



Summary of Expert Interviews & Regional Workshops on Land Use, Transportation & Climate Change

April 10, 2008

Susan Shaheen, PhD

Honda Distinguished Scholar in Transportation

sashaheen@tsrc.berkeley.edu

Transportation Sustainability Research Center

University of California, Berkeley & ITS Davis, University of California, Davis

Overview

- **Research Approach**
- **Potential GHG Emission Reduction Strategies**
- **Policy Approaches: “Where Experts & Stakeholders Are on The Continuum”**
- **Regional Targets & Local Engagement**
- **Monitoring & Modeling**
- **Public Education & Community Outreach**
- **Next Steps**

Research Approach

- **Research Sponsored by:**
 - **California Department of Transportation**
 - **California Air Resources Board**
 - **UC Davis Energy Efficiency Center**
 - **California Energy Commission (In-Kind)**
- **12 Expert Interviews with 19 Participants (3 of 19 from Other States); ~ 2 Hours**
- **Three One-Day Workshops (N = 32): Bay Area (N = 15), Sacramento (N = 10), San Diego (N = 7)**
- **Data Collected from March 3 to April 21, 2008**

Study Population: Expert Interviews

- **Expert Interview Stakeholder Groups (N = 19):**
 - **Builders/Developers (N = 4)**
 - **Elected Officials (N = 2)**
 - **Environmental Stakeholders (N = 3)**
 - **Regional Governments (N = 5)**
 - **Local Governments (N = 5)**

Study Population: Stakeholder Workshops

- **Stakeholder Workshops Groups (N = 32):**
 - **Builders/Developers (N = 1)**
 - **Elected Officials (N = 3)**
 - **Environmental Stakeholders (N = 3)**
 - **State Transportation Officials (N = 4)**
 - **Regional Governments (N = 11)**
 - **Local Governments (N = 6)**
 - **Public Health Representatives (N = 3)**
 - **Business Representative (N = 1)**

Study Limitations

- **Study Population Limited in Size**
- **Qualitative Research Approach**
- **Synopsis Prepared on Very Short Timeline**
- **Challenging to Summarize Detailed Interviews & Workshop Feedback into Highlights**
- **Workshops Not Yet Complete: Los Angeles and San Joaquin Will Be Conducted on April 18th and 21st, Respectively**

Participant Observations

- **Study Participants Felt Most Comfortable Discussing:**
 - **GHG Reduction Strategies**
 - **Policy Approaches**
 - **Public Education & Community Outreach**
- **Majority Less Confident Discussing:**
 - **Specific Policy Mechanisms (i.e., Targets, Budgets/Caps, Cap and Trade)**
 - **Details of Modeling, Monitoring & Measurement**
- **Many Had Difficulty Defining/Discussing Market-Based Approaches in Detail**

Potential GHG Emission Reduction Strategies

Question: Which Strategy or Combination of Strategies Would Be Most Effective at Reducing GHG Emissions Related to Land Use and Transportation in the Short Term (e.g., 2020) and Long Term (e.g., 2050)?

Strategies:

- Land Use & Transportation Infrastructure,
- Mobility Management,
- Pricing,
- ITS & Traffic Operations, and
- Behavioral Changes

Reduction Strategies Defined

- Land Use and Transportation Infrastructure (e.g., Mixed-Use, Transit-Oriented Development, Transit, and Improving Bicycle/Pedestrian Infrastructure)
- Mobility Management (e.g., Carsharing, Ridesharing, and Telecommuting)
- Pricing (e.g., Congestion Pricing, Peak Period Tolls/High Occupancy Toll (HOT) Lanes, Parking)
- Intelligent Transportation Systems (ITS) and Traffic Operations (e.g., Bus Rapid Transit, Traffic Signal Coordination)
- Behavioral Change (e.g., Buying Local, “Spare the Air”)

Expert Interviews: Highlights

1. **Combination of Strategies Needed—Across All Stakeholder Groups**
2. **Pricing Needed But Challenging to Implement—Across All Stakeholder Groups**
3. **Regulatory Reforms/Streamlining Needed to Support “Smart” Land Use—Across All Stakeholder Groups**
4. **Go After Gross Polluters First—Discussed By Local and Regional Governments and Builders/Developers**
5. **Bottom-Up Approach—Noted by Builders/Developers, Environmental Stakeholders, and Local and Regional Government**
6. **Emphasizing Behavioral Change—Across All Stakeholder Groups**

Workshop Highlights: 2020 (1)

1. Bay Area and San Diego: #1 Strategy Was Land Use and Transportation Infrastructure.
2. Sacramento: #1 Strategy Was Pricing.
3. All Three Regions Emphasized Mobility Management as Strategy #2.
4. Other #2 Strategies Included: Land Use (1), Pricing (1), and Behavioral Change (1) (Noted in Sacramento and San Diego).
5. All Three Regions Selected A Different Strategy #3 : Bay Area—Pricing, Sacramento—Mobility Management, and San Diego—Behavioral Change.

Workshop Highlights: 2020 (2)

6. **Most Votes Across Three Regions Went To: *Land Use and Transportation Infrastructure (22), Pricing (20), Mobility Management (18), Behavioral Change (15), and ITS and Traffic Operations (11).***
7. **Of the Top Three Strategies Among the Three Regions, Mobility Management Was Considered the Easiest to Implement, Followed by Land Use/Transportation Infrastructure, Behavioral Change, and Pricing (Most Challenging).**

Workshop Highlights: 2050 (1)

1. **Across All Three Regions: #1 Strategy Was Land Use and Transportation Infrastructure.**
2. **Two Regions Emphasized Pricing as #2 Strategy (Sacramento and San Diego). Other #2 Strategies Included Mobility Management and Behavioral Change (Bay Area and Sacramento, Respectively).**
3. **Two Regions Emphasized ITS and Traffic Operations as #3 Strategy (Sacramento and San Diego) and Another Two Behavioral Change (Bay Area and Sacramento).**

Workshop Highlights: 2050 (2)

4. One Additional #3 Strategy Was Pricing (Sacramento).
5. Overall, Most Votes Across Regions Went To: *Land Use and Transportation Infrastructure (28)*, *Pricing (18)*, *Behavioral Change (16)*, ITS and Traffic Operations (15), and Mobility Management (9).
6. For the Top Three Strategies Across the Regions in 2050, Mobility Management and Behavioral Change Were Considered the Easiest to Implement, Followed by Land Use/Transportation Infrastructure and ITS & Traffic Operations, and Pricing (Most Challenging).

Policy Approaches: “Where Experts & Stakeholders Are on The Continuum”

Question: Overall, Which of the Policy Approaches or Combination of Approaches Do You Think Would Be The Most Effective at Achieving GHG Emission Reductions in The Transportation Sector?

Approaches:

- Voluntary,
- Regulatory, and
- Market Based

Policy Approaches Defined

Voluntary: Entities Are Encouraged to Reach an Emission Target Through Appropriate Incentives and Regulatory Levers.

Regulatory: Entities Are Given Definitive Emission Allowances That They Must Meet.

Market-Based Instrument: Entities Are Allowed to Negotiate Their Emission Allowances (e.g., Cap and Trade).

Expert Interviews: Highlights

- 1. Each Stakeholder Group Mentioned A Voluntary Approach, with Regulatory Reforms and Often Incentives. Some Discussed a Phase-In to Regulatory and/or Market Based Over Time.**
- 2. Four of the Five Stakeholder Groups Discussed A Mixed Approach—Ranging from Voluntary to Market Based in Different Combinations.**
- 3. Divergence in Views Found Among Elected Officials and Environmental Stakeholders: Some Favored a Strong Regulatory Approach and Others A More Voluntary Approach to Start.**
- 3. All Uncertain About Cap and Trade Implementation.**

Workshops: Highlights (1)

1. In *Present to 2012* Timeframe, Majority of Bay Area Participants (9 of 15) Preferred A Regulatory and A Regulatory/Market Mix Approach for AB 32 Land Use and Transportation Implementation. In the *2013 to 2020* Timeframe, Even More Moved in the Regulatory Direction (13 of 15).
2. In *Present to 2012* Timeframe, Majority of Sacramento Participants (9 of 10) Preferred A Voluntary and A Voluntary/Market Mix Approach for AB 32 Land Use and Transportation Implementation. In the *2013 to 2020* Timeframe, There Was A Shift Towards Regulatory and Regulatory/Market Mix Approach (6 of 10).

Workshops: Highlights (2)

3. In *Present to 2012* Timeframe, Majority of San Diego Participants (4 of 7) Preferred A Regulatory and A Regulatory/Market Mix Approach for AB 32 Land Use and Transportation Implementation. In *2013 to 2020* Timeframe, There Was A Shift Towards A Pure Market-Based Approach (5).

Regional Targets & Local Engagement

Question: How Should 2020/2050 GHG Reduction Targets Be Achieved for Land Use and Transportation (Local, Regional)?

Expert Interview Highlights (1)

- 1. Each Stakeholder Group Mentioned Regional Targets, with Regulatory Reforms and Often Incentives. Some Discussed A Phase-In Approach to Regulatory and/or Market Based Over Time.**
- 2. One Stakeholder Discussed Regional Targets Allocated at the City/County Level with Each Revising Their General Plan and Implementing Supportive Codes.**

Expert Interview Highlights (2)

- 3. Four of Five Stakeholder Groups Discussed the Blueprint Planning Process (Bottom-Up Approach).**
- 4. Divergence in Views Was Found Among Elected Officials and Environmental Stakeholders: Some Favored A Strong Regulatory Approach and Others A More Voluntary Approach to Start.**

Workshop: Highlights

- 1. Each Region Mentioned Regional Targets, with Regulatory Reforms and Often Incentives. Sacramento Discussed A Phase-In to Market Based and Regulatory, As Needed. The Other Two Regions Did Not Discuss A Phase-In.**
- 2. All Regions Mentioned Measuring Co-Benefits (e.g., Health). Streamlining of Regional Planning Processes (i.e., RHNA, Regional Planning, Urban Water Plan, and Housing Cycle Updates) Came Up in San Diego.**

Modeling and Monitoring

Question: Are Current Modeling Tools and Data Capable of:

- **Establishing Baseline Targets,**
- **Monitoring Progress Towards Goals, and**
- **Possibly Enforcing Regulations?**

Modeling and Monitoring: Interviews and Workshops

- **Most Said Models and Data Are Limited and Improvements Are Needed.**
- **Public Policy Is Always Made Under Uncertainty; We Cannot Wait for Models and Data to Act.**
- **We Should Focus on Improved VMT Measurement, VMT Over Time, and Use Reasonable Models to Indicate Direction and Relative Magnitude of Change.**
- **Significant Improvements in Modeling and Data Are Needed to Set Targets, Monitor Achievement, and/or Educate and Make the Case to Locals and Officials.**

Public Education & Community Outreach

Question: What Kind of Public Education and Community Outreach Could Be Done to Inform the Public about Ways to Reduce GHG Emissions from Transportation? Please Provide Examples of Effective Models?

Public Education & Community Outreach: Interviews and Workshops

- **Massive Public Education Is Needed to Inform Public of Climate Change Crisis & Spur Mobilization**
 - **“Spare the Air,” “Flex Your Power,” & Tobacco**
- **Regional Blueprint Process Recommended with Significant Budget for Good Public Engagement**
- **Personalized Traveler Education (e.g., Smart Trips in Portland)**
- **Green Building Concept Includes VMT Reduction Potential, If Included In Infill Environments**

Next Steps

- **Conduct Remaining Stakeholder Workshops**
- **Complete Literature Review**
- **Synthesize All Expert Interviews & Workshop Data**
- **Review Expert Interview Summaries with Participants**
- **Write White Papers on: 1) Policy Process, 2) Evidence from Literature on Linkage Between Land Use and VMT, and 3) Evidence from Advanced Modeling Studies on Land Use, Pricing and Modal Alternatives**

Acknowledgments



- Interview and Workshop Participants
- Funding & In-Kind Support: California Department of Transportation, California Air Resources Board, California Energy Commission, and UC Davis Energy Efficiency Center
- Research Team: Caroline Rodier, Dan Sperling, Rachel Finson, Denise Allen, Melissa Chung, Jade Benjamin-Chung, Lauren Hillard, Linda Howe-Steiger, Tech Transfer UC Berkeley, Susan Handy, and Deborah Salon
- Agency Collaborators: Jeff Weir, Kurt Karperos, Reza Navai, Panama Bartholomy, Lezlie Kimura, Nancy McKeever, and Jamesine Rogers