Journal of Experimental Political Science **1** (2014) 24–38
doi:10.1017/xps.2014.2

Communication and Collective Actions: A Survey Experiment on Motivating Energy Conservation in the U.S.

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Abstract

When do citizens take action to benefit the public good, even when individual benefits are scant or non-existent? We address this question with a focus on an area of critical importance when it comes to environmental sustainability—specifically, we examine citizens' actions in the domain of energy conservation. We do so by using a survey experiment to evaluate the impact of exposure to communications posited to shape collective action behavior. We find that communications shape behavior depending on two primary factors not previously studied in concert: to whom responsibility is attributed for collective outcomes; and, what effects, or consequences, are associated with one's actions. We find that communications emphasizing individual responsibility *and* collective environmental benefits can stimulate collective action.

Keywords: Energy, framing, behaviors, attributions, survey experiment, conservation.

INTRODUCTION

When do citizens take action to benefit the public good, even when individual benefits are scant or non-existent? In this paper, we explore *when* exposure to communications induces citizens to engage in collective actions on their own volition: a topic that has received little direct attention despite the large literature on *why* citizens engage in collective actions. We focus on a) how communications affect

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attributions of responsibility for collective outcomes and b) how communications that highlight positive or negative effects resulting from an action shape individuals' willingness to act for the collective good. We attend to two classes of behavior in the domain of energy conservation, which is an area of critical importance when it comes to environmental sustainability. Specifically, we study 1) *investment* behaviors including capital outlays for goods such as insulating one's home; and, 2) *curtailment* behaviors that entail decreasing the amount of energy one consumes such as adjusting ambient home temperature to save energy (Black et al., 1985; Sears et al., 1978; Stern 2000). We find that stimulating collective action to conserve energy is challenging, but not impossible, because it requires communications that emphasize *both* individual responsibility *and* collective environmental benefits.

COMMUNICATION AND COLLECTIVE ACTION

Considerable work, including various types of experiments, explores *why* individuals engage in a collective action (e.g., Andreoni and Croson 2008; Coleman and Steed 2009; Dawes and Thaler 1988; Fehr and Gächter 2000; Hamman et al., 2011; Ostrom et al., 1992). Yet, this literature has studied a limited variation in the content of what is communicated to individuals (Coleman and Ostrom 2011). Our study is about communications that could be encountered through mass media, interpersonal discussion, and / or some form of new media. In their review of the literature on experimental research on collective action, Coleman and Ostrom (2011) note that communication "has a profound effect" yet it has barely been studied (p. 343).[1]

Our goal is to fill this gap in the literature. We focus on two types of communications that collective action models of behavior suggest matter: first, the likely costs and benefits resulting from the action (e.g., Olson 1965); and second, one's perceived "duty" or responsibility to act (Riker and Ordeshook 1968). Unlike prior work, we influence these perceptions via exposure to communications that come in the form of frames which, for us, are part of a story line in describing an issue, highlighting certain aspects of reality at the expense of others (e.g., Druckman 2001; Gamson 1992). An enormous literature demonstrates that frames can and do shape individuals' attitudes and behaviors (see Druckman 2011).

We focus on two types of emphasis frames.[2] The first type is an attribution frame (Iyengar 1991) – that is, descriptions of who is primarily responsible for providing a collective good. We expect attributions of responsibility to affect collective action behavior primarily because frames that directly link individuals'

[1]Coleman and Ostrom (2011: 344) explain that most communication in collective action laboratory studies focus on participant communications with one another about strategies, which is quite distinct from our focus.

[2]One prominent usage which we do not pursue is valence frames (positive versus negative) as popularized by Tversky and Kahneman (1981).

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decisions with collective outcomes are central to mobilizing collective action (e.g., Polletta and Ho 2006). The more one sees individuals' actions as responsible for the collective outcome, the more likely they are to perceive that their own action will be impactful, which is a key determinant of whether or not individuals engage in collective actions (Finkel and Mueller 1998; Finkel et al., 1989; Lubell 2002; Lubell et al., 2007; Riker and Ordeshook 1968). Frames that attribute responsibility to individuals for collective outcomes also may resonate with a deeply entrenched value of *individualism* in American culture (Feldman 1988). On the other hand, the more one sees government as responsible for coordinating individuals' actions to promote positive collective outcomes the less likely one is to take action because it will not been seen as impactful.

Hypothesis 1: Individuals will be more likely to engage in a collective action following exposure to a frame that emphasizes individuals' responsibility for collective outcomes, all else constant.

Hypothesis 2: Individuals will be less likely to engage in a collective action following exposure to a frame that emphasizes the government's responsibility for collective outcomes, all else constant.

The other type of frame we explore highlights the costs and benefits associated with taking action. We analyzed news articles from *The New York Times* (*NYT*) and *The USA Today* from June 2008 to June 2009 that included one of the following terms in the headline or lead paragraph: "energy policy," "energy crisis," "energy shortage," or "energy plan."[3] We found that the most prominent frames when it comes to energy conservation are: (1) the *environmental* benefits associated with taking action (a frame appearing in 55% of the articles); and, (2) the upfront *costs* for investments versus immediate savings for curtailment (a frame appearing in 48% of the articles) .We use a "cost frame" to examine a communication that primes an important consideration in this domain of behavior. Our choice of frames thus has a theoretical basis in a canonical collection action model *and* an empirical one given the results from our content analysis.

Hypothesis 3: *Individuals will be more likely to engage in energy conservation (which can be construed as a collective action) following exposure to a frame that emphasizes its environmental benefits, all else constant.*

Hypothesis 4: *Individuals will be less likely to engage in energy investment behaviors (which can be construed as a collective action) following exposure to a frame that emphasizes the costs to consumers, but more likely to engage in energy curtailment behaviors (since they would save those costs), all else constant.*

Hypothesis 4 highlights a key distinction between the two types of conservation behaviors we examine. Energy curtailment involves reducing one's consumption of energy, which *saves* money but also may involve sacrifices (Stern 2000). Capital investments, meanwhile, usually require spending additional money up-front in order to potentially reap long-term savings.

[3]This resulted in a total of 67 articles (28 from the *USA Today* and 39 from the *NYT*) after removing articles that were not focused on the U.S. energy situation.

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We also offer two straightforward predictions that follow directly from our prior hypotheses.

Hypothesis 5: Individuals will be more likely to engage in a collective action following exposure to a frame that emphasizes the benefits resulting from one's actions (e.g., environmental benefits) and individuals' responsibility for collective outcomes, all else constant.

Hypothesis 6: *Individuals will be less likely to engage in energy investment behaviors following exposure to a frame that emphasizes the costs to consumers and the government's responsibility for collective outcomes, all else constant.*

SURVEY EXPERIMENT

We implemented a survey experiment in August 2010 to test our hypotheses. We used the Internet to draw a representative sample of 1,600 members of the U.S. population.[4] The composition of our sample is nearly identical to the 2012 ANES sample in terms of party identification and ethnicity (details are available in the online supplementary appendix); however, as is typical of web-based surveys (Malhotra and Krosnick 2007), our sample is slightly more educated and interested in politics. Using procedures outlined by Bloom (1995), power analyses reveal that the experimental design could detect moderate treatment effects with a high degree of statistical power, and thus, we are confident that the N was sufficient (details are available in the online supplementary appendix). Participants completed an initial battery of attitudinal and demographic questions, and then were exposed to one of the treatments described below, which randomly assigned participants to one of nine conditions that manipulated the attribution of responsibility frame (none, individual, government) and an effect frame (none, environment, costs). The appendix reports the wording of the treatments and order of the questions.

We manipulated responsibility attributions by asking respondents to read a statement about the agent responsible for dealing with the nation's energy situation. The individual attribution treatment stated, "*The ultimate success of our nation's energy policy depends largely on individuals' choices about energy consumption. Individuals need to step up to the plate – something they have done throughout American history without having to rely on the government.*" The government attribution treatment stated, "*The ultimate success of our nation's energy*

[4]We contracted with a survey research company (Bovitz Inc.) to collect the data. The sample was drawn from a panel of respondents who have opted in to complete online surveys. The panel was originally developed based on a random-digit-dial (RDD) telephone survey, where to enter the panel a respondent needed to have access to the Internet. (In this sense, it is a non-probability sample in the same way as those taken by firms such as YouGov are non-probability samples.) The panel has continued to grow based on ongoing RDD recruiting and referrals. From the panel, which has approximately one million members, a given sample is drawn using a matching algorithm (based on likely response rates) to ensure that those screened to qualify for the survey constitute a sample that demographically represents the United States. We report a response rate of 21% among individuals contacted to participate in the survey. This sampling approach is acceptable for experimental studies (Druckman and Kam 2011).

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policy depends largely on governmental decisions about the energy supply. Government needs to step up to the plate – something they often do when individuals alone cannot resolve a problem."

We manipulated the consequences associated with an action by including a statement about its economic or environmental effects. The cost frame stated, "*These choices have important economic consequences. For instance, switching from regular light bulbs to energy saving bulbs will cost consumers, in general, billions of dollars each year by causing them to pay a cost premium*." The environmental frame stated, "*These choices have important environmental consequences. For instance, switching from regular light bulbs to energy saving bulbs will help ensure that individuals, in general, live in a healthy environment by saving the world from millions of metric tons of greenhouse gases*." Importantly, in employing these frames, we ensured that they were equally effective/strong via a pre-test (see Chong and Druckman 2007).[5]

Dependent Measures

We chose to focus on behaviors people were likely able to perform: (1) investing in insulation for one's home or apartment; and, (2) adjusting one's home thermostat setting to save energy. We included three dependent measures for investment behaviors that were asked immediately after exposure to one of the experimental treatments. First, respondents were asked: "How likely are you to invest in insulation or weatherization for your home or apartment?" on a 7-point fully labeled scale ranging from 1 = "extremely unlikely" to 7 = "extremely likely." We follow others in using a self-reported intention measure to study behavior in this domain (e.g., Lubell et al., 2007; Sears et al., 1978).[6] Second, we measure *information-seeking* behavior by asking respondents: "Would you be interested in receiving more information about how to insulate or weatherize your home or apartment?" If the answer was "yes," then participants were asked to provide their email address to receive *one* email with the corresponding information from a *non-profit, non-partisan* organization. We focus on participants who actually provided an email address. This is a unique measure as it is an *actual* rather than intended behavior. Third, we asked respondents: "What is the maximum amount you would be willing to spend to insulate or weatherize your home or apartment to save energy? Enter

[5]Specifically, in a pre-test, we found the frames do not significantly differ in terms of perceived "strength" (e.g., how compelling the frame is seen as being) but they do significantly differ in terms of direction with the economic frame being seen as significantly less in favor of energy conservation compared to the environmental frame. We also pre-tested and confirmed that our attribution frames were effective in placing responsibility on the individual or government (details are available from the authors).

[6]Ajzen and Fishbein (2005: 188) explain that an "intention to perform a behavior… is the closest cognitive antecedent of actual behavioral performance…" Further, O'Keefe (2002: 128) states, "there is good evidence that voluntary actions can be successfully predicted from intentions." Nonetheless, we acknowledge that we do not know the scaling factor that links intentions to behavior, especially when the intentions are measured immediately following exposure to the treatment and the behavior comes days or months later.

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an amount ranging from $0 to $500" (akin to a contingent valuation measure; see Green et al., 1998).

We included two dependent measures for curtailment behaviors. First, respondents were asked: "How likely are you to lower your thermostat setting in the winter and/or raise the setting in the summer to save energy?" on a 7-point fully labeled scale ranging from 1 = "extremely unlikely" to 7 = "extremely likely." We measured *information-seeking* behavior by asking respondents if they would like to receive more information "about Smart Energy Meters that save energy" in an email.[7]

RESULTS

Table 1 presents the means, standard deviations, *N*s, and 95% confidence intervals for the estimated means for each condition.[8] We indicate statistical significance in Table 1 from difference of means tests *relative* to the no attribution, no consequence condition labeled condition 1 in Table 1.[9] We found that random assignment produced assigned groups that had similar background/demographic attributes and that all main effects are robust when a host of controls are included. (Details are available in the online supplementary appendix) We also report, at the bottom of Table 1, the results from five individual models estimating the joint significance of the experimental conditions relative to the control group baseline (condition 1) for each dependent variable. The tests confirm that the conditions are jointly and significantly different from the control group baseline for each model.

We find either no support or only marginal support for hypothesis 1, which predicted that the individual responsibility attribution frame on its own would increase investment and curtailment. The frame leads individuals to be more willing to invest in insulation (condition 2, model 1) with marginally significant movement from 4.49 to 4.74; however, the frame does not have an impact on the other behaviors. This may be surprising given individualism is a core value in the U.S.

[7]We also asked a variety of belief importance (and content) questions as is typical in some framing experiments and all the results cohere with our main results reported below. We do not explore mediation given doing so brings with it inferential problems (see Bullock and Ha 2011). Details on these questions are available in the online supplementary appendix.

[8]One might expect partisanship to affect these behaviors, beyond the experimental stimuli; however, when adding a host of demographic variables, partisanship did not have a consistent effect. Aside from our experimental conditions, perhaps the most consistent predictive variable is political knowledge with more knowledgeable individuals engaging in more energy conservation behaviors. That said, our survey also asked straightforwardly the extent to which government is responsible for addressing energy problems and Democrats are significantly more likely to view government as responsible (the question came prior to the experimental manipulation on the survey).

[9]We use one-tailed tests of significance, as is common in the framing literature, given that we have clear directional expectations for the impact of our experimental conditions on opinions (Blalock 1979).

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Table 1

Experimental Treatment Effects on Dependent Measures

Exp. Cond.	Likelihood of invest. in insulation Model 1	Request info. on insulation Model 2	Max. WTP for insulation Model 3	Likelihood of changing thermostat Model 4	Request info. on Smart Meter Model 5
No Attribution, No Consequence (condition 1)	Mean: 4.49 (Std. Dev.:1.87) 95% CI: (4.22, 4.77); $N = 179$	0.21 (0.41) (0.15, 0.27); $N = 179$	232.00 (189.07) (204.11, 259.89); $N = 179$	5.44 (1.48) (5.22, 5.66); $N = 179$	0.18 (0.38) (0.12, 0.23); $N = 179$
Individual Attribution, No Consequence (condition 2)	4.74# (1.50) (4.52, 4.96); $N = 178$	0.22 (0.41) (0.16, 0.28); $N = 178$	233.08 (183.64) (205.92, 260.25); $N = 178$	5.50 (1.49) (5.28, 5.72); $N = 178$	0.16 (0.36) (0.10, 0.21); $N = 178$
Government Attribution, No Consequence (condition 3)	4.12* (1.50) (3.90, 4.34); $N = 177$	0.14* (0.34) (0.08, 0.19); $N = 177$	183.41** (174.49) (157.53, 209.30); $N = 177$	5.12* (1.45) (4.91, 5.34); $N = 177$	0.07** (0.25) (0.03, 0.10); $N = 177$
No Attribution, Cost Consequence (condition 4)	4.13* (1.58) (3.90, 4.36); $N = 178$	0.14* (0.35) (0.09, 0.19); $N = 178$	188.90** (179.26) (162.38, 215.42); $N = 178$	5.84** (1.42) (5.63, 6.05); $N = 178$	0.27* (0.44) (0.20, 0.33); $N = 178$
Individual Attribution, Cost Consequence (condition 5)	4.11* (1.55) (3.88, 4.35); $N = 176$	0.12** (0.33) (0.07, 0.17); $N = 176$	183.39** (163.69) (159.04, 207.75); $N = 176$	5.76** (1.24) (5.57, 5.94); $N = 176$	0.26* (0.43) (0.19, 0.32); $N = 176$

Table 1
(continued)

Exp. Cond.	Likelihood of invest. in insulation Model 1	Request info. on insulation Model 2	Max. WTP for insulation Model 3	Likelihood of changing thermostat Model 4	Request info. on Smart Meter Model 5
Government Attribution, Cost Consequence (condition 6)	4.00** (1.72) (3.74, 4.25); $N = 178$	0.14* (0.34) (0.08, 0.19); $N = 178$	181.35** (173.67) (155.66, 207.04); $N = 178$	5.73* (1.33) (5.53, 5.92); $N = 178$	0.26* (0.44) (3.74, 4.25); $N = 178$
No Attribution, Environmental Consequence (condition 7)	4.57 (1.79) (4.30, 4.83); $N = 177$	0.26 (0.44) (0.22, 0.33); $N = 177$	243.81 (192.95) (215.19, 272.43); $N = 177$	5.51 (1.58) (5.28, 5.75); $N = 177$	0.15 (0.36) (0.09, 0.20); $N = 177$
Individual Attribution, Environmental Consequence (condition 8)	4.94** (1.62) (4.70, 5.18); $N = 177$	0.31** (0.46) (0.24, 0.38); $N = 177$	286.24** (192.63) (257.66, 314.81); $N = 177$	5.74* (1.37) (5.54, 5.94); $N = 177$	0.28** (0.45) (0.21, 0.34); $N = 177$
Government Attribution, Environmental Consequence (condition 9)	4.16* (1.51) (3.93, 4.38); $N = 180$	0.16# (0.36) (0.10, 0.21); $N = 180$	191.87* (159.78) (168.37, 215.37); $N = 180$	5.08** (1.52) (4.85, 5.30); $N = 180$	0.09** (0.29) (0.05, 0.13); $N = 180$
Overall Mean Across Conditions	4.37 (1.66) $N = 1{,}600$	0.19 (0.39) $N = 1{,}600$	213.77 (182.03) $N = 1{,}600$	5.53 (1.46) $N = 1{,}600$	0.19 (0.39) $N = 1{,}600$

Note: Entries in each cell report the mean for each respective dependent measure (see column headings), standard deviation (in parentheses), 95% confidence interval associated with each estimate (in parentheses), and the N. Baseline condition (control group is in boldface). For model 1 and model 4, 1 = "extremely unlikely" and 7 = "extremely likely." For model 2 and model 5, 0 = "no" and 1 = "yes." For model 3, respondents entered an amount ranging from $ 0 to $ 500. $^{**}p \leq .01$; $^{*}p \leq .05$; $^{\#}p \leq .10$, one-tailed test.

We conducted joint significance tests for the impact of the experimental conditions on each dependent variable in multivariate analyses relative to the control group (condition 1) and report the following results: model 1, $F(8, 1591) = 7.31$ ($p < .001$); model 2, $\chi 2(8) = 38.55$ ($p < .001$); model 3, $F(8, 1591) = 7.49$ ($p < .001$); model 4, $F(8, 1591) = 6.51$ ($p < .001$); and, model 5, $\chi 2(8) = 58.59$ ($p < .001$).

In contrast, we find support for hypothesis 2 across outcome measures. When responsibility is attributed to the government for collective outcomes, individuals are significantly less likely to invest in insulation (from 4.49 to 4.12, condition 3, model 1), significantly less interested in receiving an email with information on home insulation (from .21 to .14, model 2), willing to pay significantly less to conserve energy (from $232 to $183.41, model 3), significantly less willing to adjust the temperature in their home to save energy (from 5.44 to 5.12, model 4) and significantly less interested in receiving information about Smart Energy Meters (from .18 to .07, model 5).

No support exists for hypothesis 3 that predicts that individuals will be more likely to engage in energy conservation following a frame that emphasizes environmental benefits (see condition 7, Table 1). There are no instances across dependent variables where emphasizing the collective environmental benefits of energy conservation on its own affects behavior. Conversely, we find strong support for hypothesis 4. In the presence of a frame highlighting the costs of these actions to consumers, individuals are significantly less likely to invest in insulation (from 4.49 to 4.13, condition 4, model 1), significantly less likely to request an email seeking information about insulation (from .21 to .14, model 2) and willing to pay significantly less to insulate one's home or apartment (from $232.00 to $188.90, model 3). We predicted *increased* curtailment behavior in the presence of an economic effects frame. Highlighting the economic consequences of these actions significantly increases the likelihood of adjusting one's home thermostat to save energy (from 5.44 to 5.84, model 4) and requests to receive an email with information about Smart Energy Meters (from .18 to .27, model 5). Thus, individual attributions on their own do little but when individual benefits are highlighted, people act.

We also find strong support for hypothesis 5. Exposure to an individual responsibility attribution frame combined with a frame highlighting the collective environmental benefits of taking action causes individuals to be significantly more likely to report a willingness to make investments to conserve energy (from 4.49 to 4.94), more interested in receiving an email with information about how to insulate one's home or apartment (from .21 to .31), and willing to pay more to insulate one's home (from $232.00 to $286.24) (see condition 8, Table 1). Similarly, with respect to curtailment behaviors, individuals exposed to this combination of frames are more willing to adjust the home thermostat (from 5.44 to 5.74, model 4) and request information (from .18 to .28, model 5). We also find strong support for hypothesis 6 that a cost frame paired with a government attribution of responsibility frame would decrease individuals' willingness to make investments (see condition 6, models 1–3). Indeed, the results indicate that receiving this combination of frames significantly decreases reported willingness to insulate one's home (from 4.49 to 4.00), requests for information (from .21 to .14), and willingness to pay for investments (from $232.00 to $181.35). On the other hand, with respect to curtailment behaviors (see condition 6, models 4–5), the economic effects frame trumps the attribution frame and leads people to become significantly more willing to take action as a way to save money.

https://doi.org/10.1017/xps.2014.2 Published online by Cambridge University Press

Although we did not offer explicit hypotheses for the conditions in which there were directionally opposed frames consisting of competing responsibility attribution and distinct effect frames (conditions 5 and 9), we see in both instances that it is the *negative (anti-investment)* frame that is stronger in demobilizing investment behaviors. The combination of the negative and positive frames significantly decreases the likelihood of investment behaviors in the range of 5% to 10%. We suspect this reflects a negativity bias (e.g., Baumeister et al., 2001). The combination of the individual responsibility attribution frame and an economic effects frame (condition 5, models 4–5) *increases* the likelihood of curtailment behaviors.

CONCLUSION

We find that communications influence whether or not individuals intend to engage in collective actions. Nonetheless, mobilizing individuals to engage in energy-conservation-related collective action is challenging because it requires *both* persuading people to attribute responsibility to themselves *and* emphasizing that positive collective benefits will occur as a result (in support of hypothesis 5). Counter to hypothesis 1 and hypothesis 3, an individual responsibility attribution frame and an environmental benefits frame *in isolation* did not increase action. In contrast, in support of hypotheses 2, 4, and 6, demobilization is easier because emphasizing either the economic consequences (e.g., costs of investments) *and/or* attributing responsibility to the government decreases individuals' willingness to act.

Our results are consistent with evidence from field experiments that find exposure to different types of communications can significantly affect household electricity usage (Allcott 2011; Ayres et al., 2009). However, as opposed to these studies, we do not examine the extent to which the treatment effects we uncover persist over time. Extant work on communication effects suggests that they endure only under certain conditions; for instance, following repeated exposure to communications or arguments (Druckman et al., 2012; Cacioppo and Petty 1989; Moons et al., 2009). Finally, the demobilization effect we find is important, especially given that in the aforementioned content analysis we found that government is the agent most often assigned responsibility for the nation's energy problems. The political implications of this finding may be considerable given that liberals often advocate for a pro-active government on many issues, but in doing so may undercut voluntary efforts to mitigate collective action problems. These are important areas for future work on private-sphere environmentally-relevant behaviors.

SUPPLEMENTARY MATERIAL

To view supplementary material for this paper, please visit http://dx.doi.org/10.1017/S2052263014000025.

https://doi.org/10.1017/xps.2014.2 Published online by Cambridge University Press

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APPENDIX

Condition 1

We are now going to ask you about energy choices you may make.

Condition 2

We are now going to ask you about energy choices you may make. The ultimate success of our nation's energy policy depends largely on individuals' choices about

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energy consumption. Individuals need to step up to the plate—something they have done throughout American history without having to rely on the government.

Condition 3

We are now going to ask you about energy choices you may make. The ultimate success of our nation's energy policy depends largely on governmental decisions about the energy supply. Government needs to step up to the plate—something they often do when individuals alone cannot resolve a problem.

Condition 4

We are now going to ask you about energy choices you may make. These choices have important economic consequences. For instance, switching from regular light bulbs to energy saving bulbs will cost consumers, in general, billions of dollars each year by causing them to pay a cost premium.

Condition 5

We are now going to ask you about energy choices you may make. These choices have important economic consequences. For instance, switching from regular light bulbs to energy saving bulbs will cost consumers, in general, billions of dollars each year by causing them to pay a cost premium. That said, the ultimate success of our nation's energy policy depends largely on individuals' choices about energy consumption. Individuals need to step up to the plate—something they have done throughout American history without having to rely on the government.

Condition 6

We are now going to ask you about energy choices you may make. These choices have important economic consequences. For instance, switching from regular light bulbs to energy saving bulbs will cost consumers, in general, billions of dollars each year by causing them to pay a cost premium. This is why the ultimate success of our nation's energy policy depends largely on governmental decisions about the energy supply. Government needs to step up to the plate—something they often do when individuals alone cannot resolve a problem.

Condition 7

We are now going to ask you about energy choices you may make. These choices have important environmental consequences. For instance, switching from regular light bulbs to energy saving bulbs will help ensure that individuals, in general, live in a healthy environment by saving the world from millions of metric tons of greenhouse gases.

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Condition 8

We are now going to ask you about energy choices you may make. These choices have important environmental consequences. For instance, switching from regular light bulbs to energy saving bulbs will help ensure that individuals, in general, live in a healthy environment by saving the world from millions of metric tons of greenhouse gases. This is why the ultimate success of our nation's energy policy depends largely on individuals' choices about energy consumption. Individuals need to step up to the plate—something they have done throughout American history without having to rely on the government.

Condition 9

We are now going to ask you about energy choices you may make. These choices have important environmental consequences. For instance, switching from regular light bulbs to energy saving bulbs will help ensure that individuals, in general, live in a healthy environment by saving the world from millions of metric tons of greenhouse gases. That said, the ultimate success of our nation's energy policy depends largely on governmental decisions about the energy supply. Government needs to step up to the plate—something they often do when individuals alone cannot resolve a problem.

Dependent Measures

How likely are you to invest in insulation or weatherization for your home or apartment?

extremely unlikely	*very unlikely*	*somewhat unlikely*	*neither unlikely nor likely*	*somewhat likely*	*very likely*	*extremely likely*

What is the maximum amount you would be willing to spend to insulate or weatherize your home or apartment to save energy? Enter an amount ranging from $0 to $500.

Enter amount: $____

Would you be interested in receiving more information about how to insulate or weatherize your home or apartment?

Yes: ____

No: ____

(If "yes" was selected): We will send you ONE e-mail with such information that we have obtained from a non-profit organization. (If you are not interested, please select one of the responses below.)

Enter e-mail address here: _____

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___ No thanks, I already receive this information.

___ No thanks, I am interested but prefer not to provide my e-mail at this time.

How likely are you to lower your thermostat setting in the winter and/or raise the setting in the summer to save energy?

extremely unlikely	*very unlikely*	*somewhat unlikely*	*neither unlikely nor likely*	*somewhat likely*	*very likely*	*extremely likely*

Would you be interested in receiving more information about Smart Energy Meters that save energy?

Yes: ___

No: ___

(If "yes" was selected): We will send you ONE e-mail with such information that we have obtained from a non-profit organization. (If you are not interested, please select one of the responses below.)

Enter e-mail address here: _____

___ No thanks, I already receive this information.

___ No thanks, I am interested but prefer not to provide my e-mail at this time.

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