

Proposal
Website, Database, and Academic Paper on
Behavior and Decision-Making Research Related to
Energy-Efficiency and Climate Change

Dr. Carrie Armel

Summary

We propose to develop an interdisciplinary website and integrated literature database containing key research relevant to energy decisions and behaviors, for behaviors occurring at the individual and group levels. The goal of the site is to accelerate the adoption and sustained use of energy-efficient technologies and climate-positive actions. This will be accomplished by providing a variety of tools that enable visitors to increase the effectiveness of policies, research, and programs, and also by fostering interdisciplinary communication and work. The audience for the site will include researchers, policymakers, and program/communication designers at universities, businesses, and governmental or non-governmental organizations. The research will be compiled from currently disparate areas including psychology, behavioral economics, diffusion of innovation, marketing, program evaluation, technology commercialization, and others. As a demonstration of the use of this resource, Dr. Carrie Armel, project leader, will prepare an analytic research paper on a specific topic that explores one or more high-impact approaches for promoting energy-efficient behavior change. To the best of our knowledge, there is no similar website, database, listing of professional profiles, or organization that draws together this range of disciplines and research relating to behavior, energy efficiency, and climate change.

Deliverables

1. A website hosted by the Precourt Institute that provides access to professional profiles, research tools, and other resources. The central research tool is a bibliographic database, described below, that will be complemented by supporting foundational and overview readings. Other research tools might include key questions to be addressed by future research, tools for measuring behavior, and resources for comparing the relative energy footprint of specific behaviors. The website will also provide links to organizations, academic programs, conferences, and other relevant websites. See Appendix A for more details on the anticipated website content. The intent is for the website to allow registered users to add content, allowing the research citations, professional profiles, and other areas to be expanded over time with minimal up-keep by Precourt staff.
2. A bibliographic database of research on behavior and decision-making occurring at the individual and group levels related to energy-efficiency and climate change. The included research will have a solutions-oriented focus. The database is intended to provide the initial research content which registered users can then expand with time. Attachment B provides a list of potential research areas that may be included in the database. For disciplines that currently have few papers specifically on environmental topics, literature will primarily include reviews or seminal papers on theory and findings that could be translated into the energy domain.
3. An academic paper that reviews relevant literature and proposes future approaches for promoting energy-efficient behavior or decisions. Depending on the topic, the paper might also integrate existing findings from industry (e.g., through interviews and white papers), report some original survey and focus group work, and suggest experiments for evaluating the efficacy of the proposed approaches. The topic of the paper will be agreed upon by the project leader and the Director of the Precourt Institute, and the selection of the topic will in part be informed by reviewing literature during the development of the bibliographic database. An example of a topic might be how to get consumers to pay more for more efficient goods. The paper will be presented at the Behavior, Energy, and Climate Change Symposium, November 8-9, 2007.

Project Team

The project will be led by Stanford University Postdoctoral Fellow, Dr. Carrie Armel, with guidance from the Director of the Precourt Institute, and will include two research assistants and one part-time programmer selected by Dr. Armel. Dr. Armel graduated with a joint Ph.D. in Psychology and Cognitive Science from the University of California, San Diego, where she studied decision making, affect (motivation, empathy, etc.), and the neural underpinnings of these processes. She also worked as a postdoctoral fellow in the Stanford Economics Department in the area of Neuroeconomics, which is an emerging field dedicated to the study of decision making that draws from economics, psychology, and neuroscience. She is currently working at a second postdoctoral position at the Stanford Prevention Research Center in the School of Medicine, where she is developing tools for measuring environmental behaviors and is co-teaching a Stanford course that she developed on creating interventions to promote climate-positive behavior change.

The RA's will be Stanford graduate or advanced undergraduate students with experience in the social sciences or areas related to energy-efficiency. A part-time programmer will develop the parts of the website that allow for growth that is mostly self-sustained, including the database. The Precourt Institute's webmaster will be engaged to design, launch, and support the website. The project team expects to conduct approximately 30 interviews with researchers and others who will provide expertise and recommendations on prior research.

The project team will work collaboratively with the "Behavior, Energy, and Climate Change" (BECC) project to develop the research database and researcher profiles. BECC involves a consortium of researchers and policymakers from universities, government, business, and NGOs working to increase the effective use of social science research in energy policies and programs. A national BECC symposium is planned for November, and Dr. Armel will participate as a member of the organizing group. The project team will have access to the 40-member BECC Board of Advisors to assist in their research. Attachment C lists the BECC Board.

Timeframe

The project will cover a six-month period from July – December 2007. At the beginning of the project Dr. Armel will review project plans and the budget with the Precourt Director. The development of the website and database, and the initial research for the paper, will take place primarily during July, August, and September. During October through December, Dr. Armel will complete the research paper and participate in the BECC Symposium. Throughout the project, Dr. Armel will be involved half time. The Research Assistants will work full time during the summer, and the programmer will work approximately a 100 hours over the course of the project. The Precourt webmaster will be involved, particularly over the summer.

Attachment A

Proposed Site Map of the Website

Home

Brief purpose of site
Summary of what can be found on site

About

Description of effort
Advisory Board
Contact Information

Professional Profiles

Researcher list (searchable)

- *Title, institution, contact information. Photo. Keywords describing areas of interest.*
- *Brief summary of research.*
- *Link to home institution webpage.*

Other profiles (searchable)

- *Program designers, program evaluators, non-profit contacts, government contacts.*

Research Tools

Overview of Fields

- *Key Journals, journal issues, and books (with Amazon or purchase link).*
- *Recommended foundational, overview, or seminal reading.*

Database

- *Including full citations, abstracts, and links to articles where possible.*

Other

- *Key questions for future behavioral and decision research.*
- *Comparison of the approximate relative energy (or greenhouse gas) impact of specific behaviors, and links to relevant resources, to help guide the selection of target behaviors in research and program design.*
- *Tools for measuring behavior, including surveys, electric meters, etc.*

Other Resources (mostly links)

- *Academic programs and courses.*
- *Organizations/associations (including those that offer relevant conferences/events).*
- *Other websites (organized by topic).*
- *Possibly a listserv, forum, etc. (e.g., to facilitate interdisciplinary research ideas, initiate collaborations, etc.).*
- *Resources for program designers.*

Attachment B

Research Areas for Potential Inclusion in Research Database Preliminary List

- Social Marketing
- Behavioral Economics
- Anthropology/Ethnographic Research
- Risk Evaluation
- Energy Program Evaluation especially Process Evaluation
- Public Opinion Polling
- Advertising/Communication Research
- Consumer Behavior Research
- Technology Commercialization
- Diffusion of Innovation
- Psychology (e.g., Social, Cognitive, Conservation Psychology)
- Education
- Public Health (e.g., to share techniques that have been successful at changing behavior in campaigns against smoking or heart disease, for example; or on diffusion research in behavioral epidemiology)

Attachment C

Behavior, Energy and Climate Collaboration (BECC) Advisory Board (As of May 2, 2007)

POLICYMAKERS

- Governor's Office: Brian Prusnek – Governor's Office (invited)
- California Energy Commission Jackie Pfannenstiel – Chair and Commissioner
- California Energy Commission Martha Krebs – Deputy Director for R & D
- CA Environmental Protection Agency Dan Skopec – Undersecretary (invited)
- CA Environmental Protection Agency Eileen Tutt – Assistant Secretary for Climate Change Activities
- Air Resources Board Dan Sperling – CARB Board Member and Director, ITS, UC Davis
- Air Resources Board Chuck Shulock – Project Manager for Greenhouse Gas Reduction, Executive Office
- Natural Resources Bridgett Luther – Director, Department of Conservation
- CA Senate Christine Kehoe – Senator (invited)
- CA Senate Byron Sher - Senator (retired)
- CA Assembly Jared Huffman – Assembly Member
- CA Public Utilities Commission Jeanne Clinton - Clean Energy Advisor

RESEARCHERS/UNIVERSITIES

- National Research Council Paul Stern - Director, Committee on the Human Dimensions of Global Change
- CA Institute for Energy & Environment Carl Blumstein, Director
- Precourt Institute for Energy Efficiency Jim Sweeney - Director and Professor of Mgmt. Science and Engineering, Stanford
- UC Davis Energy Efficiency Center Andy Hargadon – Director
- School of Management, UC Davis Nicole Biggart, Dean
- Portland State University Loren Lutzenhiser - Professor, Urban Studies and Planning (Sociology)
- School of Social Sciences, UC Irvine Linda Cohen, Associate Dean of Graduate Studies, and Prof. of Economics
- Lawrence Berkeley National Laboratory Alan Sansted – Scientist, LBNL and Lecturer, Energy & Resource Grp, UC Berkeley
- Stanford University Paul Ehrlich - Professor, Population Studies, Stanford University -
- Stanford School of Medicine Carrie Armel – Stanford Prevention Research Center, Stanford University
- Institute for Transportation Studies Tom Turrentine - Research Scientist, Institute for Transportation Studies, UC Davis
- CSU San Marcos P. Wesley Schultz - Professor of Psychology, CSU San Marcos
- University of Delaware Willett Kempton - Urban Affairs and Public Policy, (Anthropology)
- UC Sacramento Center Gary Dymski - Director

IMPLEMENTERS AND INFLUENCERS – PRIVATE SECTOR

- PG&E Roland Risser - Director, Customer Energy Efficiency
- Sempra/SDG&E: Mark Gaines - Director of Customer Programs
- SMUD Obediah Bartholomy - Sacramento Municipal Utility District
- SCE Gene Rodrigues - Director of Energy Efficiency
- SCE Catherine Hackney - Director, State Legislative Policy
- Public Opinion Mark DiCamillo - Field Research Corporation
- Advertising/Branding Alex Biel (invited) Advertising Research Foundation
- Segmentation/Strategy Bill Guns - President & CEO, SRI Consulting Business Intelligence
- Market Research Sharyn Barata - Vice President, Opinion Dynamics Corporation
- Press Rebecca Smith - Energy Reporter, Wall Street Journal (invited)
- Process Evaluation Jane Peters, President, Research Into Action
- Public Relations/Issues Management William Kahl – head of Public Relation, KP Public Affairs
- TV and Film Debbie Levin - Environmental Media Association, (invited)
- Retail Trudi Hughes - Senior Public Affairs Manager, Wal-Mart
- Clean Tech Business Jim Robbins - Executive Director, Environmental Business Cluster

IMPLEMENTERS AND INFLUENCERS - NON-PROFIT

- Natural Resources Defense Council Ralph Cavanaugh - Senior Attorney, Co-director NRDC's Energy Program
- Union of Concerned Scientists Amy Leurs - California Climate Manager
- FlexYourPower Wally McGuire – President, McGuire & Co.
- ENERGY STAR Wendy Reed - Energy Star Change a Light Program, US EPA
- Alliance for Climate Protection Mark Simmons – Director of Marketing
- Acterra Michael Closson - Executive Director
- 11th Hour Project Amy Rao or Wendy Schmidt (invited)
- Energy Foundation Charlotte Pera - Vice President - US Programs (invited)
- Google.org Dan Reicher and/or Aimee Christensen - Climate and Energy Programs (invited)
- Cities JoAnne Speers - Executive Director, Institute for Local Government
- ACEEE Skip Laitner (invited)