Behavior and decision-making related to energy efficiency; NYSERDA's Behavior Research Program

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Behavior Research Program Goals

- Apply psychosocial insights into human behavior to energy-related decision making using controlled experiments

- Provide independent evaluations & disseminate the results

- (NYSERDA, utility programs, private sector, community/regional initiatives)

NYSERDA

- Public Benefit Corporation established by NYS Legislature in 1975

- **Mission Statement**
  Advance innovative energy solutions in ways that improve New York's economy and environment

❑ 2010 Budget - $660M

   *SBC *EEPS *RPS *Statutory *REGGI *ARRA *CAIR

   2008 Budget - $340M

   1998 Budget - $80M

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New York State Goals

From 1990 levels,

- Increase energy efficiency 15% by 2015
- Meet 45% of State electric needs with renewable resources by 2015
- Reduce CO_2 80% by 2050

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Scoping Session (2007)

Linking Behavioral Research & Energy-Related Decision Making

- 7 experts participated

- Presented behavioral research relevant to energy-related decision making

- Helped galvanize interest in behavior research at NYSERDA & NYS PSC

"Linking Behavioral Research to Energy Decision Making"
RFP 1192 October 2009
$400,000

Services of a behavioral expert
to design pilot experiments to identify
potentially more effective approaches to
achieve New York's clean energy targets

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Action Research, Inc.

- ☐ Full-service consulting firm

- ☐ Oceanside, CA

- ☐ Established P. Wesley Schultz in 2001

  Jennifer Tabanico, Cofounder/President

- ☐ Leverages the academic community to apply research to real world problems

- ☐ Uses Community Based Social Marketing (CBSM) approach

Scientific Advisors

- Dr. P. Wesley Schultz, California State University

- Dr. Noah Goldstein, UCLA Anderson School of Management

- Dr. Jessica Nolan, University of Scranton PA

- Dr. Renee Bator, State University of New York Plattsburgh

- Dr. Jeff Joireman, Washington State University

Community Based Social Marketing Approach (McKenzie-Mohr)

- Foundational market research

- Identify potential behavior change actions (nondivisible)

- Quantify energy-savings potential for each behavior change

- Select action with greatest potential and likelihood of success

CBSM con't

- Identify perceived barriers and benefits
- Uses known tools of behavior change like social norms, commitments, and social diffusion
- Design pilots for field implementation
- Develop evaluation protocols

Responsibilities

- NYSERDA's Behavior Research Program funds Action Research consulting services by task work order

- Clients responsible for implementing recommendations & providing data needed for evaluation

NYSERDA's Behavior Referrals

- VPSI vanpool program

- College Computer Lab

- NYSERDA New Construction Program (NCP)

- NYSERDA Paper Reduction Campaign

- Central New York Regional Planning & Development Board – (EPA Climate Change Innovation Program (C2IP)

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1. VPSI Vanpool

- only 2 out of 20 vanpools deployed
- central vs. peripheral route (Petty and Cacioppo 1981)

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Power of the personal (messenger, brochures & VPSI's website)

- ☐ Use photos that show people like YOU vanpool
- ☐ Personal communication
- ☐ Testimonials

2. Computer Lab

☐ Ithaca College

Goals:

◻ to get students to turn off machines in computer labs when not being used

◻ descriptive & injunctive norms

(Oceja & Berenguer 2009; Aronson & O'Leary 1983)

Computer lab 1 pilot descriptive norm & injunctive norm

Plattsburgh Green Machine
Please turn computer & monitor off before you leave

N=308

Computers off, sign posted N=100	Computers on, sign posted N=88
Computers off, no sign N=60	No treatment (Computers on, no sign) N=60

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Computer lab 1 pilot descriptive norm & injunctive norm

Plattsburgh Green Machine
Please turn computer & monitor off before you leave

Computers off, sign posted 48%	Computers on, sign posted 11%
Computers off, no sign 15%	No treatment (Computers on, no sign) 3%

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Computer lab 2 pilot descriptive norm & injunctive norm

Ithaca Green Machine
Please turn off the computer & monitor when you are done
ITHACA

N=772

| Computers off, sign posted 30% (N=330) |
| Computers on, no sign 3% (N=442) |

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Thank you!

3. NYSERDA's New Construction Program (NCP)

Goals: Increase effectiveness of NCP's Technical Assistants (TAs)

- TAs attend scoping meetings with NCP building owners and architectural design teams
- TAs' job is to answer technical questions about technologies and NCP incentives & promote NCP goals

Foundational Research

- TAs' self-efficacy as agents of innovation need reinforcement

- Uncertainty (TAs' and Building Owners')

- Need for information on measures and design approaches that worked in successful NCP projects (case studies)

- Qualifying criteria for incentives

NCP Scoping Sessions:
Capital District, Syracuse & NYC

☐ *Control (10 firms)*

☐ *Experimental (10 firms)*

☐ New NCP training-
(including case studies,
vivid flow charts &
clear incentive info)

New NCP training/
"   "   "

☐ Focus groups

Persuasiveness training

4.   Reduce Residential Energy   Use

- Central New York Regional Planning & Development Board received funding under the EPA Climate Change Innovation Program (C2IP)

- To achieve 30% CO_2 reductions in Central New York Communities, including Syracuse

Energy Team

- The Planning Board identified the City of Syracuse as having very close-knit neighborhoods

- Action Research recommended using David Gershon's Eco Team concept to influence energy-efficiency behaviors

Energy Team

- Apply the Eco Team model to Syracuse

- Teams of 5-7 individuals each representing separate households meet 1 x/monthly to learn about an energy-efficient action/technology and consider implementing it in their households

Energy Team

- Meeting materials developed by Action Research

- Training for Energy Team leaders

- Planning Board maintain a website with information about the action/measure featured that month & feedback on groups' progress

- Is the model scalable? Can we rely on social diffusion for 2nd-tier & 3rd-tier effects?