

## **Reframing and Rethinking Climate Policy**

### *2011 Asilomar Conference on Transportation and Energy*

The findings of the 13<sup>th</sup> Biennial Asilomar Conference on Transportation and Energy point to a growing abundance of transportation technologies and fuels competing for market dominance around the world. But policy makers and researchers cannot focus solely on technologies and fuels and expect to improve mobility in a sustainable way. They need to, and are, grappling more and more with the human dimension. What do people think about climate change? How do they respond to new technologies, messages and policies? How should researchers and policymakers communicate these complex topics to the public? The 2011 Asilomar gathering addressed the human factor as a central component of the continuing policy and technology discussion.

Hosted by ITS-Davis under the auspices of the Energy and Alternative Fuels Committees of the U.S. Transportation Research Board, the three-day Asilomar Conference brings together leading transportation, energy and policy thinkers in a casual, open and collegial setting that fosters discussion, debate and creative problem-solving. The 2011 theme,

“Rethinking Energy and Climate Strategies for Transportation,” recognized that political progress toward a secure, low-carbon transportation future is slowing. With the human behavior factor ever present, participants discussed reframing the debate to focus on the co-benefits of climate strategies, and developing a portfolio of vehicles, fuels, mobility, and land-use policies.

Germany’s former foreign minister, Joschka Fischer, kicked off the meeting with an energizing look at how environmental reform in his country has led to economic development. Although public concern about climate change recently has taken a back seat to the global financial crisis, he predicted globalization will bring increased consumption, triggering unintended consequences and forcing climate change back on the agenda. “Those who prepare for the trend will win,” he said. In a nod to the industry representatives in the room, he said most automakers understand that the climate-energy dynamic presents opportunity.

California Air Resources Board Chairman Mary Nichols offered a more sobering perspective of the current political climate in the United States. She speculated that climate change may be too big and “too scary” for people to think about, so starting small may be more publicly acceptable. For example, she noted, California first tackled energy efficiency in buildings, then vehicle emissions standards. Now, she said, the state is still grappling with pricing carbon and the finer details of the cap and trade provisions of its groundbreaking AB 32 climate law. Despite the challenges, she told attendees she is an optimist. “How long it will take and how smoothly it will go is up to you.”

Many speakers suggested breaking the political logjam by reframing the debate so that climate change becomes a co-benefit of policies aimed primarily at energy and resource security, urban livability, and improved public health and quality of life.

#### **Asilomar by the Numbers**

More than 280 people participated, representing these disciplines.

18% University

10% NGO

21% Government (national, 9%; state, 6%; local, 6%)

25% Industry (oil and gas, 9%; electricity, 2%; automotive, 14%)

8% DOE labs

18% Other (think tanks, consulting, independent)

## **Return of the walkable community**

In a panel on smart growth and reduced vehicle travel, Christopher B. Leinberger, a real estate and development professional who is a visiting fellow at the Brookings Institution, made that co-benefit case. He said that while policies and government incentives over the last 50 years fueled “drivable suburban” communities designed around roads, the pendulum is swinging back to a “walkable urban” design. Demographic shifts—America’s aging population and fewer large families—are fueling the latest swing. And that swing to less road infrastructure and more in-fill development yields co-benefits for investors and consumers.

The low supply of walkable urban communities has created a pent-up demand in the real estate market, resulting in a price per square foot premium of 40-200 percent, he said, citing University of Michigan colleague Jonathan Levine. He also drew on his recent article in *The Atlantic* to demonstrate how walkable urban design puts more money in consumers’ pockets.

“On average, traditional suburban households spend 24 percent of their income paying for and maintaining their cars; urban households in walkable neighborhoods spend only 12 percent of their income on transportation. The difference amounts to half of what a typical household spends on health care – nationally, \$700 billion a year in total.”<sup>1</sup>

Policies that encourage more compact walkable urban development are an important factor in helping the pendulum swing. In California, for example, pursuant to SB 375, communities are adopting smart growth strategies for reducing their transportation-related greenhouse gas emissions by 2020. But even this goals-driven policy lacks enforcement mechanisms and consequences for failure. Several speakers said we need more directed fiscal policies that decouple the local tax base from sprawl development, provide incentives to reward creative development and transportation solutions, and serve as models that can be replicated in diverse regions around the country.

## **Policy portfolios, not prescriptions**

Asilomar attendees generally agreed on the need for portfolios of policies, both national and sub-national, based on performance standards. In the fuels policy arena, California’s Low Carbon Fuel Standard, which sets a specific carbon reduction target and rewards fuels that meet it, is one example. Northeast and mid-Atlantic states are developing a similar policy, and a multi-university national research study, led by researchers at ITS-Davis, is examining how best to institute such a national policy.

Attendees noted that the California policy and the U.S. and European biofuels mandates have been hampered by the sagging economy and lack of investment capital, which have slowed the launch of the advanced biofuels market. They commiserated that in the current economy, risk-averse financiers do not want to fund the first cellulosic ethanol plants; they want to watch someone else go first and learn from their mistakes.

In this scenario, is there a role for government loans and public funding of new technology start-ups? Kinkead Reiling, co-founder of renewable fuels and chemicals company Amyris Technologies,

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<sup>1</sup> [\*Here Comes the Neighborhood\*](#), The Atlantic, June 2010

said yes – but government must accept upfront that not all investments will pay back. The market is risky, he said. (Hours later, his words seemed prescient when news came of the collapse of DOE-funded solar-panel maker Solyndra.) If government is not willing to take those risks, private industry must, he added.

Reiling also urged government agencies to coordinate and remove regulatory barriers, and to not try to pick winning technologies. Another speaker from the private sector, Jerry Moyes, founder and CEO of the Phoenix-based trucking firm Swift Transportation Company, criticized policies that force a one-size-fits-all solution, saying they can be costly and ineffective. He also expressed frustration at policies designed around industry laggards. He asked how to design policies that reward, instead, those companies that see value in leading and being progressive for their own reasons, while still addressing a broader industry-wide need.

Other conversations centered on what level of government—local, state or federal—should act on climate policy. Steve Heminger, executive director of the San Francisco Bay Area’s Metropolitan Transportation Commission, said one reason we need a true federal engagement in transportation and a comprehensive federal climate policy is to protect local jurisdictions from climate-change impacts to their coastlines. He illustrated his point with map projections showing much of Silicon Valley and the San Francisco and Oakland international airports under water.

### **EVs: Range anxiety or new consumer values?**

Asilomar attendees also revisited familiar consumer-behavior challenges, such as how buyers will respond to electric vehicle range limitations. Mike Tamor of Ford took issue with how National Household Travel Survey data, which shows that 70 percent of travel is less than 100 miles per day, is often used to explain why 100 miles of all-electric range should be sufficient for most trips. The data is misinterpreted and not representative of real-world, individual driving needs, he said. Market studies must capture the needs and alternatives for occasional uses rather than focus on typical usage, he said.

Much has been written in the popular press on range anxiety. UC Davis researcher Ken Kurani described how his consumer behavior research has identified an alternative frame, where electric vehicles offer drivers the opportunity to experience new values, benefits and behaviors.

“A new frame doesn’t make all the problems go away. A new frame does change the way we see plug-in electric vehicles, the goals we seek, the plans we make, the way we act, and what counts as a good or bad outcome,” Kurani said. Industry could embrace the co-benefits and new values that PEVs offer and leave behind the old, negative frame that focuses on their limitations.

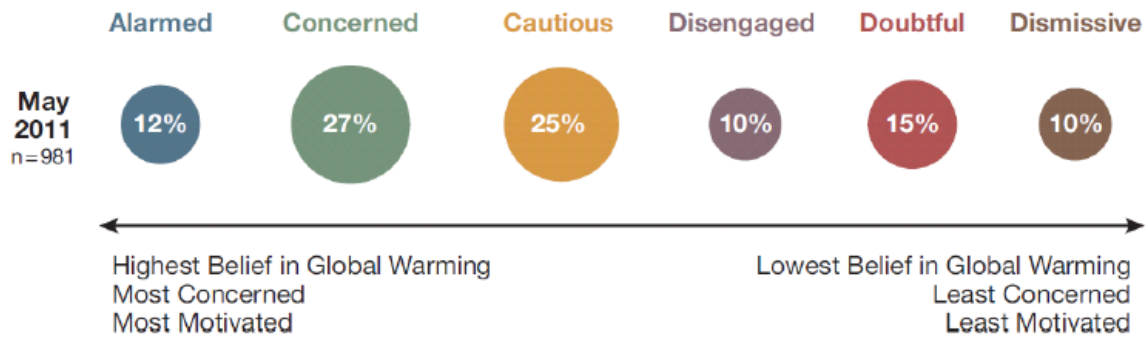
### **The human factor**

Several presenters discussed the prospects for similarly re-framing, and perhaps re-energizing, the climate change discussion in the United States.

Only a small fraction of the American public is motivated to act by the fear of climate change, according to research conducted at George Mason University and Yale University. Connie Roser-Renouf of the George Mason Center for Climate Change Communication presented findings of a national survey on Americans’ climate change and energy beliefs, attitudes, policy support, and

behavior. Her “Global Warming’s Six Americas” study describes six audience groups, each with a unique set of beliefs, values, opinions and actions. Understanding the differences among the groups is vital to effective engagement. When we know what audiences think and how they feel, she explained, we can we speak to their concerns more directly.

*Global Warming’s Six Americas*<sup>2</sup>



People at the opposite ends of the spectrum—the alarmed and the dismissive—are actively engaged in the climate debate, Roser-Renouf said. They also happen to be the people who think the most about climate change. The large numbers of people in the middle are concerned about life’s daily challenges; climate change simply is not on their radar. Since 2008, data show, the number of people in the alarmed group has shrunk while the number of people in the dismissive group has grown.

Communicating to these diverse audiences is difficult because they are politically polarized and their values lie at opposite ends of the spectrum, she said. Their informational needs are different and their willingness to process information varies. Many people simply don’t understand climate change or lack interest in it, are suspicious of news reports, and feel helpless when it comes to doing something about it.

Conference participants discussed the need for public education, how children can spur their parents into action, and even the role of religion. Germany’s Fischer asked why religious Americans seem to dismiss environmental and climate concerns, unlike religious people in his country, who he said tend to value stewardship. He was told that, in the United States, some vocal minorities’ literal interpretations of the Bible result in beliefs that we humans cannot control our world; only God can.

To reach the different groups requires different messages and varying approaches – and therein is the challenge for policymakers and scientists. Citing The Resource Innovation Group,<sup>3</sup> David L. Greene of Oak Ridge National Lab shared his frustration that the number of Americans who believe in anthropogenic global warming has declined in recent years. Americans still trust scientists, he noted, but they seem to be less sure if scientists agree on the issue. Greene’s conclusion was that he

<sup>2</sup> *Global Warming’s Six Americas: An Audience Segmentation Analysis*, Connie Roser-Renouf, Ph.D., George Mason Center for Climate Change Communication, <http://www.climatechangecommunication.org/>

<sup>3</sup> *American Climate Attitudes*, The Resource Innovation Group, Pike and Herr, 2011

and his colleagues in the room have a responsibility to inform the public. “We may not be climate scientists but... we know the solutions. Our responsibility is to communicate what we know: how to mitigate greenhouse gas from transportation.”

Others argued that scientists and academics may not be the best messengers, primarily because of the way they communicate. At the very least, Roser-Renouf counseled, scientists should use language and imagery that resonate, and should talk about people instead of facts and figures.

### **The Power of “And”**

Reframe and rethink. Don’t rely on a single approach but rather build a portfolio of policies designed around a performance standard. Know what people want and talk to them in language they can relate to. Involve people in the policy decisions. Retired General Motors executive Larry Burns, now a professor of engineering practice at the University of Michigan, touched on all the conference’s key themes in his closing keynote on “The Power of ‘And.’”

“The power of ‘and’ is a key to realizing a secure, low-cost and low-carbon energy future, and the price of a sustainable energy future makes the power of ‘and’ worthwhile,” he said. A focus on “or” rather than “and” creates friction. Many people are preoccupied with “or” questions because of the magnitude of challenges, a sense of urgency and limited resources. As a result, he said, we make trade-offs, such as focusing on biofuels instead of EVs, or solar instead of wind energy. If we shift our minds away from the tradeoffs and toward “and” we get synergies.

Reflecting the conference attendees’ consensus around portfolio approaches to policy, Burns advocated a comprehensive approach to solving the transportation sustainability challenge, one that examines the fuels, vehicles, land use and built environment, as well as the human behavior and market aspects, how we communicate, and how we develop policy. Policies must link energy sources and mobility. The energy challenge, he said, is not due to lack of resources but rather lack of integrated systems, and inertia and leadership influenced by vested interests. By combining our abundant energy resources with a broad portfolio of promising technology, integrated system opportunities, and a commitment to working together, the globe has the potential to enable sustainable development.

#### **Asilomar Resources Online**

- [Speakers’ slides and additional materials are posted at the ITS-Davis website.](#)
- [Books and other publications from past Asilomar Conferences are available on the ITS-Davis website.](#)
- [Photographs of Asilomar speakers and attendees are in albums at the ITS-Davis Facebook page.](#)