored the challenges and made





RESEARCHERS ON THE PROJECT "POLICIES TO INCREASE PEV ACCESS IN MULTI-UNIT DWELLINGS"

Left to right: Megan Kirkeby, Greg Bonett, and Judith Balmin recommendations. Case studies described the installation process for several buildings from the landlord and home owner association (HOA) perspectives, for both existing buildings and new construction to minimize costs. Peterson found that EVs need to occupy parking spaces closest to electrical panels and electrical rooms, and that HOAs need tailored approaches to addressing apportionment of common-area electricity costs, parking space assignments, and EV charging station installation costs.

Building on this research, the Luskin Center and a team at the Anderson School of Management produced a decision-making brochure and interactive financial model to help owners of multiunit dwellings understand the potential risks and rewards to installing EV charging stations at their properties. The financial model allows property owners to input specific variables related to their property to determine an estimated rate of return period for their potential investment in an EV charging system.

Policy incentives play a significant role in overcoming challenges to EV charging in multifamily residential dwellings. The Luskin Center is working with a team of masters in public policy students to produce a follow-up report, "Policies to Increase PEV Access for Residents of Multi-Unit Dwellings." The project is a comprehensive analysis of policies addressing multiunit dwellings and PEVs, both abroad and in the US, to illuminate best practices in local policy responses and highlight lessons that can be applied to California and the Los Angeles region.

### CONTRIBUTING TO LEGISLATION GOVERNING ELECTRIC VEHICLE CHARGING STATIONS

California Senate Bill 209 (Corbett), signed by Governor Brown in 2011, banned home owner associations from prohibiting EV charging stations in multiunit dwellings. The California Energy Commission (CEC) reviewed research by the Luskin Center's David Peterson and others as part of the CEC's recommendation for fixing technical issues with SB 209. This led to SB 880 (Corbett), which addressed the technical problems and helped remove barriers to installing electric vehicle charging stations in multiunit residential buildings.

### CAN PUBLIC EV CHARGING STATIONS BE FINANCIALLY SUSTAINABLE?

It depends, finds the UCLA Anderson School of Management team that worked on the Luskin Center research project "Public and Private Business Models for Different PEV Charging Environments." This project examines the value chain and competitive environment surrounding charging station service providers; explores the costs of charging station equipment, installation, operations, and maintenance; and looks at revenue schemes that support cost recovery. The researchers found negative net present values for all modeled scenarios but also discovered that profitability could be improved with changes in utilization, turnover, and willingness to pay. The findings reveal that utilizing Level 1 charging equipment at locations with longer parking durations may be profitable.



RESEARCHERS ON THE PROJECT "PUBLIC AND PRIVATE BUSINESS MODELS FOR DIFFERENT PEV CHARGING ENVIRONMENTS"

Left to right: Chia Goh, Ellen Lin, Daniel Chang, Alicia Rice, Dan Erstad, and Angel Tsao

# MPACT SUSTAINABLE MOBILITY

### UC SUMMIT CONVENES WORLD CITIES ON ELECTRIC VEHICLE ROLLOUTS

As battery technology improves and vehicle makers introduce new products, cities are becoming the testing grounds for how and when consumers will get on board with electric mobility options.

Architects of electric vehicle programs from San Diego to Shanghai shared their experiences May 5 at the first-ever World Electric Vehicle Cities & Ecosystems conference, co-hosted in downtown Los Angeles by the UCLA Luskin Center for Innovation and the UC Davis Plug-In Hybrid & Electric Vehicle Research Center. Sponsors included BMW Group, the South Coast Air Quality Management District, Electric Power Research Institute, the California Public Utilities Commission, Enterprise Holdings, Southern California Edison, ECOtality, Fehr & Peers, and the UCLA GSA Sustainable Resource Center.

The international conference brought together over 200 leaders from municipal governments and public agencies, vehicle and charging companies, utilities, universities

and nonprofits that support electric vehicle (EV) adoption in cities. Enabling city-to-city learning, the conference featured representatives from Amsterdam, Barcelona, Lisbon, Los Angeles, Portland, San Diego, Shanghai, and Stockholm, among other pioneering municipalities. Common themes included EV pilot programs; best practices for streamlining permitting, incentivizing EV use, and engaging with the public; and success stories of integrating EVs into municipal fleets, developing charging infrastructure, and greening EV energy sources. Attendees also explored areas for further research and information-sharing.

"Cities are critical catalysts in the development of electric vehicle ecosystems. Yet in this nascent EV marketplace, there a strong need for decision support," stated J.R. DeShazo, director of the UCLA Luskin Center for Innovation. "We organized World Electric Vehicle Cities & Ecosystems to help municipalities, as well as their nonprofit and private sector partners, refine and advance new visions for the development of EV ecosystems."

The Global Electric Vehicle Insight Exchange (EVX) debuted at the conference, launching the first international EV City Casebook and web portal to accelerate the global push toward cleaner, electrified transportation. EVX is a knowledge-sharing consortium that pools information and



The Conference Steering Committee, from left to right: Tom Turrentine, director of the PH&EV Research Center at the University of California, Davis; J.R. DeShazo, director of the UCLA Luskin Center for Innovation; Tamar Sarkisian, conference coordinator with the UCLA Luskin Center for Innovation and candidate for masters in urban planning; Robert Stüssi, president of the APEV Portuguese Electric Vehicle Association; Paul Telleen with the U.S. Department of Energy; David Beeton, operating agent of EV Ecosystems at the International Energy Agency; Tali Trigg with the International Energy Agency; and Ben Holland, manager of Project Get Ready with the Rocky Mountain Institute (not pictured: Stephen Crolius of The William J. Clinton Foundation and Yunshi Wang, director of the China Center for Energy & Transportation at UC Davis)

#### WORLD ELECTRIC VEHICLE CITIES & ECOSYSTEMS MAY & 2012 J JW MARBIDT | DOWNTOWN LOS ANGELES





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



Thomas Becker, vice president of government affairs, BMW Group



expertise from an international network of cities, regions and countries to provide an evolving perspective on worldwide electric vehicle deployment progress.

"This is really about conversations," said Tom Turrentine, director of UC Davis' PH&EV Research Center, as he announced the web portal. The portal will facilitate sharing of ideas and data in a common reporting structure from EV projects around the world, and will initially feature the 16 cities profiled in the EV City Casebook. Debuting at the conference on May 5, the EV City Casebook highlights policies, incentives and consumer responses from nearly a third of the early global EV market.

That market is still relatively small. But amid rising gas prices and concerns over climate change and dependence on foreign oil, electric vehicle promotion is the one issue on which "I see more bipartisan agreement on than any other," stated David Sandalow, assistant secretary of policy and international affairs at the U.S. Department of Energy. He cited a new crop of federally-funded EV readiness grants, charging infrastructure demonstration projects and EV purchase incentives.

Thomas Becker, vice president of government affairs for BMW Group, noted that changing consumer preferences are also driving a growing demand for EVs in cities. "People care about how the electricity is produced that goes into their cars," said Becker, referring to BMW surveys that found 80 percent of Berlin respondents wanted their cars to be emission-free. He expressed BMW's desire to partner with cities to create sustainable mobility.

Becker added that California is the most important electric vehicle market in the United States—no surprise, given the state's requirement that 15 percent of new cars sold in California be zero-emission vehicles by 2025.

Matt Miyasato of the South Coast Air Quality Management District explained that electric transportation is part of the solution to Southern California's air quality challenges. He highlighted that the San Pedro Bay Ports Clean Trucks Plan creates an opportunity for electric trucks. This was underscored by Jasna Tomić of CALSTART, who explained that e-trucks work best on limited-range fixed routes. Tomić also noted that the payback period on an e-truck ranges from six to eight years, and that cost and quality improvements are needed for wider adoption.

"We're reflecting the zeitgeist of vehicle introduction and technologies in the United States," said the day's final speaker, U.S. Department of Energy Clean Cities co-director Linda Bluestein. "It's early days for electric vehicle programs in the United States."

The UCLA Luskin Center is committed to staying on the cutting edge of this emerging technology and helping cities prepare for EVs. The center is currently working on a regional EV readiness plan for the Southern California Association of Governments.

Left to right: Ramon Pruneda, strategic sectors project manager for the Barcelona City Council; Maarten Linnekamp, project manager with Management Consulting in Amsterdam, Netherlands; and Guangyu Cao, deputy general manager for the Shanghai International Automobile City Group Co.



Left to right: Robert Stüssi, president of the APVE Portuguese Electric Vehicle Association; Diane Wittenberg, executive director of the California Plug-In Electric Vehicle Collaborative; and Ben Holland, manager of Project Get Ready with the Rocky Mountain Institute



From left to right: Jasna Tomić, fuels program manager for CALSTART; Mike Ferry, transportation programs manager for the California Center for Sustainable Energy; and Matt Miyasato, assistant deputy executive officer of the South Coast Air Quality Management District





### THOUGHT LEADERSHIP ON SUSTAINABLE MOBILITY

CALIFORNIA DRIVES INVESTMENT IN CLEANER CARS



By State Senator Fran Pavley (D-Agoura Hills)

Earlier this year, the California Air Resources Board passed a new package of Advanced Clean Car rules continuing California's leadership in auto technology. It is rare that a regulatory action will result in such a big win for the economy, consumers, national security, and the environment.

Simply put, cleaner cars will save money and drive job creation.

As the original author of California's landmark clean car law that now serves as our national standard, I believe the Advanced Clean Car standards will help clean our air, reduce our dependence on foreign oil, ensure automakers have the certainty they need to create jobs, and save consumers money at the pump.

The adopted rules combine new control of greenhouse gases, soot, and other pollutants in both gasoline and diesel powered vehicles. The California Air Resources Board economic analysis indicates some of the benefits of the new rules:

- Savings of \$5 billion in operating costs for California drivers by 2025—which rises to \$10 billion in 2030 when more advanced cars are on the road
- An additional 21,000 clean car related jobs in California in 2025, rising to 37,000 in 2030
- Reduction of 52 million tons of greenhouse gases by 2025, the equivalent of taking 10 million cars off the road

California will continue to lead the world in creating markets for cleaner, more fuel-efficient cars. In fact, California is now the home to three innovative electric car companies bringing in revenue and creating new jobs. Once again, our state is leading the way in economic and environmental sustainability.

State Senator Fran Pavley (D-Agoura Hills) is the Chair of the State Senate Natural Resources and Water Committee. Senator Pavley authored Assembly Bill 1493 (2002), which created California's first advanced clean car standards and became the national standard. She is a member of the Luskin Center advisory board.



### COMPLETE STREETS FOR CALIFORNIA 2012

Over 300 planners, engineers, advocates, policy makers, and researchers convened on March 2, 2012, for the UCLA Complete Streets for California conference in downtown Los Angeles. Hosted by UCLA's Luskin School of Public Affairs, Lewis Center, and Luskin Center, this conference expanded on the 2011 UCLA Complete Streets for Los Angeles conference by highlighting recent accomplishments and advancing new approaches for implementing complete and living streets in California and in the US. Presenters covered topics such as how to redefine street performance metrics, repurpose roads as public space, and integrate equity considerations into complete streets planning.

Complete streets are multiuse environments that enable safe and comfortable access for all users in the streets and sidewalks. Complementary to complete streets, living streets consider the social, economic, and environmental sustainability of streets, including green space, storm water capture and use, inviting architecture, economic development, and social equity.

Gil Penalosa, executive director of the healthy communities nonprofit 8–80 Cities and former government supporter of complete streets initiatives in Bogota, Colombia, energized participants with his keynote address. Making a case for designing streets where people ages 8 to 80 feel safe, Penalosa stated that "mobility is a human right." He offered encouragement by noting that "If these cities [Copenhagen, Vancouver] can do it, any city in California can do it."

Other participants discussed barriers and opportunities for achieving complete streets throughout California. In Los Angeles, a minimum of four different agencies own the streets, noted Tim Papandreou, deputy director at the San Francisco Municipal Transportation Agency and a former Angeleno.



Papandreou also believes that building a movement of support in Los Angeles for more pedestrian and bicycle-oriented streets is critical. "The political environment will change. In San Francisco, you were crazy to run on a complete streets platform 10 years ago. Now, you're crazy not to."

The complete streets movement is at a point of excitement and transition. Brian Taylor, professor of urban planning at UCLA and director of the UCLA Lewis Center, noted that we are transitioning from a "project to network, streets to communities, and from outliers to mainstream, baby steps to big change." Yet many obstacles still need to be addressed and more research needs to be done. The UCLA Complete Streets Initiative will help fill these gaps in the coming years.



### **COMPLETE STREETS** OVER 15,000 HITS TO LIVING STREETS MANUAL WEBSITE. BRINGING CHANGE TO CITIES ACROSS NORTH AMERICA

Since its release in October 2011, the Model Design Manual for Living Streets has generated highlevel visibility from national media outlets, the US Department of Transportation, and municipalities across North America. Ryan Snyder Associates, the Los Angeles County Department of Public Health,

and UCLA's Luskin Center and Lewis Center produced the manual to provide guidance for cities seeking to update their existing road standard manuals to achieve streets design that ensures pedestrians, cyclists, and transit users can travel safely and comfortably. Colleen Callahan, deputy director of the Luskin Center, managed the section that focuses on tips and tools for creating streetscape ecosystems that are lively, economically vibrant, and environmentally sustainable. With over 15,000 hits on the manual's website and over 5,100 downloads to date, outcomes of the manual have been significant. They include:

• Los Angeles County Metropolitan Transportation Authority

will use the manual in scoring projects for funding.

- Los Angeles County is using the manual's innovative bikeway treatments in its bike plan.
- Baldwin Park, Lancaster, and other cities across North America are adopting customized versions of the manual or using it to update their own guidelines.





### PARKLETS TO TRANSFORM THE STREETS OF DOWNTOWN LOS ANGELES

The Rosalinde and Arthur Gilbert Foundation awarded UCLA's Complete Streets Initiative a \$75,000 grant for research and implementation of the Parklets for Los Angeles project. A "parklet" is a minipark created by the low-cost conversion of small and underutilized residual spaces that were originally devoted to cars. These "parklets" are beginning to appear in cities such as San Francisco, New York and Philadelphia.

In the first phase of this project, the Complete Streets Initiative will create a "Parklet Toolkit" to provide Los Angeles and other cities with practical guidance for developing these small-scale parks. The second phase, conducted in



collaboration with the Downtown Los Angeles Neighborhood Council, will culminate in construction of a demonstration parklet in downtown Los Angeles. The UCLA parklet project, designed for active recreation, will complement the Downtown Neighborhood Council's work as it moves forward with two other parklets designed for passive recreation. These efforts are part of a larger movement advanced by UCLA's Complete Streets for Los Angeles Conference.

Anastasia Loukaitou-Sideris, associate dean of the Luskin School of Public Affairs, is the principal investigator of the Gilbert Foundation-supported parklet project. Other research team members include Madeline Brozen, Complete Streets Initiative program manager, and Colleen Callahan, deputy director of the Luskin Center for Innovation.

### STUDENT RESEARCH SUPPORTS CiclAvia, INTEGRATING COMPLETE STREETS ELEMENTS INTO LOS ANGELES GENERAL PLAN, AND MORE

During the 2011–2012 academic year, six graduate students in the UCLA Department of Urban Planning are conducting their capstone projects with the UCLA Complete Streets Initiative and clients in the local community. These projects support pedestrian planning, multimodal level of service, and institutional capacity to implement complete streets. Below is a preview of selected projects.

As the city of Los Angeles is updating the Mobility Element of its General Plan, UCLA's Kristen Torres is investigating how the city could do so in a way that substantively meets the requirements of the California Complete Streets Act. Torres analyzed the state's guidance document on how to draft circulation elements that include balanced, multimodal transportation networks for all users, including bicyclists, transit riders, and pedestrians. Torres recommends that as



Kristen Torres at the Complete Streets for California Conference

Los Angeles moves further into its General Plan Mobility Element update, the city should continue to build on the momentum from its 2010 Bicycle Plan and model its efforts on the successful Caltrans Complete Streets Deputy Directive.

Ryan Johnson's research is supporting CicLAvia, a popular event that closes a select number of streets to cars and opens them to bicyclists and pedestrians. Hundreds of thousands of Angelenos



Ryan Johnson (center) and other CicLAvia supporters

have enjoyed CicLAvia since the first event was held October 2010 and semiannually ever since. Johnson surveyed participants at the October 2011 event and found that firsttime attendees, compared to people who had attended the event previously, were less likely to have taken any trips by bicycle in the previous week. First-timers were also more likely to have arrived at the event by transit rather than by walking or cycling. Johnson recommends that CicLAvia work with the city of Los Angeles to provide free or lowcost bicycle rentals along the route to encourage first-time attendees to participate by bicycle, and to ensure that future route extensions are accessible by transit to attract attendees who are uncomfortable cycling on urban streets under normal traffic conditions.

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## CLIMATE ACTION

### PROGRESS REPORT ON CLIMATE ACTION DEBUTS AT CONFERENCE HOSTED BY GOVERNOR'S OFFICE OF PLANNING AND RESEARCH

The UCLA Luskin Center for Innovation's recent update of "The Progress Report on Climate Action Planning in Southern California" debuted at the conference "Confronting Climate Change: A Focus on Local Government Impacts, Action, and Resources." The conference was hosted April 9 by the



Governor's Office of Planning and Research.

The progress report and the Southern California Climate Action Database, on which the progress report is based, supports the Governor's goal of providing tools and resources for local governments to reduce climate change risks and impacts. The database is a resource developed by UCLA that provides cities and stakeholders with access to city climate planning information and allows cities to take credit for actions they have taken.

Authors J.R. DeShazo and Juan Matute, with support from Norman Wong and Michael Sandler, reveal that roughly one-third of Southern California cities have taken some steps toward reducing greenhouse gas emissions. The report lists ten cities whose climate performance stands out. While Santa Monica is the region's definitive climate planning leader, many other cities will soon achieve similar levels of climate planning.

Local governments are essential partners in California's

effort to reduce greenhouse gas emissions and adapt to climate change. The California Global Warming Solutions Act, AB 32 (2006), establishes a statewide greenhouse gas emissions target to reduce emissions to 1990 levels by 2020. The state's Climate Change Scoping Plan, which details the state's efforts to meet its AB 32 greenhouse gas reduction target, calls on local governments to reduce emissions by 15 percent from 2008 levels by 2020.

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In 2006, I joined UCLA's faculty and the Brookings Institution Press published my first book, Green Cities: Urban Growth and the Environment. The book's punch line is: I am optimistic that wealthier individuals will demand to live in "green cities," and this will provide local politicians with strong incentives to create them. It is no accident that local air pollution and water pollution have fallen sharply in the US over the last 30 years. Successful government regulation deserves much of the credit for this trend. In contrast, greenhouse gas emissions continue to rise, and this is due to the combination of economic growth and the absence of a credible incentive (such as a carbon tax or a pollution permit market) to nudge polluters to change their behavior. I moved to California in part due to my excitement about California's AB32 and this landmark legislation's potential to act as a "green guinea pig" that would teach the rest of the nation and the world about how to configure public policy to achieve the win-win of economic growth and enhanced sustainability.

Flash forward to the year 2012 and I am still in deep thought about economic growth's impact on city quality of life, but now my focus has moved to China's rapidly growing cities. In joint research with Professor Siqi Zheng of Tsinghua University, we have revisited some of my favorite questions about the green city consequences of urban growth but are studying these questions using unique data from China. Today, China's cities are experiencing amazing economic growth. Millions of new vehicles are being registered and new subways, airports, roads, and urban infrastructure are being built. It is well known that China is home to some of the world's most polluted cities based on particulate levels and rising greenhouse gas emissions.

While I acknowledge the very serious problems that China's cities face, I am highly optimistic about China's urban environmental future. Our empirical work indicates that Chinese households value green cities and that more educated people prioritize environmental protection. Given that attracting and retaining skilled workers is the "golden goose" for the modern Chinese economy, we argue that urban mayors will have strong incentives to embrace green city strategies or their cities will suffer a brain drain due to outmigration. For those cities that continue to focus on heavy industry, adopting US and European emissions control equipment can sharply reduce the emissions from this sector. China's endowment of coal poses the greatest challenge to an environmental optimist. A major sustainability challenge is to figure out how to incentivize China not to burn its coal and to address its increasing demand for electricity using renewable power.

### THOUGHT LEADERSHIP ON CLIMATE CHANGE

### CHINA'S GREEN CITIES



By Luskin scholar Matthew E. Kahn





### ENVIRONMENTAL HEALTH AND SAFETY OF NANOTECHNOLOGY

#### NANOTECHNOLOGY TOOLKIT DEBUTS

A new manual highlights specific guidelines for safely handling engineered nanomaterials in university research laboratories. Published in early April, "Nanotoolkit: Working Safely With Engineered Nanomaterials in Academic Research Settings" was developed by Luskin scholar and



Luskin scholar Hilary Godwin

UCLA professor of environmental health sciences Hilary Godwin along with an interdisciplinary team of environmental health and safety professionals from academic institutions, the National Institute for Occupational Health and Safety, and the California Department of Toxic Substances Control. The Luskin Center provided a fellowship for Khadeeja Abdullah, the doctoral student who worked with Professor Godwin on the toolkit.

Godwin's research focuses on nanomaterials—tiny particles that contain tens to hundreds of thousands of atoms—that are poised for use in everything from organ-targeting cancer therapy to affordable solar power. Godwin's work focuses on elucidating how to eliminate the potentially hazardous aspects of nanomaterials while maintaining their beneficial properties. The Nanotoolkit is part of Godwin's efforts to ensure that researchers are able to work safely with this new technology.

The Nanotoolkit gives an overview of the occupational safety and health concerns around nanomaterials, and helps researchers determine potential risks of proposed procedures and develop standard operating procedures for safe handling of nanomaterials. The manual advises

researchers on how to minimize and respond to exposures, deal with spills, and properly dispose of nanomaterial waste.

The Nanotoolkit is a key component of the Luskin Center's Green Chemistry Initiative, which seeks to mitigate the risks of this promising new technology.

### DEVELOPING A POLICY FRAMEWORK FOR NANOTECHNOLOGY HEALTH AND SAFETY

The Luskin Center is gearing up for an increased investment in our Green Chemistry Initiative in 2012. Luskin scholar Hilary Godwin is leading a partnership between the Luskin Center and the UC Center for Environmental Implications of Nanotechnology. The Luskin Center's role in the partnership will be to develop a policy and regulatory framework for ensuring the safe implementation of nanotechnology. As such, the Luskin Center will help lead discussions with national-level stakeholders to determine the most practical and protective route forward for industry and regulatory agencies.



In 2009, Deutsche Bank Climate Change Advisors published a study that concluded that successful renewable energy markets offered investors "TLC"—transparency, longevity, and certainty. The research found that US energy policy lacked a stable and reliable set of rules.

A glaring example is Congress' failure to extend the Production Tax Credits for wind projects, which expire this year. Given the lead time for such projects, the industry has been brought to a virtual standstill because of Congress' inaction.

Nevertheless, the US remains a significant force in the clean energy arena, led by state action. The standout is California, with the most ambitious goals in the country.

The California Renewable Energy Resources Act (CRERA), which took effect last year, obligates all California utilities to obtain at least 33 percent of their energy from renewable resources by the year 2020. Additionally, Governor Brown has called for the development of 12,000 megawatts of local renewable energy.

The foregoing would seem to evidence solid TLC in California. In fact, the market is undergoing considerable turmoil; we have not yet attained TLC, but we're getting there.

First, CRERA itself is responsible for some confusion because of its formulas for determining eligible renewable resources. Utilities, under pressure to meet the milestones, have sought resources that would satisfy the safest eligibility category (generally, energy produced within California or having its first point of interconnection to a California balancing authority). This unlikely coupling of speed and conservatism has spawned some speculation in the market, fueling land price inflation and clogging interconnection and RFP queues.

Meanwhile, utilities demand ever-lower prices even as some local governments are levying fees on projects. One such effort in Riverside County has drawn a legal challenge. This means that stakeholders (including other agencies with similar programs) must now wait until the courts rule—losing precious time.

California's leadership has clearly paid dividends; clean tech investment in California exceeded \$2 billion in 2009, 60 percent of the total in North America. We must understand, however, that leadership involves risk. The challenge is to manage this transition on the way to TLC with the minimum amount of upheaval and insecurity.

H. David Nahai is president of David Nahai Consulting Services LLC and a partner at the law firm of Lewis Brisbois Bisgaard & Smith. Mr. Nahai formerly served as CEO and commission president of the Los Angeles Department of Water and Power, and later as senior advisor to the Clinton Climate Initiative. He is a member of the Luskin Center advisory board.

### THOUGHT LEADERSHIP ON SUSTAINABLE ENERGY

"I WANT MY TLC: ATTAINING STABILITY IN THE CALIFORNIA RENEWABLES MARKET"



By H. David Nahai



#### SOLAR WORKFORCE OUTPACES JOBS

Thousands of workers are trained and ready to create a solar-panel revolution in Los Angeles, if only city policies would goose the market and create jobs, finds a report presented by the Los Angeles Business Council Institute.

J.R. DeShazo, director of the UCLA Luskin Center for Innovation, and Manuel Pastor, director of USC's Program for Environment and Regional Equity, led the research for this report, "Empowering LA's Solar Workforce: New Policies that Deliver Investments and Jobs."

A key step forward would be adopting policies making it easier for businesses and residents to install rooftop solar panels and sell surplus energy to the Los Angeles Department of Water and Power, the report says. DeShazo's previous research has guided the city in developing a blueprint for such a solar incentive program, called a feed-in tariff, or FiT.





J.R. DeShazo presenting at Mayoral Housing, Transportation, and Jobs Summit

The solar workforce report estimated that more than 2,200 people are trained every year in Los Angeles County for jobs in solar energy installation, design, sales, and more.

With a feed-in tariff in place, the city could put them to work by incentivizing additional federal or state subsidies to complement the FiT for the industrial and commercial market; channeling benefits to disadvantaged communities; bringing transparency and consistency to the labor market through certifications and training standardization; and advocating for continued funding of green training programs.

The researchers presented their report at UCLA during the Los Angeles Business Council's Mayoral Housing, Transportation, and Jobs Summit on November 16, 2011.

DeShazo also presented these research findings to Lisa Jackson, Administrator of the US Environmental Protection Agency, in February 2012.



### LOS ANGELES DEPARTMENT OF WATER AND POWER UTILIZES LUSKIN CENTER RESEARCH FOR SOLAR PROGRAM

The City of Los Angeles is embarking on a new path to solar energy supported by Luskin Center research. The Los Angeles Department of Water and Power (LADWP) began accepting applications on May 17 for the 10-megawatt Solar Feed-in Tariff Demonstration Program. In addition, the City Council approved a measure in April to allow the LADWP to move forward with the groundbreaking CLEAN LA (Clean Local Energy Accessible Now) solar program.

The first 75 megawatts of the CLEAN LA program are expected to come on line this year, with an additional 75 megawatts expected by 2016. The full 150 megawatts will power the equivalent of 34,000 homes in Los Angeles.

Luskin Center research has helped shape the CLEAN LA policy and program, which was advanced by the Los Angeles Business Council and coalition partners. The program will allow local property owners to sell solar power generated from rooftops and parking lots back to the DWP, using a mechanism called a feed-in tariff, or FiT. Los Angeles is the largest city in the nation to adopt such a program, which will supply renewable energy at a reasonable cost while spurring private investment, creating high-quality jobs, reducing greenhouse gas emissions, and helping the state and city meet renewable power requirements.



"Through research and engagement with policy makers, the Luskin Center has been integral in shifting the debate around sustainable energy policy in California and contributed to the CLEAN LA solar program," stated Mary Leslie, president of the Los Angeles Business Council (LABC). "The ground-breaking research conducted by the Luskin Center has provided the foundation for the advocacy of our broad-based CLEAN LA Coalition, and has contributed to the creation of a robust and cost-effective local solar energy program in Los Angeles this year."

The center has published five reports in the past two years related to solar power for Los Angeles. Three of these studies, commissioned by the LABC, investigated the rationale for, and viability of, an in-basin solar FiT. In the report "Bringing Solar Energy to Los Angeles: An Assessment of the Feasibility and Impacts of an In-basin Solar Feed-in Tariff Program" authors J.R. DeShazo and Ryan Matulka evaluate the solar capacity of the Los Angeles region and recommend how it can be harnessed in a cost-effective and sustainable manner. The authors conducted comparative analyses to determine program features that could be designed to maximize environmental and economic development benefits while minimizing the costs of an in-basin solar FiT.



### UCLA CONFERENCE ADVANCES GOVERNOR'S GOAL FOR LOCAL RENEWABLE ENERGY

Gov. Jerry Brown vowed to overcome California's fragmented regulatory framework and make the state a leader in rooftop solar power generation in less than a decade at a conference co-hosted by the Luskin Center and the Governor's Office. The two-day Governor's Conference on Local Renewable Energy Resources, held July 25–26, 2011, at UCLA, drew elected officials, business leaders, researchers,



Governor Jerry Brown at UCLA

and academics to propose ways to meet Brown's goal of developing localized renewable energy sources that can produce 12,000 megawatts of power for the state by 2020. The conference contributed to the state's design of the feed-in tariff (solar incentive) program mandated by SB 32.

During and after the conference, Brown has focused on solar power as the most likely and abundant source for the bulk of those 12,000 megawatts. "Whatever amount of oil they have over there in Texas, we have a hell of a lot more sun right here in California . . . The sun is more abundant, more powerful, and capable of generating more power," Brown said. "We are spending, we Americans, hundreds of billions of dollars on

importing foreign oil that could all go back into our economy if we had domestic energy sources." Placing solar panels on the rooftops of homes and businesses would create decentralized power systems that would be harder to disrupt, Brown said. He joined a panel of solar-power supporters who highlighted feed-in tariff programs across the globe, which encourage home owners and businesses to install rooftop solar panels that feed power to the city around them.

J.R. DeShazo, director of UCLA's Luskin Center for Innovation and an associate professor of public

policy at the UCLA Luskin School of Public Affairs, who led another panel at the conference, helped develop a feed-in tariff system that forms the basis of Los Angeles' solar plan.

"The governor's commitment to an event like this shows that he recognizes that he can play a leadership role in bringing together all of the pieces needed to make renewable energy possible," DeShazo said. "The event itself recognizes the need to get all the stakeholders at the table, come up with a plan, and implement it. That hard work's going to start tomorrow, in all the panels, when we go through all of the challenges that renewable energy faces."



Left to right: Steve Clemons, *The Atlantic Monthly*; Governor Jerry Brown; Rick Needham, Google; David Crane, NRG Energy; and Lyndon Rive, Solar City





Left to right: Assistant Vice Chancellor Keith S. Parker; J.R. DeShazo, director of the Luskin Center; Mayor Antonio Villaraigosa; and Executive Vice Chancellor Scott Waugh

Universities like UCLA have an important role in helping the state meet the 12,000 megawatt goal, Brown said. "Universities are . . . training people who are vitally necessary, and then, of course, they can do things on their own rooftops," Brown said.

The governor also expressed frustration with the limits of his power to move renewable resources forward in California. With 58 counties and more than 400 cities, each with their own rules and permits, the distribution of localized solar power is also one of the project's biggest challenges.

"[As mayor] in Oakland, I learned that some opposition you have to crush. You can talk a little bit, but at the end of the day, you have to move forward. And California needs to move forward with renewable energy."

The next steps in financing, siting, permitting, and assuring the reliability of rooftop solar power supply were discussed

on more than a dozen panels. Speakers on the "Cost and Transparency" panel raised questions about how the success of two financing methods—the feed-in tariff and reverse auction mechanism, in which bidders vie for the lowest rate at which to sell power back to a utility—would be evaluated.

Speakers on the "Principles and Design for Financing Distributed Renewables" panel discussed how a mix of financing methods—feed-in tariff, reverse auction mechanism, and net energy metering, in which small generators receive a credit on their bill for renewable energy production—could be scaled up proportionate to their ability to deliver 12,000 megawatts.

The Governor's Conference on Local Renewable Energy Resources reflects the UCLA Luskin Center's commitment to engaging key stakeholders in solving our complex energy and sustainability challenges.

With excerpts from a UCLA Newsroom article by Alison Hewitt.



Governor with media



Wade Crowfoot of the Governor's Office



### NEW TECHNOLOGY TRANSFORMS WATER FOR UCLA AND US NAVY TODAY, OTHER SOURCES TOMORROW

A new technology designed to turn seawater and wastewater into drinking water is moving toward commercialization after successful demonstrations at UCLA and the Port Hueneme naval base.

Com2RO, or compact second generation reverse osmosis, was developed by Luskin scholar and UCLA Water Technology Research (WaTeR) Center director Yoram Cohen

together with fellow engineering professor Panagiotis Christofides and their students at UCLA's Henry Samueli School of Engineering and Applied Science.

Constructed with a compact footprint, the Com2RO system is deployable on land and sea, where it can fit into watertight hatch doors on Navy ships. The technology has successfully produced potable water from the cooling tower wastewater at UCLA's Cogeneration Plant and from seawater at Port Hueneme.

In a blind taste test, samplers preferred the taste of drinking desalinated seawater (product of the Com2RO) relative to bottled water by a ratio of 7:2 and preferred it relative to filtered tap water by a ratio of 3:2.

Most water purification systems fail or perform suboptimally when confronted with changing water quality, but Com2RO allows the reverse osmosis (RO) and ultrafiltration processes to work seamlessly together in a self-adaptive mode of operation. Ultrafiltration eliminates micro-organisms and other particles that can lead to fouling of the RO membranes.

While water purification systems have traditionally needed to be adjusted or even redesigned to handle different kinds of impaired water, the Com2RO could produce freshwater in poverty-stricken countries without experts to adjust the system if polluted water



Luskin scholar Yoram Cohen

becomes more mineralized or salty. The system can be controlled remotely through a web-based application.

"We're going to conquer water scarcity," said Cohen. "Imagine having these systems around the world in places where water is the cause of wars."

A new mobile prototype for agricultural wastewater treatment/brackish water desalting is also currently under development.

Innovative technology, like Com2RO, and enhanced applications for this technology are critical to address water challenges as the world's population rises amid potential climate change–induced changes in rainfall.



#### UCLA CONFERENCE FORGES VISION FOR LOCAL WATER

Even as a proposed bond to fund local water source development faces an uncertain future on the November ballot, efforts to reduce Southern California's dependence on imported water have gained critical momentum.

"A growing population, climate change, and the rising cost of transporting water is increasing the need for a more self-sufficient water future for Southern California," J.R. DeShazo, director of the Luskin Center, summarized in his opening to the policy makers who gathered on January 27 to present a framework for a sustainable water future. The urgency of addressing our water challenges was underscored by opening speaker Glen MacDonald, director of the UCLA Institute of the Environment and Sustainability, who explained that "climate models indicate that by midcentury enhanced aridity will be the norm and the resulting water resource challenges will be exacerbated by episodic droughts persisting longer than those experienced in the 20th century."



The one-day summit, "The Future of Water in Southern California," was hosted in downtown Los Angeles by UCLA's Luskin Center for Innovation, the Institute of the Environment and

Sustainability, and the Water Technology Research Center. The event drew over 250 leaders from water agencies, universities, the private sector, government, and nonprofits. Attendees explored the feasibility of replacing more imported water supplies with local alternatives such as recycled wastewater for potable and nonpotable reuse, cleaned-up groundwater, desalinated ocean water, and more effective conservation measures.

Financing a transition to more local water sources will be difficult in the short term. An \$11 billion bond to invest in such efforts will have to be reduced to under \$10 billion or postponed from the November ballot, State Senate President pro Tem Darrell Steinberg remarked during his keynote address. Yet the bond, in some form, could present long-term opportunities.



California State Senate President pro Tempore Darrell Steinberg, Madelyn Glickfeld of the UCLA Institute of the Environment and Sustainability, and J.R. DeShazo of the UCLA Luskin Center for Innovation

Cost issues around local water source

development were raised throughout the event. Keynote speaker Jeffrey Kightlinger, chief executive officer and general manager of the Metropolitan Water District of Southern California, told the summit audience that the utility's water rates have effectively tripled since 1990.

Other stakeholders in attendance highlighted how the science, policy, and public acceptance challenges of sourcing more water from these local alternatives may have turned a corner.

"The Future of Water in Southern California" was the beginning of a continued dialogue and collaboration to help identify and move forward solutions for water sustainability in Southern California.

# MPACT BUSINESS AND THE

#### GREEN FIRMS MORE PRODUCTIVE, UCLA RESEARCHER FINDS

Companies that adopt environmental standards tend to be more productive and produce bettertrained and more engaged workers, according to a study by Luskin scholar and UCLA professor of management Magali Delmas of the Institute of the Environment and Sustainability and Anderson School of Management.

In the last decade, a rising number of firms have adopted voluntary international environmental management and product standards. While emerging research analyzes the impact of these voluntary standards on environmental and financial performance, until now there was a lack of empirical research on how environmental standards affect employees' productivity.

In the landmark article to be published in the *Journal of Organizational Behavior*, Delmas and co-author Sanja Pekovic of the University Paris–Dauphine investigated the effects on employee productivity of voluntary international environmental management and product standards, such as the



Luskin scholar Magali Delmas presents at an energy conservation seminar with corporate partners

international ISO 14001 management standard or organic certification. The study also examined two mediating mechanisms through which environmental standards influence labor productivity: employee training and enhanced interpersonal contacts within the firm. The study's empirical results are based on a French employer-employee survey with 10,728 responses from 5,220 firms.

Delmas and Pekovic found that the adoption of environmental standards might increase employees' social identification with their firm and result in enhanced labor productivity. They also make the case that the adoption of environmental standards is associated with organizational changes, which may result in increased productivity. These

changes include implementation of employee training programs and higher levels of interpersonal interactions, or greater employee engagement, in standard business operations. The adoption of environmental standards may also improve organizational effectiveness through adjustments in the firm's work systems.

Delmas' study advances the Luskin Center's mission of supporting sustainable business practices with quality research.

#### SUPPORT INCREASES TO MEET CLEAN TECHNOLOGY GOALS IN LOS ANGELES

Mark Goodstein has joined Cleantech LA—a collaborative that brings together business, government, and academia to grow the clean tech sector in LA region—as the organization's first executive director. At a recent event hosted by the Luskin Center and Young Professionals in Energy, Goodstein stated that "the LA region has the biggest clean technology market by many measures but we have an image problem. Too many young energy entrepreneurs, scientists, and engineers who go to school

## ENVIRONMENT



here—we educate more than any region in this hemisphere—leave." Goodstein, along with the Cleantech LA executive advisory board and board of directors chaired by UCLA's Michael Swords, is committed to telling LA's cleantech story to the world and supporting collaborative research, technology commercialization, and job creation.

To advance this objective, the Luskin Center conducts research in support of Cleantech LA.

The report "Clean Technology Company Case Studies in the Los Angeles Region" profiles companies in the LA area and sheds light on the public policies, business incentives, and regional characteristics driving major sectors of the region's cleantech industry. In addition, Max Messervy, as a Luskin Center graduate student researcher, assisted the Los Angeles Mayor's Office and the Los Angeles Department of Water and Power in developing a framework for a Clean Technology Investment Fund, based on best practices from across the nation and the unique characteristics of Los Angeles.



Magali Delmas and lunch seminar guests

### IOES/LUSKIN RESEARCH SEMINAR

Luskin scholar Magali Delmas, a professor in the UCLA Institute of the Environment and Sustainability (IOES) and Anderson School of Management, has for the past two years led the IOES/Luskin Center monthly lunch seminar. This monthly lecture provides an opportunity for UCLA professors to discuss their research findings with others from throughout the campus. Speakers this year have included the following.

Climate Warming and Southwest Aridity: Where we are going, where we have been, and where we are now?	Glen MacDonald	UCLA Institute of the Environment and Sustainability, Departments of Geography & Ecology and Evolutionary Biology
Distributed Smart Water Systems for Water Sustainability—Technology Progress, Incentives, and Roadblocks	Yoram Cohen	UCLA Chemical and Biomolecular Engineering
China's Green Cities	Matthew Kahn	UCLA Institute of the Environment and Sustainability, Department of Economics, and Department of Public Policy
<b>The Oil Curse:</b> <i>How petroleum wealth shapes</i> <i>the development of nations</i>	Michael Ross	UCLA Political Science
<b>Smart Grid:</b> <i>Opportunities and challenges in t he creation of the 21st century power grid</i>	Rajit Gadh	UCLA Mechanical and Aerospace Engineering
Nature, Urban Development, and Sustainability	Stephanie Pincetl	UCLA Institute of the Environment and Sustainabilit



### FACILITATING ECONOMIC DEVELOPMENT PARTNERSHIPS WITH STATE LEGISLATORS

How should universities form innovative partnerships with industry to spur job creation and economic development?

This was the challenge the Luskin Center helped over 40 state legislator leaders from 26 states grapple with on Saturday, March 10th. The center supported the Anderson School of Management and the State Legislative Leaders Foundation, which hosted the 2012 Economic Summit entitled "The American Dream in the 21st Century: Jobs, the Economy & Moving Forward."

Led by the Anderson School's Bill Ouchi, the summit presented legislative leaders with university-industry partnership models for the energy, agricultural, high tech, manufacturing, and biotechnology sectors.



J.R. DeShazo facilitates discussion with state legislators

Luskin Center Director J.R. DeShazo, an economist and public policy professor, presented ways of identifying promising private sector partners based on each state's unique economic history and geography. Highlighting the distinction between traded industries and local support industries, DeShazo advised the state legislators to understand what specific traded industries would complement existing industries because traded industries, which produce and sell products and services across economic areas, are associated with higher wages and affect the size and wages in local support industries.

The entire center staff supported the legislators as they developed action plans, in a small group setting, that the legislators then took back to their states for implementation. For example, Luskin Center Deputy Director Colleen Callahan facilitated a conversation focused on the transportation sector with the Luskin Center's Susan Woodward taking notes. The legislators discussed overcoming barriers for the states to collaborate with research universities and other stakeholders to prioritize transportation investments that can drive economic development while at the same time supporting workforce development that can ensure the associated jobs benefit local communities.

"These are the types of conversations that universities should partake in and continue to position themselves as a valuable asset to economic revitalization," says DeShazo.



#### CLOSING THE ENVIRONMENTAL JUSTICE GAP

"A watershed moment in the environmental justice movement," was how Charles Lee, a longtime environmental justice leader in the US Environmental Protection Agency, described "Closing the Environmental Justice Gap: A Workshop on Advancing Evaluation Methods."

This event on September 30, 2011, marked the beginning of a dialogue about the first generation of environmental justice (EJ) policies and programs and how evaluation can inform the design and implementation of the next generation of EJ policies and programs, with the goal of most effectively reducing environmental disparities in low-income communities of color. Over 100 advocates, regulators, and scholars from all regions of the US participated in the workshop at UCLA's historic Royce Hall.

"Evaluation is a critical tool for many reasons," said J.R. DeShazo, director of the UCLA Luskin Center, as he opened the event as moderator. "It can be used to determine policy and program effects and effectiveness, generate knowledge to improve future efforts, and hold government agencies accountable so that adopted policies and programs are properly implemented."

The UCLA Luskin Center and the US Environmental Protection Agency's Office of Research and Development National Center for Environmental Research co-sponsored the event, with additional financial support and

guidance provided by the USC Program for Environmental and Regional Equity. Other partners included scholars from the UC Berkeley Department of Environmental Science, Policy, and Management; the UC Berkeley School of Public Health; and the Metropolitan Futures Initiative in the UC Irvine School of Social Ecology.

The day included a keynote address by Lisa Garcia, the EPA's Senior Advisor to the Administrator for Environmental Justice, and what Garcia called "great dialogue" among panelists and all participants throughout the day.

Panelists presented case studies in program evaluation. UCLA professor Paul Ong

demonstrated how grants from the South Coast Air Quality Management District, which were intended to convert dry cleaners to the use of non-perc cleaning substances, were less likely to go to low-income and minority areas.

The panels were followed by breakout groups in which all participants considered the real-world application of evaluation to current EJ programs.

In his event synthesis at the end of the workshop, Manuel Pastor, director of the USC Program for Environmental and Regional Equity, stated "We're entering a new era . . . We need to break through the environmental barrier to apply environmental justice principles to all environmental policies."



Devon Payne-Sturges, assistant center director, U.S. Environmental Protection Agency, and Romel Pascual, Los Angeles deputy mayor for the environment



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**Daniel Maldonado**, senior policy advisor at Holland & Knight, has joined the Luskin Center's board of directors. Mr. Maldonado has over 40 years of federal appropriations, legislative, and budget experience and brings extensive expertise in federal financing of a range of critical public policies. He has developed strategies to fund renewable energy projects, including biofuel, fuel cell, and solar technologies.

> Mariana Conte Grand, Luskin visiting scholar and also a Fulbright scholar and professor and director of the Economic Department at the University of Cema in Buenos Aires, Argentina, spent the winter of 2012 at the Luskin Center conducting research on climate change and the "augmenting effect" over health damages due to lack of access to water and sanitation services in developing countries.





Yoram Cohen, Luskin scholar and professor of chemical and biomolecular engineering, filed three new full-patent applications: (1) Method and System for High Recovery Water Desalting, (2) Integrated Ultrafiltration and Reverse Osmosis Process and System, and (3) Highly Sensitive and Selective Nano-Structured Grafted Polymer Layers for Chemical Sensors. In addition, a patent has been granted for Method and System for Monitoring Reverse Osmosis Membranes.

Magali Delmas, Luskin scholar and professor in the Institute of the Environment and Sustainability, and Charles Corbett, professor in the Anderson School of Management, were awarded the prestigious Darla Moore School of Business' Page Prize for the UCLA Leaders in Sustainability (LiS) graduate certificate program. This 16-unit program offered by the Institute of the Environment and Sustainability and supported by the Anderson School of Management provides a mechanism for graduate students at UCLA to pursue their interests in sustainability and collaborate with students from different fields. LiS includes over 160 students from diverse programs all across campus.





## & MEDIA



**Richard Jackson**, professor and chair of the Environmental Health Sciences Department and Luskin Center executive committee member, hosted a four-part PBS series called Designing Healthy Communities, which also features a companion book. Dr. Jackson investigates the link between urban sprawl and our national's obesity and Type 2 Diabetes epidemic. To prevent disease through better urban planning, he supports city redesigns to make bicycles a safe alternative transportation. He was also recently featured in the *Chronicle of Higher Education* and *The New York Times* for a piece he wrote on America's health threat caused by poor urban design.

Nurit Katz, UCLA's first sustainability coordinator and Luskin Center executive committee member, was honored this past year as one of Anderson School of Management's top 100 inspirational alumni at their 75th anniversary event. She was also instrumental in establishing the Leaders in Sustainability interdisciplinary certificate program with Charles Corbett.





**Paul Weiss**, director of the California NanoSystems Institute and Luskin Center executive committee member, was featured in the weekly magazine Chemical & Engineering News. He also recently provided insights on the American Chemical Society's website regarding ethical considerations for the worldwide scientific community.

> The Luskin Center and graphic designer **Will Sherwood** were awarded an ADDY<sup>®</sup> award for co-creating the Future of Water in Southern California conference logo. The ADDY<sup>®</sup> Awards are the creative industry's largest and most representative competition, attracting over 60,000 entries every year.



The Luskin Center generated considerable press coverage this past year from a range of media including The New York Times, Los Angeles Times, NBC Newsroom, Silicon Valley Mercury News, La Opinion, Southern California Public Radio, KPCC, KQED, and the blogosphere. Highlights include the following. The Governor's Conference on Local Renewable Energy Resources co-hosted by the Luskin Center was covered live by *The Atlantic* and almost every major syndicated newspaper in the country.

The Future of Water in Southern California summit was featured on the *KQED* gateway, and due to the number of visits, was voted "Most Popular." The report "Empowering LA's Solar Workforce: New Policies that Deliver Investments and Jobs" was covered by KCET's SoCal Focus, KPCC, Santa Monica Daily Press, La Opinion, Marketwatch, EGPNews, Enhanced Online News, Solar News and Solar Daily. The Model Design Manual for Living Streets website has received more than 15,000 hits and high-level visibility from national media outlets including The Atlantic.

For a complete listing of media coverage, please go to www.luskin. ucla.edu.





#### OFFICE REMODEL COMPLETED

A remodeled Luskin Center office opened its doors in April, to the delight of center staff and affiliates. Beautifully designed by Audrey Alberts and associates, the space features eight private offices, shared work spaces, and a mural. The office connects to the Dean's conference room, which was also part of the remodel in the Luskin School of Public Affairs, and is now used for high profile meetings.

The extra office space will allow the center to house more staff, student researchers, and visiting scholars. The center's Visiting Scholars Program provides an opportunity for thought leaders from outside of UCLA to spend significant time on campus to conduct critical research, write, and collaborate with scholars at UCLA. In addition, the office remodel coincides with an expansion of the center's staff team to meet demand in the community for our work.



### BRETT WILLIAMS AND AYALA BEN-YEHUDA JOIN LUSKIN CENTER



Brett Williams has joined the Luskin Center as program director of electric vehicles and alternative fuels. He will also be an assistant adjunct professor in the UCLA Luskin School of Public Affairs. Dr. Williams comes to UCLA with more than 15 years of experience work-

ing with companies and academic researchers in the U.S. and Europe to investigate alternative fuels, electric-drive vehicles, and green power systems. Williams received his PhD in transportation technology and policy at UC Davis. While at UC Davis, he also taught graduate and undergraduate courses, earned a business-development certificate from the Graduate School of Management, and worked for Ford Motor. Most recently, he was a researcher at the UC Berkeley Transportation Sustainability Research Center, where his research included the secondary use of plug-in-vehicle batteries as grid energy storage, vehicle energy analysis, and electric-fuel and electric-drive-vehicle commercialization. He also holds an MPhil in environment and development from Cambridge University (UK), and a BA in physics/public policy analysis from Pomona College.



Ayala Ben-Yehuda is joining the Luskin Center as project manager. She will work on a grant from the Southern California Association of Governments to develop an electric vehicle readiness plan for the region. Ayala starts full-time as project manager after working as a gradu-

ate student researcher for the Luskin Center. Graduating with a master's in urban and regional planning from UCLA, Ayala studies economic development and is helping create a Healthy Communities element in the Long Beach General Plan. She is a skilled writer and researcher with over ten years of experience as a staff correspondent, reporter and producer for outlets including Billboard Magazine, National Public Radio, Southern California Public Radio, Marketplace, and Newsday. She also holds a BA in political science from UC Berkeley.

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UCLA Luskin School of Public Affairs



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### "Sustaining the environment

is the greatest inheritance

one can leave to children,

and the most enduring gift

to community and nation."

– Meyer Luskin

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