Putting the Pieces Together

How Do Citizens and Experts See the Energy Issue?

A Report for the Kettering Foundation from Public Agenda

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INTRODUCTION

Energy, for years an issue with little resonance for the public, is now a real and growing concern for many Americans. Awareness of energy issues is on the rise: Public Agenda's most recent Foreign Policy Index found that security concerns related to energy are reaching a "tipping point" for the public and energy has become a higher priority among voters for the past several years. More and more, Americans are waking up to the nation's energy challenges and have begun looking for leadership to address the issue.

As interest among the public grows, energy is an increasingly important issue for leaders as well. Policymakers at all levels of government are starting to address many of the energy problems facing the country. At the end of 2007 congressional lawmakers passed the Energy Independence and Security Act of 2007, a major energy bill that will raise fuel economy standards on cars, light trucks and SUVs for the first time in thirty years, expand the use of biofuels, and raise appliance efficiency standards. National policymakers are working on other energy-related legislation as well, including proposals to limit carbon emissions from power plants and other forms of energy generation, provisions to require utilities to acquire a percentage of their energy from renewable sources and to shift tax incentives from oil and gas to renewable energy.

Moreover, this new action is not all at the national level. Indeed, in many ways, states and cities are leading the way with new regulations, incentive programs and initiatives to address energy problems at the local and region level. *PlaNYC,* Mayor Bloomberg's initiative to make New York City America's greenest city by 2030, is a prime example.

As a result of this surge in interest and activity, energy experts—scientists, researchers, analysts, and industry leaders—are playing a more influential role. Having gained the ear of policymakers and the media, experts often bear the responsibility of providing guidance about how to respond to the public's call for leadership and how to craft appropriate energy policy.

But while opinion polls help us understand that the public is increasingly concerned, there is still much we don't know about how the public thinks about energy, how typical Americans define the problem or what they believe can or should be done to address it. And although policymakers frequently look to experts to provide insight about how to act, it is unclear how well experts understand or reflect the public's views and values around energy. It is therefore also important to understand the extent to which the public's attitudes align with, or diverge from, the views of experts.

This report applies Public Agenda's expertise in qualitative research to the task of taking a deeper look at the public's views on energy. It also seeks to examine the gaps and similarities between public attitudes about energy and the attitudes of the experts who are influencing the current national thinking on energy and energy policy.

To explore these issues, Public Agenda convened a series of six focus groups with the general public across the country and conducted sixteen in-depth interviews with energy experts from an array of fields. (See the Methodology Section that closes the report for more details.) The research covered a wide range of energy issues, such as dependence on foreign sources of oil, soaring costs, the environmental consequences of reliance on fossil fuels, options for alternative energy production, and energy use and conservation. It probed people's understanding of energy issues and their beliefs about the underlying causes of the problem; it attempted to elucidate the values and concerns that shape people's ideas about what can be done to address the problem and what they believe stands in the way of action.

Putting the Pieces Together: How Do Citizens and Experts See the Energy Issue?

EXECUTIVE SUMMARY

I. What's The Problem?

Pocketbook Concerns and Partial Understanding

While citizens have been showing increasing concern about energy issues in recent years, they continue to have a hazy understanding and a fragmentary view of the problem. In focus groups, people identified immediately with how energy prices are hitting their wallets, but few had much sense of the larger energy picture. To the extent that people did talk about other aspects of the issue (such as concerns about foreign dependence, limited supplies, and environmental consequences), they had a limited understanding of the connections between these various energy sub-issues.

Experts, by contrast, tended to view the nation's energy dilemma as a complex, interactive mix of economic, national security and environmental challenges.

II. What's Behind the Problem?

Out-of-Control Consumers and Misguided Leaders

Focus group respondents appeared unusually willing to shoulder much of the blame for the nation's energy dilemmas. They pointed to how wasteful people are and how indulgent they can be in their energy consumption, and they felt that personal sacrifices would be needed to address the energy problem. This is not to say that participants appeared ready or eager to make sacrifices in their own lives, but simply that they identified personal wastefulness as a significant problem. Experts had a somewhat different and perhaps less depressing perspective on this question. They placed less emphasis on the wastefulness of individual behavior and more on the need to address the inefficiencies endemic to our current energy production and delivery systems overall.

In addition to unchecked consumption, focus group respondents also paid significant attention to corporate greed, special interest politics and the lack of true leadership. Experts were strongly in tune with the public in decrying the lack of pragmatic, visionary, bipartisan political leadership on energy.

III. Dual Concerns about Oil Dependency

Dependence on Foreign Energy vs. Dependence on Fossil Fuels

Many focus groups participants were wary of America's dependence on foreign sources of oil, seeing it as a source of trouble for our economic well-being and national security. Others worried more about oil dependence *per se*, no matter the source, due to oil's effects on the environment and its finite supply.

On this issue, the views of focus group participants were not far from those of the experts we interviewed. One notable distinction is that whereas the public tends to think in terms of *oil independence,* experts reject the notion that we can become truly independent of foreign sources of energy. They are much more apt to think in terms of the broader concept of *energy security*, meaning protecting against vulnerability caused by *over*-reliance on foreign (and often hostile) sources of energy as well as fluctuations in the energy market by securing a more diverse array of energy sources and by reducing overall energy demand.

IV. Solving the Dependency Syndrome

Domestic Resources for Some, Renewable Energy for All

Focus group respondents were somewhat divided about how to address foreign dependency. Those who were concerned primarily about the national security and economic vulnerabilities that flow from our dependence on foreign oil expressed more openness to increasing exploitation of domestic resources than were those worried about sustainability and environmental issues. Both groups, however, viewed using renewable energy sources like wind and solar as one promising way to address energy dependency issues. Hardly anyone in these focus groups was comfortable with nuclear energy as a solution (although people did not appear completely closed to the possibility).

The experts we interviewed were split on domestic resource exploitation as well, and like the public, were almost unanimous in their support of renewable alternatives. But even those experts strongly concerned with global warming did not think it possible to do without fossil fuels completely in the short term. Instead, they talked about technologies that enable cleaner use of them—a concept that appears to be outside of the thinking of the public. While experts favored using a diverse array of alternative technologies, they expressed divergent opinions about the relative utility of some energy sources, particularly nuclear power.

V. How Experts Think We Should Move Ahead

The experts we interviewed stressed that there is no single answer to the nation's energy woes, emphasizing instead an integrated suite of solutions. For most experts, a key part of such a portfolio would involve measures to reduce energy consumption, especially through improved efficiency. Focus group participants seemed less attuned to efficiency improvements as a means to conservation, tending instead to think in terms of lifestyle change and personal sacrifice.

Another core element in the experts' suite of solutions is increasing the use of renewable sources of energy. While focus group respondents strongly agreed, they tended to see obstacles to renewables purely in terms of special interest politics, whereas experts stressed the complexity of bringing new technologies to scale and to market.

A third element is the cleaner use of fossil fuels, something that our focus group participants did not seem to be particularly aware of, which suggests that this is an area where public education might be particularly useful.

VI. Some Keys to Closing the Gaps

Based on this qualitative research, we suggest five ways in which experts and leaders can help the public come to terms with energy issues:

- Nurturing more systemic thinking among the public about the nation's energy problems
- Viewing conservation, especially through increased efficiency, as a place to begin creating momentum for change
- Building on the shared support among citizens and experts for renewable energy
- Building on the common ground about the need for better leadership
- Engaging the public in the search for solutions, beginning with those aspects of energy that strike closest to home

In the pages that follow, we elucidate these findings in some detail. Before doing so, we wish to remind the reader that focus groups and interviews are qualitative, not quantitative, research tools. They can provide important insight into the nature and complexity of people's views and the dynamics that underlie them. By listening to how people describe an issue in their own words, it is possible to ascertain the degree to which their views are grounded or whether they are top-of-the head reactions tossed off without much thought. But focus group results cannot be generalized

and said to precisely represent the views of larger populations in the ways that statistically valid surveys can.

That notwithstanding, carefully conducted focus groups can provide important clues and insights that can inform further research and analysis. It is noteworthy that our findings here are quite consistent with another Public Agenda study, this one on a series of National Issues Forums citizen deliberations on energy.[1] Public Agenda's analysis of citizen deliberations at National Issues Forums on energy also found that the public tends to hold a fragmentary view of energy and identified a number of similar attitudes: that wasteful lifestyles are a major source of the problem, and that people have mixed feelings about increasing domestic production of fossil fuels and a great faith in renewable energy technologies. The consistency between these two reports strengthens our confidence in our findings.

It is also important to note that attitudes towards energy are in some flux at present, and that the policy context is rapidly changing as well. For example, a majority of the interviews and all of the focus groups for this study were conducted prior to the passage of the Energy Independence and Security Act of 2007. This bill may be the first sign of the kind of national leadership that both experts and focus group participants called for, as we'll discuss at several points in the pages that follow.

It is our hope that this qualitative investigation will serve as a starting point for further exploration of the evolving and expanding nature of Americans' views on energy, and that it will help inform efforts to engage citizens effectively in the formation of an appropriate public policy response to the energy challenges we face.

[1] John Doble, et al., 2008, *Public Thinking about "The Energy Problem": Choices for an Uncertain Future, Results from the 2007 National Issues Forums* (New York: Public Agenda).

MAIN FINDINGS

I. What's The Problem?

Pocketbook Concerns and Partial Understanding

Overview

While recent opinion polls clearly show that energy is ranking higher than it used to among the public's concerns, our research reveals that the public continues to have a hazy and fragmentary understanding of the problem.

Focus group participants identified immediately with the most personal element related to "energy issues"—gas and home heating prices—but few readily made connections to more structural or systemic issues like foreign dependence, reliance on fossil fuels, efficiency or environmental impacts. They experience pieces of the problem in their daily lives, but few connect the dots that would lead them to see how their personal pain sits within the context of the larger forces that must be contended with if the nation is going to come to terms with its energy future.

Experts, for their part, tend to view the nation's energy challenges as a complex, interactive mix of economic, national security and environmental issues.

Feeling It First in Their Wallets

People's starting point on the energy dilemma became evident early in our discussions. When asked to list the top issues facing the nation today (and before they knew the theme of the group) no one said "energy," but at least someone in every focus group spontaneously mentioned gas prices.

As the conversations developed, such pocketbook concerns remained at the center of how most people entered the discussion. They viewed energy first and foremost in terms of the rising prices at the pump, increasing heating costs, and the adjustments and sacrifices they and their families are making as a result.

> *"I have to carpool now [and] don't have as much leisure driving…I used to just get in my car and drive without thinking about how's this going to affect the bottom line."—Stamford man*

> *"My energy bills have probably gone up literally 40% in the past three years. It affects your grocery costs and everything."—Denver man*

> *"I remember when gas was approaching $2 and people were freaking out over that. Now, I'd give my left arm, probably, to go back."—Kansas City man*

"We're Too Dependent"

While pocket-book concerns were the dominant note as people began talking about energy, a number of respondents brought up other dimensions of the issue, especially as the conversation progressed.

Some spoke, for example, of what they feel is the nation's over-reliance on oil, often with a particular concern about the national security and economic implications of our dependence on *foreign* sources of oil. In several groups, people who ranked the war in Iraq as the top issue facing the country quickly made a connection between the war and America's thirst for oil as soon as the topic of the group became evident.

> *"I just feel like we should be self-sufficient. We're just too dependent on the countries that we're actually fighting. We're dependent on them. We've got [resources] over here, and we should do something about it."—Dallas woman*

> *"Remember the Gulf War, what it was all about? …it was Iraq going in and taking and freezing up Kuwait's oil. It still has a lot to do with all the oil over there…It's just a fact, cause and effect."—Dallas woman*

> *"If we weren't as worried about the relationships that we had with some of the other countries that set the price for oil in the first place, we might even be able to spend more on renewables…"—Stamford woman*

Environmental Concerns

A smaller number of respondents were especially concerned about wasting natural resources and the environmental impacts of burning fossil fuels. Surprisingly, global warming rarely surfaced as a primary or urgent concern, even among those worried about pollution and other forms of environmental harm due to fossil fuel use. Still, global warming did register as a real, if perhaps distant, threat for a number of focus group participants.

> *"We're so dependent on the fossil fuels that create all the pollution...Why can't we put our energies and resources in developing something else?"—Denver man*

> *"Probably within our life spans we're not going to see much change [from global warming], and really be faced with it, but the children and the grandchildren are definitely going to be directly affected."—Stamford woman*

In sum, knowledge of the various dimensions of the energy challenge was evident in at least nascent form among the various comments by focus group participants as they began to confront

the issue. But the dominant note was clearly a concern with rising costs. Moreover, to the extent that some people highlighted other aspects of the energy issue, they did not generally appreciate the interconnections among them. As we will see, this narrow and fragmented view is in clear contrast to the thinking of the experts with whom we spoke.

How Experts Compare

A More Comprehensive, Integrated View

The experts with whom we spoke consistently had a more complex and multi-faceted analysis of energy than did focus group participants. By their account, the changing energy situation affects America and the world in terms of three interlocking themes: national security and diplomatic challenges stemming from dependence on foreign sources of energy; the economics of energy supply and consumption; and environmental, especially global warming, impacts.[2]

> *"[There's] not just one problem. Energy security is definitely a problem; energy costs, especially for low-income consumers, is a problem. I think maybe the third problem is the environmental impact of energy."—Policy Expert, Energy*

> *"We're using more energy…relative to the resources we have and we're going to have to deal with tightening resources. We're clearly dealing with rising prices. There are security implications…then there's climate change… So, yes there's a set of problems with energy at the core."—Policy Expert, Energy Efficiency*

Certainly the experts we spoke with were not in perfect lockstep. Some, for instance, *prioritized* the dimensions of the dilemma in different ways.

> *"[The problem is] we're…over-consuming [fossil fuels]. There are problems both in emissions, which is the environmental problem, and in terms of resources…."—Industry Expert, Energy Economics*

> *"[The biggest problem is] the reliance on foreign oil. You just saw what the disruptions from Katrina could do, from a natural event. And a lot of our oil resources are coming from really unstable parts of the world that we've got little control over."—Policy Expert, Energy and Efficiency*

But such matters of emphasis aside, experts all tended to view the "energy issue" within a comprehensive framework in which all three dimensions were not only important but significantly interrelated.

[2] We are indebted to Dan Yankelovich for sensitizing us to these three dimensions of expert thinking on the energy challenge.

A Different Perspective on Rising Costs

In addition to this more complex, comprehensive and integrated mode of thinking about energy, experts also differed dramatically with the public's leading concern and way of entering the energy conversation—i.e., people's anxiety about rising costs. In sharp contrast with the public, the view of many experts is that energy has been too cheap for too long, causing both an over-reliance on abundant and inexpensive fossil fuels, as well as wasteful patterns and habits.

> ***"****The problem is that we basically have a world that got…absolutely addicted to using energy and an unbelievably unresearched belief that we would have the luxury of increasing our energy use as far as the eye can see for a long, long period of time and, even more unbelievable, at low, low prices." –Industry Expert, Oil and Natural Gas*

> *"I think we need to be a little bit more realistic on the fact that we had this unusual point in history where we were awash in very cheap energy. We're a long ways away from some kind of miracle technology that will make energy as cheap [in the future] as it has been since the 1930s or 1940s."—Technical Expert, Renewable Energy*

II. What's Behind the Problem?

Out-of-Control Consumers and Misguided Leaders

Overview

When pressed to explain the sources and causes of the nation's energy challenges, focus group respondents appeared unusually willing to shoulder much of the blame. They pointed to how wasteful people are and how indulgent they can be in their energy consumption and felt that personal sacrifices would be needed to address the energy problem. This is not to say that participants appeared ready or eager to make sacrifices in their *own* lives, but rather that they identified personal wastefulness as a significant problem. Experts had a somewhat different and perhaps less depressing perspective that focused more on the need to address the waste and inefficiency endemic to our current energy systems overall, rather than on the wastefulness of individual behavior alone.

But if focus group respondents were willing to place much responsibility on individual citizens, they did not let society's power players and institutions completely off the hook. Many, for instance, spoke of the greed of big business as a major factor fanning the flames of self-indulgent consumerism. And virtually all bemoaned the dearth of effective, public-spirited leadership and the pointless partisanship that dominates the public debate. In this last point particularly, they were strongly in tune with the views of experts.

"I Think There Are Just a Lot of Wasteful People in Our Society"

Just as most people found their way into the energy challenge by thinking of their personal experience (with rising costs), many also thought in personal terms when pressed to describe what underlies the energy dilemma. Comments about personal wastefulness and thoughtless, self-indulgent behavior were a major theme.

> *"We just waste [energy], and way too much, and we're not conscious about what we're doing"—Stamford woman*

> *"I think that we waste a lot of energy, whether it's on large homes that are unnecessary or just taking for granted our resources that we have. I think there are just wasteful people in our society. If they could just step back and look and consume less, every little bit would help."—Denver woman*

> *"We are [to blame] if we drive our cars everywhere, if we don't carpool, stuff like that."—Dallas man*

> *"It's nighttime, this building is 90% empty, and I bet every light is on in every office right now."—Stamford man*

Big Business and Political Leadership: Doing More Harm than Good

The counterpart to people blaming themselves and their fellow citizens for the nation's energy woes was their strongly felt perception that "movers and shakers" are either actively making matters worse or are simply abdicating responsibility and leaving problems to fester.

For instance, many felt that the public's self-indulgence is exacerbated by the behavior of big companies, who exploit it.

> *"I think it's more the bigger companies' fault for—just like the credit card companies—throwing it at us as consumers. I think they give us too many choices in the supermarket to get fat on, too many credit cards to get more debt on. The consumer is out of control, but I don't think they're the source of being out of control as a nation."—Stamford woman*

> *"Why can't the American auto companies be more innovative? Why is it always up to the consumer to cut back? That's what bothers me. I don't have a choice. I can't take public transportation to work."—Kansas City woman*

This last point about public transportation was itself a notable thread in the conversations. Local government deserved some blame in many people's eyes by failing to provide reasonable alternative transportation options.

> *"One thing that we haven't utilized in this country, in the last nearly, I'd say at least close to 50 years, and that is mass transit…it's going downhill to almost nil."—Kansas City man*

> *"This [area] is pretty densely populated. [Public transportation] should be better than it is. We do have a good train system, but people live 10 or 15 miles from the train station, then it becomes a problem."—Stamford man*

In general, people perceived that in too many instances big business and government leadership are intertwined in ways that obstruct, rather than promote, progress on energy issues. As a man in one of our Dallas focus groups put it, "I believe the government has a responsibility to enforce the things that are for the good of the people, that increase our efficiencies and make us a better civilization." Unfortunately, due to the corrupting influence of big money, many people feel that this is not the kind of leadership we're getting.

> *"There are too many lobbyists with money in the politicians' pockets saying, 'Don't touch the auto industry,' or 'Don't touch the energy industry,' 'Don't touch the oil industry.' There's too much of that going on."—Denver man*

> *"I think that we could solve some of the problems... if we wanted to, if there was the will to. It's the politicians just don't seem to be able to pull away from all that—the money involved in it."—Stamford man*

> *"This is all oil companies' faults…Big companies period. That's just why we don't use windmills, so the big companies continue to make the money out of it. If everybody had windmills, that would cut big companies from being big companies."—Dallas man*

How Experts Compare

A full analysis of what experts think about "what's behind the problem" would require a lengthy treatise that is beyond the scope of this report. It would undoubtedly involve arguments over the quirks of history, regulatory regimes and their unintended consequences, geology and natural resources, politics and markets, consumer psychology and more. What will be useful here, instead, is to look for the ways in which expert's thinking dovetails or departs from the *public's* analysis specifically.

Conservation Means Cutting Waste More than Cutting Back

If, as was noted in the last section, people feel that a large part of the energy problem may be laid at the feet of wasteful and indulgent consumers, then it follows that changing that behavior is going to be a large part of the solution.

> *"I used to know people that kept the house very cold years ago. We used to say, 'How can they live like that? They keep their house 62, 63,' and I'm doing it now."—Stamford woman*

The experts we spoke with agreed that over-consumption and waste are significant drivers of the problem. But, interestingly, they placed much less emphasis on the need for personal sacrifice than focus group respondents did—in what appears to be a rather rare instance of the public engaging in decidedly "*un*wishful" thinking.

Instead, experts pointed much more towards addressing waste and increasing energy efficiency through new regulations and technologies that upgrade the efficiency of homes, appliances and energy production and delivery systems. They believe that greater and more expedient conservation gains are likely to come through this route rather than through individual consumer sacrifice. Indeed, some view the perception of conservation as a "personal virtue" more as an obstacle than a solution.

> *"There's a lot of wasteful energy use in the U.S., but there are a lot of people who would buy more energy efficient products…if they had an affordable choice. There's no reason we shouldn't be making them…One of the results would be that consumers wouldn't have to, in the short-term, sacrifice their lifestyle."—Policy Expert, Energy and Environment*

In sum, whereas conservation resonated as a notion of personal sacrifice with the public, the experts we interviewed interpreted it primarily as improved efficiency. Both talked about wastefulness, but while most citizens expressed a guilty, but divided, conscience around American consumer culture and tended to view conservation as a "bitter pill" that is probably both necessary and unlikely to be widely embraced, most experts talked about conservation in terms that had little to do with individual sacrifice or radical changes in Americans' standards of living.

We don't wish to overstate this point: It is not so much that experts think our energy problems can be solved without personal sacrifices or at least significant changes in personal behaviors and attitudes. Rather, it is that they view personal sacrifices as secondary to technological, structural and regulatory improvements to efficiency.

Leadership Is, Indeed, Missing

If there is one area where the experts we spoke with were in concert with focus group participants it is around the theme of leadership, which they agreed is sorely lacking.

> *"I think there's a hunger for leadership… the public is hungry for progress on this issue, and I think there's a great opportunity for leadership to emerge in a lot of different areas."—Industry Expert, Renewable Energy*

> *"I listen to the political debates on energy and I keep thinking 'I hope these guys are hypocrites because if they believe what they're saying, we're in deep trouble.' Essentially, nobody talks very frankly about these issues."—Industry Expert, Energy Economics*

Most experts saw the forces behind the energy leadership vacuum as a combination of the prevailing culture of partisanship and the corrupting influence of big money on public decision-making. Some placed their emphasis on one of these factors and some on the other, but across the expert interviews both came up repeatedly.

> *"If you take a look at the amount of money that's involved in the energy game, and you shift things around like this, the amount of money that's going to get shifted, dropped off the table for some, put on the table for others, you're talking a big stakes game!"—Industry Expert, Energy and Efficiency*

> *"A top obstacle has been the lack of a bi-partisan policy making effort." —Industry Expert, Oil and Natural Gas*

> *"[A] major barrier historically, and it's still there to some extent, has been the resistance of… potentially regulated industries to national action...."—Policy Expert, Energy and Efficiency*

> *"Essentially the politics have gotten in the way of the sensible policy."*
> *—Industry Expert, Energy Economics*

> *"People [running the corporations] in this country deal with a relatively short time horizon, they're only looking to the next 6 or 8 years …and that's the main part of the problem."—Policy Expert, Energy and Environment*

Certainly, experts have a much more nuanced view than the public of the obstacles to sound energy policy that even strong and principled leadership, were it to appear, would have to confront. Experts would not, in other words, tend to say that better political leadership would lead in some easy and straight line to a better energy future—the issues are simply too complex for that. But on the failure of leadership as a major obstacle to progress and on some of the prime dynamics behind that failure, the public and the experts are fundamentally on the same page.

III. Dual Concerns about Oil Dependency

Dependence on Foreign Energy vs. Dependence on Fossil Fuels

Overview

The findings of our focus groups suggest that the public is wary about America's dependence on oil. Most respondents were concerned primarily about the nation's dependence on *foreign* sources of oil in particular, seeing it as a source of trouble for our national security and economic well-being. Others focused on the effects of fossil fuels on the environment (including global warming) and its limited and finite supply and therefore worried about oil dependence *per se*, no matter where the crude comes from.

On this topic, citizens in our focus groups were not that far from the views of the experts, although there are a few differences worth noting. For instance, whereas the public tends to think in terms of *oil independence*, experts are more apt to think in terms of the broader notion of *energy security.*

It's Dangerous to be Dependent

For many focus group participants, oil independence was a critical national security and economic issue.

> *"I think we should be independent of foreign sources. That's our big problem. If we had a major squabble with Saudi Arabia…we would be into a depression… we'd be in serious trouble."—Stamford man*

> *"We need to be able to stand on our own feet. We shouldn't be reliant on other countries."—Dallas man*

This concern is very likely exacerbated by the fact that focus group participants strongly over-estimated the proportion of our oil consumption that comes from the Middle East. They were almost uniformly surprised when shown a chart outlining all U.S. oil sources and finding out that only about 16% is Middle Eastern in origin.

> "*[It's surprising because] the perception is always that we get most of our oil from the Middle East. According to this it's only 16%... I was under the impression it was like 60-70%."—Stamford man*

> "*I really didn't know that [a large portion of our oil comes from Canada and Mexico]. I thought it all actually came from the Middle East."—Dallas woman*

However, the significance of this misperception should not be overstated. While it may very well intensify people's concerns it hardly nullifies them. Even if Middle Eastern oil does not account

for the vast majority of our oil intake, enough of it does so that America's economy and foreign policy are profoundly tied to and affected by the region and its greatest source of wealth. If the public does not quite have the facts right, they are nonetheless keying into one important dimension of the energy challenge.

Oil Dependency Is Also Unsustainable and Bad for the Environment

So far we've seen participants in the focus groups worried about dependency on foreign sources of oil because of national security and economic implications. Others were more broadly concerned with our dependence on oil itself, from under whoever's soil it emerges, because of concerns about sustainability and environmental impacts.

> *"Foreign or not, it's a fossil fuel that we rely on, and at some point that is going to hinder us…eventually it's going to run out and we're going to have to find something else."—Denver woman*

> "*To me [the most important issue] would be the environment, when you see some of the dramatic climate changes in the country that are due to industrialization or over-industrialization*."*—Stamford man*

> *"We're going to end up using [our resources] up, if we rely on the same methods of heating our homes, and lighting our homes, and air-conditioning it, and driving, and using the same fuel sources. In a hundred years, it's going to be gone anyways."—Kansas City woman*

> *"I believe Alaska has a lot of oil. [Using that] would be bad because of pollution. We don't need that. You have to compromise pollution and oil." —Dallas man*

> *"China and India now have grown to the point that they're …going to start buying [oil] also. It is going to be more expensive and there's not going to be enough of it. We do need to find alternate sources.—Stamford man*

In short, our focus groups suggest that many people do not view oil as an unquestionable foundation of American life. Rather, they see serious problems with our oil reliance, whether foreign or domestic.

How Experts Compare

Oil Independence vs. Energy Security

A number of the experts with whom we spoke shared the public's concern with the national security challenges posed by our dependence on foreign sources of oil. Many more, like some members of the public, worried primarily about the harmful environmental effects of continuing to rely on fossil fuels.

> *"I think it is a significant threat, particularly where we get large chunks of energy from unstable portions of the world, or portions of the world that may have different values than ours…For oil, we do get quite a large share from unstable regions of the world…."—Policy Expert, Energy Efficiency*

> *"The [problem] I see that's the most urgent to deal with is climate change…."—Policy Expert, Energy and Environment*

But in contrast to the public, the experts we interviewed tended to be largely uninterested in talking about the nation becoming energy independent, a notion that few saw as a realistic, or even a valuable, goal.

> *"A significant and very credible group of experts believe that energy independence is not possible. The goal must be developing energy security, not independence."—Industry Expert, Oil and Natural Gas*

> *I don't think we're ever going to eliminate our use of imported energy from these countries, but I think if we can keep it from becoming too large, that will be very much in our strategic interest."—Policy Expert, Energy Efficiency*

Rather than energy independence, then, experts looked towards the concept of energy *security*. This means, first of all, bringing energy demand down, primarily through new efficiencies. Secondly, and just as importantly, it means securing a more diverse mix of energy sources than we currently have.

Just as a diverse economic investment portfolio protects against financial market fluctuations, experts contend that a more diverse array of energy sources will enable us to weather temporary instabilities in the energy marketplace. This, rather than complete energy independence, is the most realistic way to improve our national and economic security in the eyes of the experts with whom we spoke.

Oil Is Just One Piece of the Puzzle

Another important distinction between the way experts and the public approached the question of energy dependence is that the former were more mindful that oil is only one of our major sources, and that it meets only one aspect of our energy needs. As we'll see, this point has some significant implications for the public's ability to effectively orient itself to the policy debate.

Specifically, experts took pains to point out that oil pertains primarily to *transportation* energy usage, and not to the nation's *other* major energy challenge: the need to produce cleaner electricity, which is currently generated in large part by coal and natural gas rather than oil. For experts, then, the challenge is a dual need to find "carbon-neutral" alternatives for *both* transportation fuels (oil) and electricity generation (coal and natural gas).

> *"We need to be… de-carbonizing the entire fuel spectrum, and then offering consumers more cost-effective energy choices—or design communities in a way that people need less energy."—Policy Expert, Energy and Environment*

This ability to disentangle our energy usage and needs was not evident among the public and at times this seemed to muddle their thinking somewhat about solutions. For instance, citizens in our focus groups tended to define our energy problems primarily in terms of oil, but they would then go on to discuss alternative energy solutions such as wind and solar that are more relevant to *electricity* production (which is *not* primarily about oil) rather than transportation (which *is*). In other words, our focus group respondents sometimes failed to match the right alternatives to the right energy needs, which could lead to confusion as the policy debate unfolds.

IV. Solving the Dependency Syndrome

Domestic Resources for Some, Renewable Energy for All

Overview

Two solutions tended to bubble up in our focus group conversations about energy—one of which tended to divide participants, while the other tended to unite them.

The groups tended to split on the question of ramping up exploitation of domestic oil. Naturally enough, those concerned about oil primarily in terms of its economic or national security impact were more open to it than were those who worried most about sustainability and environmental issues. But the groups were united in viewing renewable energy sources like wind and solar as a promising way to address energy dependency issues.

Few focus group participants volunteered nuclear energy as a possible solution. When queried about it, people were not completely closed to the possibility of increasing nuclear energy production but remained concerned enough about safety that they did not want to see nuclear facilities sited near their communities.

Experts, for their part, were split on domestic resource exploitation as well, with the tension between those interested in reducing dependence on foreign energy sources and those concerned about environmental issues mirroring the split in public thinking. However, even those experts most alarmed about environmental consequences did not think it possible to move completely beyond fossil fuels in the short term. Instead, they talked about developing technologies to use them more cleanly—a concept that appears to be outside of the public's current thinking.

Like focus group participants, the experts we spoke with were enthusiastic about the potential for producing more energy from renewable sources. On the question of nuclear energy, experts did not tend to share the same level of concern about safety as focus group respondents, but most were nonetheless wary of nuclear energy for a variety of reasons, including cost and waste disposal.

Conflicting Views about Ramping Up Domestic Production

Addressing our oil dependence through increased exploration and exploitation of domestic resources was a notion that tended to divide focus group participants. This solution was naturally more appealing to those more concerned about foreign dependency than environmental impact. Many respondents were conflicted, their inner struggles evident in their comments.

> *"I'm torn between environmental [concerns] and dependence on foreign oil. Do we want to tap our sources that we have…? I'm torn."—Denver woman*

> *"You got the rest of the world that is drilling for oil. You don't hear them concerned about conservation [or] taking care of the environment in their countries…. I think we should be less concerned."—Denver man*

> *"I know that there are people that are worried about the animals [but] from what I've heard, they're not even in the area where the oil is. If that's true, I don't know why we can't do something with our own resources."—Dallas woman*

Increasing domestic production of fossil fuels was not, of course, viewed as a viable solution for those who have concluded that nonrenewable, polluting fossil fuels themselves, and not their geographic source, are the main problem we're facing.

> *"I would only support [tapping our domestic resources] if it can be done without hurting the environment."—Dallas woman*

> *"I feel like [domestic resources] could be a temporary source, but again, it's not permanent, so what do you do after that?"—Denver woman*

Shifting to Renewable Energy Sources

The other solution that people gravitated towards attracted adherents of *both* the "foreign-dependency-is-bad" and the "fossil fuels-are-bad" camps: increasing the use of renewable energy sources. Focus group participants expressed a robust faith in the potential of alternative technologies and renewable energy sources.

> *"The pursuit of renewable energy should be one of our main concerns." —Denver man*

> *You have to do something more proactive. You have to develop new, alternative, cleaner fuels to replace the ones we're using up now."—Kansas City woman*

> *"I think government…could do something very positive to encourage alternative energy development, renewable sources…Just like we got to the moon…It was done through a national policy dedicated to reach that goal. This country could do it, if they just get a pin stuck into them and get going."—Stamford man*

Lingering Nuclear Anxieties

People did, of course, differ and argue about which alternatives make the most sense to pursue. While most seemed enthusiastic about solar and wind energy, they leaned away from increasing our reliance on nuclear energy—although opposition was not generally intense and a good number appeared to be ready to give nuclear a hearing. The overriding concern here was about

the safety of nuclear power plants; many mentioned Chernobyl and Three Mile Island as examples of the worst-case scenario. Even among those who felt generally positive toward nuclear power, there was a sense that a nuclear power plant in their neighborhood would be unwelcome.

> *"I believe we have technology that will protect us and [nuclear energy] is not an issue, but I still believe most of us will say, 'Not in my backyard.'"—Dallas man*

The complexities of the nuclear option aside, most agreed that the nation should be heading down the path to cleaner and renewable sources of energy and away from fossil fuels.

> *"If we weren't dependent on polluting, nonrenewable energy and we had renewable energy, that would create domestic production, which is going to help the economy... On top of that, if we are causing any global warming, that's going to help fix it."—Denver man*

What's Holding Up the Works?

If alternative sources of energy are so important, why aren't they more widely available? Here people continued to emphasize the corrupting influence of money and the lack of real leadership—the same kind of perspective that we saw earlier in people's analysis of why the nation is facing energy problems in general.

> *"It's got to do with money. I mean the persistence of big coal and big oil to continually exploit all the natural resources to the last drop or the last piece of coal rather than find ways to invest in cleaner, alternate sources of energy…There are alternate sources out there, but…the money's not there behind it."—Kansas City woman*

> *"Texas has the most sun. Why can't we harness in on that? Somebody's keeping the price of the solar panels too high, because they've been around forever. The cell phones are getting smaller and smaller, but we can't get a solar panel for our homes?"—Dallas man*

How Experts Compare

In many respects, expert opinion ran roughly parallel to the focus groups on the topics discussed in this section. For instance, some experts were comfortable pushing for expanded domestic production of oil, coal and natural gas to increase the nation's energy "security" while others were not, based on environmental considerations. And like the public, experts strongly supported bringing new and alternative sources of energy online. How, then, did expert views differ from those of citizens?

Continued, but Cleaner, Reliance on Fossil Fuels

Expert responses reflected a good deal more thought about our fossil fuel future than did our general public participants. Most felt that that the nation will need to continue relying on fossil fuels—whether domestic or foreign—to a significant extent for the foreseeable future and many promoted technological fixes to remove or minimize the environmental consequences of doing so.

> *"We need to diversify. And that means moving away, as much as we can, from fossil fuels. At the same time acknowledging that we're not going to move that far away from fossil fuels…And so we need to develop technologies to deal with the carbon dioxide produced…."—Policy Expert, Energy and Environment*

> *"[W]e must recognize that the massive dependence on our conventional fossil fuels within our economy cannot be changed overnight. Our policy should be directed toward a 'smooth landing' over the next 25 years towards an energy future less dependent on oil and gas."—Industry Expert, Oil and Natural Gas*

> *"Our [coal, oil and natural gas] resources…will be an important part of the solution. [But] we're going to need carbon capture. Put a price on carbon so it rises gradually over time…companies will invest in [carbon sequestering] technologies, and we'll be able to continue to use fossil fuels for some time." —Policy Expert, Energy and Environment*

Bringing Alternatives to Scale Is Not as Easy as It Looks

Turning to the subject of clean, renewable energy alternatives, the experts we spoke to had a rather different analysis than focus group respondents about why alternatives have yet to play a more significant role.

Experts generally went beyond the "money corrupts" analysis favored by focus groups about why alternative energy technologies and resources have so far not played a significant role. While sometimes sounding that note, they spoke more frequently about complex market forces, incentives, research-and-development funding, and the like.

> *"You need some combination of market push and pull – some combination of regulating, de-subsidizing [nuclear and fossil fuels], providing new incentives for renewables. So there is a strong role for government, a strong role for businesses, for investors, and then consumers."—Policy Expert, Energy and Environment*

> *"We have to realize that future technologies, although they're available, they still have a fairly high cost to them that we can make improvements to. And that comes down to investing in research and development."—Technical Expert, Renewable Energy*

Here, the issue is not that citizens have an unrealistic view of the importance of renewable technologies or about their availability. It's more that they don't have a strong grasp of the costs, tradeoffs and challenges involved in bringing these technologies to market.

The Problems with Nuclear…

Experts were more divided in their views on nuclear energy than were the focus group respondents, who almost uniformly leaned away from it on safety grounds. In general, experts tended to say, "It's a great idea, *but…*" before going on to note serious problems that would have to be overcome, with safety being one of the lesser players among them.

> *"[Nuclear] certainly is promising in terms of carbon-free electricity. But it's a huge, huge capital investment…."—Policy Expert, Energy*

> *"Nuclear's fabulous, it never should have been killed. But the problem is, we ran out the clock. We don't have any idea where the new sources of uranium are, which is one of the reasons why uranium prices have gone up tenfold…." —Industry Expert, Oil and Natural Gas*

> *"I'm one that believes nuclear is going to come back. The problem is, nobody has figured out what to do with the waste problem."—Policy Expert, Energy and Environment*

> *"It's true that our nuclear industry is safer than it was…but that doesn't mean it's safe enough…."—Policy Expert, Energy and Environment*

Moreover, regardless of their own views about nuclear, experts largely felt that the public had strong negative feelings about nuclear energy. Interestingly, based on the focus groups, we did not get this impression. Rather, despite concerns around safety, people did not seem rigidly closed to the possibility of expanding nuclear power as part of the mix of our energy future.

V. How Do Experts Think We Should Move Ahead?

Overview

What can the nation do to make progress on our energy challenges? Here, we reverse our practice of starting with the views of citizens in our focus groups and then contrasting them with what experts think. It is our contention, based on the findings of our focus groups, that the public's understanding of energy issues is still so fragmentary that it would be difficult and quite possibly distorting to attempt to make a coherent narrative out of the their views on solutions.

There are, of course, aspects of the public's views on solutions that are clear and important, many reported on in earlier sections. But given that ordinary citizens are just beginning to grapple with energy in its many dimensions, it will be more useful at this juncture to begin with what experts believe needs to happen and then look for ways in which the public's values and views, as expressed by our focus group participants, align or clash with what experts think. These expert views have also been touched on earlier, but we think it useful to present them here in a more coherent package, and to add some details and nuance to more fully reflect expert thinking.

Briefly, experts tended to stress that there is no single answer to the nation's energy woes. Instead they believe that we need an integrated "portfolio" of solutions that includes lowering consumption, bringing renewable energy technologies to scale and using fossil fuels in cleaner ways.

There is No Silver Bullet

Just as experts articulated a comprehensive and integrated perspective on the nation's energy problems, they tended to take an integrated, multi-faceted approach to solutions. There is no single answer to the complex of issues underlying "energy," they argued. Instead, what's needed is an integrated suite of solutions. Or, as one expert respondent put it (in what appears to be a new catch phrase) what's needed is a "silver buckshot" (not a silver bullet) approach.

> *"There's no silver bullet. You can't take one policy or another and run with it, you've got to do everything you can."—Industry Expert, Energy Economics*

> *"This is an area where you don't have single, all-purpose solutions. You need portfolios of solutions."—Policy Expert, Energy and Efficiency*

> *"It's going to require a diverse portfolio, it's not going to be just efficiency, or just wind or just nuclear…."—Policy Expert, Energy Efficiency*

How Does the Public Compare?

Citizens in our focus groups didn't necessarily believe there is a silver bullet solution to the nation's energy problems either. Indeed, as soon as they started talking about energy at any length they began to realize how complex and far-reaching a conundrum it is. But neither did they have a coherent notion of a diverse, integrated portfolio of solutions. For instance, experts were much more likely than the public to point out the unintended consequences of partial solutions, such as how taking measures to lower gas prices to ease economic impacts would exacerbate other energy-related issues, such as increased environmental damage and lower investments in alternatives.

Lowering Energy Consumption

Experts viewed conservation as a relatively easy and fast way to take the pressure off our energy supplies and environment. They virtually all agreed that the critical first step is to concentrate on increasing the *efficiency* with which the nation uses energy—from consumers to industries to municipalities.

> *"Energy efficiency is the fastest, cheapest and cleanest source of solutions. It needs a lot more public attention and emphasis, but its proven capacity to deliver energy solutions to the country has a record of a quarter century." —Policy Expert, Energy and Efficiency*

Many experts spoke at length about both existing and potential technologies that can increase energy efficiency in homes, buildings and appliances. They spoke as well about opportunities for improving efficiency through infrastructure improvements and utility regulation—areas where the public seems to have no real awareness.

> *"There are ways to get the same light, the same heat, the same cooling—but more efficiently."—Policy Expert, Energy Efficiency*

> *"[We need] to use the electricity grid in a better more integrated way—almost like a toll road—being able to provide easy on/easy off access… [We can] better serve not only electricity consumers and customers, but also better serve…people that are trying to get new alternative technologies into the market place and test them."— Industry Expert, Energy Economics*

Easy on the Guilt Card: Responsibility and Efficiency, not Sacrifice and Deprivation

Experts acknowledged that over-consumption due to energy-profligate lifestyles will be more difficult to change than simply creating more efficient cars and building codes, as the former will require shifts in cultural attitudes and consumer behavior. But as noted earlier in our report, addressing lifestyle choices and individual waste was a secondary priority for experts relative to efficiency, and one some felt could be advanced gradually over time.

> *"People may have some very wasteful habits and they'll recognize that and it's not going to be that difficult to get them to change. Do people really need a 10,000 square foot home or to drive the car to the corner grocery when it's a five minute walk? I think as people realize the problems we have… [t]hey'll be willing to make those choices."—Policy Expert, Energy Efficiency*

Rising prices as an incentive to change

Finally, rising prices are another factor that experts identified as pushing consumers of energy (whether individuals, businesses or government) towards more efficient and prudent usage. For this reason, most experts we spoke with would encourage leaders to resist the temptation to push policies that would artificially keep energy prices down.

> *"I think that realistically, as the cost of energy goes up, people just naturally conserve more. Even now, with gasoline at $3 a gallon, people learn to be better conservationists. Once they learn it and develop a habit, they don't generally go back to more spendthrift habits."—Policy Expert, Energy and Environment*

> *"[O]il and gas prices… have contributed to a consciousness that…we have a lot of choices that can be made [about] cost effective alternative energy sources."—Industry Expert, Renewable Energy*

> *"[D]emands that the tax on gasoline go down when the price of gasoline goes up is counter-productive to our goals of reducing dependence on imported petroleum, improving environmental performance. Those wishes are completely contrary to those ultimate goals."—Technical Expert, Renewable Energy*

How Does the Public Compare?

The focus groups showed that when citizens consider conservation their thinking veers towards lifestyle sacrifices, with less of a sense than experts about the opportunities for more efficient uses of energy. That said, the latter theme did have some play in the focus groups, where occasionally people talked about using more energy efficient light bulbs or insulating their houses.

Opinions differed, however, in the one place where experts did tend to veer towards "deprivatory" solutions: the price of fuel. A number of experts thought that prices need to go up to drive conversation efforts and investment in alternative technologies. Not surprisingly, this did not sit well with the public.

> *"I would be in trouble if they raise [gas prices], you know. I don't know what it's going to do. I mean, I'll have to find a new job. Work somewhere closer. That would really hurt me."—Dallas woman*

> *"I don't want to be taxed more [on gas]. We can't ride around on bicycles everywhere we need to go."—Kansas City woman*

That said, people did appear open to *incentives* that decrease excessive fuel consumption, such as a luxury tax on inefficient vehicles or tax breaks for highly efficient vehicles, but they generally did not want to see gas prices go up explicitly to promote conservation.

> *"If someone wants to drive a Hummer that gets very poor gas mileage maybe they get taxed a higher penalty for that…"—Kansas City man*

> *"The government should step in and say, 'We need to put out a reasonably priced car that's a hybrid or something like that.' That way you know the person that still wants to buy his Hummer, he can, [but] there's a reasonably priced car for the masses."—Dallas man*

New, Clean, Renewable Sources of Energy

Most experts with whom we spoke called for a diverse assortment of alternative energy sources, not just one or two. They talked about a range of technologies that capture renewable energy sources like wind, solar, water, biomass and geothermal heat—and also, in some cases, "carbon-neutral" nuclear power. It's true that different experts had their own preferred technologies, but virtually all agreed that no single alternative will be enough.

Most also believed that much of the technology that is needed to solve our energy challenges already exists, or will very soon. In this sense, the technology is not at all out of reach.

> *"[W]ind, solar, solar voltaics, concentrating solar power, cellulosic biomass for fuels—all of those kind of those things are well on their way. New forms of energy storage are well on their way."—Industry Expert, Renewable Energy*

But even if needed technologies exist (or are very close to existing), there are serious obstacles to bringing them to scale. As noted earlier, experts stressed that there are market barriers and regulatory issues that have hampered the widespread adoption of alternative technologies.

> *"We've had [alternative] technologies for years and years. It's always been a matter of whether there is an economic incentive or some kind of national crisis*

that would drive the necessity to moving to those."—Technical Expert, Renewable Energy

"The majority of people…believe that the marketplace works and that the things that make sense and that they would enjoy buying would just be delivered to them in the marketplace. But there are a number of market failures out there… [And] we do need more government efforts to address those market failures, either through regulation or incentives."—Policy Expert, Energy and Environment

"The real question is are we going to succeed in getting resource procurement processes that let winners and losers emerge on their [true] merits in a carbon-constrained world?"—Policy Expert, Energy

How Does the Public Compare?

We've already noted that, generally speaking, the focus group respondents put great faith in new technologies that can tap renewable sources of energy. Not surprisingly, the focus group participants generally knew less than experts about what technologies or resources are available (usually ticking off solar and wind before running out of ideas), but they were very open to new ideas and excited by other possible sources suggested by fellow participants (such as geothermal, hydro or wave power).

Another important difference between our general public and expert respondents in this arena is that the latter are thinking more about the challenges and tradeoffs involved with bringing renewable energy technologies to scale.

"There are drawbacks to almost every [new] energy source out there… [Some] people don't want to consider [hydro power] a renewable resource because of the impact on fish. And you see people going after windmills because of the impact on birds, or because it destroys the scenic vista. People are afraid of nuclear power, so they don't even want to discuss that. I think people have to understand that there will repercussions from any energy source you use." —Policy Expert, Energy

Corn ethanol offers a specific example of citizens' tendency to embrace new technology without fully understanding the consequences. People in our focus groups had hazy ideas about ethanol, but generally expressed a positive feeling about it and a willingness to use it.

"Ethanol is good, clean…it's cheaper, and it's clean."—Stamford man

"We're paying farmers not to farm on land, which they could farm corn on. Which we could get ethanol, which could definitely take care of the country." —Dallas man

In contrast, experts almost universally denounced corn-based ethanol as a kind of fool's gold, saying things like, "We got on this [corn] ethanol kick and it was a terrible idea…it's a net energy loser" (Industry Expert, Oil and Natural Gas).

Cleaner Ways of Using Fossil Fuels

As noted earlier, most experts acknowledged that fossil fuels will continue to be part of the nation's—and the world's—energy mix for some time. Some even felt that the use of coal, which is an abundant resource here in the United States, should be ramped up domestically. Others felt that we should minimize fossil fuels as much as possible, but all stressed the importance of finding ways to make their use cleaner and less damaging to the natural environment.

> *"I really don't see us moving away from coal so I really think we need a solution to deal with the coal problem and I see [carbon sequestration] as being a solution…especially for countries like China and India—they're not going to stop using coal. That's what they have, that's what cheap."—Policy Expert, Energy and Environment*

> *"I think…we should be trying to diversify our resources as much a possible, [but we need to] recognize that [many alternatives are] intermittent resources [i.e., the sun doesn't always shine, the wind doesn't always blow] so you still need your backup power, and that's usually [natural] gas or coal."—Policy Expert, Energy*

> *"We need a major shift towards using clean coal technology…The technology to do this is becoming available. The need is for the public to realize [it will] cost and accept the higher costs for electricity." –Industry Expert, Energy Economics*

How Does the Public Compare?

For the members of the public who participated in our focus groups, "alternative technologies" implied methods for generating energy from renewable resources like wind and solar. The efforts to modify fossil fuel use to create cleaner energy were not discussed in any depth, suggesting that these technologies are not yet on the public's radar and that this is a place where public education could be useful. Notably, coal was largely absent from our conversations with citizens as well. It seems that, in these conversations at least, coal was not an energy source that was much on people's minds.

VI. Some Keys to Closing the Gaps

Overview

Based on our interviews and focus groups, this report suggests several important ways in which the views of the public and experts diverge, as well as some areas of overlap. For instance:

- Experts view energy as a complex of issues involving costs and supplies, national security and ecological challenges. The public feels the issue first and foremost in terms of personal finances. While people at times key into one or another larger dimension of the problem, they generally fail to see it in a comprehensive fashion.
- Citizens and experts agree that conservation is an important solution, but the public tends to view it in terms of "cutting back" while experts focus much more on increasing energy efficiency.
- The pubic emphasizes the importance of energy (especially oil) *independence*, whereas experts tend to think in terms of the more nuanced notion of energy *security* based on diversifying our energy portfolio so that it is less vulnerable to market instability.
- Both sets of respondents, each for their own reasons, are cautious about the prospects of expanding the role of nuclear energy.
- Both are enthusiastic about clean, renewable sources of energy, even if the experts have a more complex and complete analysis of the obstacles that will have to be overcome to bring them to scale.
- Several expert solutions are largely outside of the general public's awareness, such as increasing efficiency through electricity grid and utilities reforms and cleaner fossil fuel usage.
- The public and experts alike decry the state of political leadership on energy issues.

In this final section, we will build on these insights to suggest five ways in which experts and leaders can help the public more fully come to terms with energy issues:

1. Nurturing more systemic thinking among the public about the nation's energy problems.
2. Viewing conservation, especially through increased efficiency, as a place to begin creating momentum for change.
3. Building on the shared support among citizens and experts for renewable energy.
4. Building on the common ground about the need for better leadership.
5. Engaging the public in the search for solutions, beginning with those aspects that strike closest to home.

1. Nurturing the Seeds of a More Systemic View

While participants in these focus groups did not begin with a very clear or comprehensive definition of "energy issues," they were fairly quick to say that energy is embedded in many of the nation's challenges.

> *"I think [energy is] an underlying reason for a lot of the other problems, like the wars, the environmental issues, politicians getting richer, things like that."—Kansas City woman*

> *"I didn't really realize how much energy cost affected everything in the economy until I was out on my own."—Denver man*

Moreover, while people did not exhibit an intuitive or deep understanding of the relationship between economic, foreign policy/national security and environmental issues, they consistently identified some aspect of this complex of challenges as important to their concerns, and in some cases showed at least an emerging appreciation for the interrelationships among them. For example, several understood that there might be environmental consequences if we were to exploit Alaskan oil resources in order to reduce foreign dependence.

There are, in this, the seeds of a more systemic understanding by the public. Experts and leaders can help people connect the dots among the various dimensions of the energy challenge and better understand the tradeoffs among them. This suggests that citizen education efforts should take pains to help people understand the consequences and tradeoffs of going down different solution paths, and so help them enlarge their understanding of the broader contours of the issue. The point for now is that there are some important existing dots to connect in the public's thinking, and at least a nascent sense that energy is a complex issue with broad ramifications across many areas of society.

2. Conservation, through More Efficient Energy Use, as a Place to Start

Leaders often spoke of conservation, especially through more efficient uses of energy, as a good starting point for action that could create real progress.

> *"[Recently, policymakers have] taken a bigger bite at efficiency. And I think there's recognition that that's kind of the low-hanging fruit and something we can be doing now…."—Policy Expert, Energy*

Of course, leaders were quick to point out that conservation alone won't solve our energy problems. But it could certainly be a good place to start making progress and building momentum around the issue. As citizens already seem to see consumer behavior as a major source of the

energy problems we face, it seems likely that the experts' emphasis on efficiency over deprivation would resonate happily with the public.

In short, emphasizing efficiency first and lifestyle change second (and, in the process, directly addressing the public's misperception that conservation is primarily a matter of personal sacrifice) would likely be a fairly easy pill for the public to swallow. It is noteworthy in this regard that experts recognized that calls for personal sacrifice elicit ambivalent feelings among the public and can be self-defeating if overemphasized.

> *"[We need to] replace the rhetoric of sacrifice with the rhetoric of personal responsibility, which I think works better for most Americans and is more likely to deliver enduring changes in energy use that actually will have the results we're seeking."—Policy Expert, Energy and Efficiency*

3. Building on the Shared Support for Renewable Energy

Another area where good progress seems possible stems from the common ground among experts and the public on renewable energy. Where there are opportunities to expand the role of renewable energy, this shared enthusiasm can be mobilized to break through partisan bickering over legislative minutiae and make it clear to leaders that action is needed. In this regard, one expert suggested that,

> *"It's time to scrap the term alternative energy. The term itself conveys a sense, I think, of both marginality and speculative character that is inappropriate at a time when renewable energy [is] making such obvious and dramatic advances."—Policy Expert, Energy and Efficiency*

A key challenge in this area is likely to be in communicating to citizens that, while renewable energy technologies can indeed be an important part of the solution, bringing them to scale will not be effortless. There are real obstacles that need to be worked through and real investments that will need to be made in order to do so.

4. Building on the Common Ground about the Need for Leadership

The views of both the public and experts clearly dovetailed in their calls for principled, bi-partisan leadership.

> *"What progress will require…is a strong bipartisan consensus on the need for action."—Policy Expert, Energy and Efficiency*

> *"I think we need leadership. We don't have it. It's got to start at the national level, and then the states will jump in, maybe towns—major cities will jump in."—Stamford man*

From this common ground could evolve a common call to move beyond partisan bickering and pressure to make real progress. And at least some leaders recognized that the public could be helpful in getting leaders off the dime.

> *"These should not be issues that polarize the Congress. There are no appreciable differences among the parties…It ought to be possible to carve out a safe space for congressional action, but in order to get that, an aroused and motivated public will certainly be very important."—Policy Expert, Energy and Efficiency*

Leaders may be ready to Listen

It is noteworthy here that, after years of hostile, partisan deadlock and a conspicuous failure by Congress to develop a comprehensive national energy policy, energy issues are beginning to gain serious attention in Washington. Some observers say that the recent passage of national energy legislation signals "a new political dynamic on Capitol Hill" and new "a political pathway forward" (*Christian Science Monitor*, 12/20/07).

5. Engaging, not just Researching, the Public

If citizens are to act as a voice to spur continued progress, they will have to come to a fuller understanding of energy in its complexity. This is not to say that they need more technical, expert knowledge, but that they must develop a "citizenly understanding" that allows them to appreciate and act on the choices and tradeoffs that the nation faces in attempting to fashion a more comprehensive and appropriate approach. At present, this is lacking, and citizens themselves realize this quickly as they begin to explore the issue.

> *"I know there's a lot of controversy about the building of the coal plants, and about the safety in nuclear plants. Anything related to energy. The cost of bringing fuel to this country, or mining it, or pumping it out of Alaska. There's just all kinds of controversies and everybody has a different opinion about what course we should take. The public is just basically left to get the bits of information that whatever company wants us to have. That's the information we get, unless we do a lot of research on our own."—Dallas man*

Therefore, while we believe that ongoing exploration of the public's attitudes is crucial to help leaders fashion appropriate policies, we believe as well that research is not enough; that new ways must be found to actively engage the public in deliberation and problem-solving on energy issues. For it is primarily in this way that people's thinking and behavior will evolve and contribute to solutions.

Begin with the Energy Issues People Can Relate to and Build from There

In this task of engagement it will always be easier to begin with those aspects of energy that strike closest to home for people, such as how to improve public transportation, how to enable people to increase the efficiency of their energy use and therefore save both money and the environment, or how to adapt flood-prone areas to the effects of global warming.

These deliberative building blocks can then be expanded upon to help the public come to terms with larger national policy questions. What's going to be important as citizen engage major digestible bites of the energy issue—ones that are viscerally important to them and are of a size that they can wrap their minds around—is that experts help them (again) to connect the dots. People need to see how solutions that might make sense for a particular purpose can have unintended consequences that must also be taken into account. In other words, experts can help the public understand the larger tradeoffs at stake as they take on a particular piece of the energy puzzle.

Doing so will help citizens move up what Dan Yankelovich calls the "public's learning curve." In this way, policy solutions can be developed that are more aligned with the public's values, more informed through the public's deliberations, and more sustainable because the public has had a voice in their formation and is playing a role in their implementation.

METHODOLOGY

The findings in this report are based on six focus groups with the general public and sixteen in-depth phone interviews with a wide range of energy experts.

Focus Groups with the General Public

Public Agenda convened six focus groups over several months in the fall of 2007 with typical Americans in four cities—Dallas, TX (two groups), Kansas City, MO (one group), Denver, CO (one group) and Stamford, CT (two groups). In each case, local market research firms recruited focus group respondents according to Public Agenda's specifications, which roughly reflected the nation's demographics with respect to income, race, gender, education, etc. Each group was approximately two hours in length and moderated by senior Public Agenda researchers.

Focus groups are an especially useful tool for identifying how people talk about an issue as complex and multifaceted as "energy," but it is important to note that they are not reliable predictors of the percentage of people who hold a particular viewpoint. They produce highly-textured qualitative results, not quantitative ones that can be generalized with confidence to the larger population.

Nevertheless, some patterns of thinking emerged in all of the focus groups we conducted that, compounded by similar findings outlined in Public Agenda's analysis of the results from the 2007 National Issues Forums, suggest that it is likely that the attitudes and views identified in these focus groups are important elements in citizen thinking about energy.

In-depth Interviews with Energy Experts

Public Agenda conducted sixteen in-depth telephone interviews in fall 2007 and Winter 2008 with a wide range of experts in energy and energy policy, including scientists, engineers and researchers with experience working on a variety of energy technologies, energy economists, advocates from leading environmental organizations, industry representatives, energy policy analysts and legislative experts. The telephone interviews ranged from 20 to 40 minutes in length. Although quotes from these interviews used throughout the text have not been directly attributed, a list of the experts whom we interviewed and their affiliations follows.

Dr. Robert Brown, Director of Biorenewables Program, Iowa State University

Ralph Cavanaugh, Senior Attorney, Energy Program Director for the Natural Resources Defense Council

Kellie Donnelly, Minority Counsel to Senate Energy Committee

Deborah Estes, Counsel to Senate Energy Committee

Dr. Michelle Foss, Chief Energy Economist, Bureau of Economic Geology, University of Texas-Austin

Charlie Gay, Vice President of Solar Business Group, Applied Materials

Dr. Yogi Goswami, Co-Director, Clean Energy Research Center, University of Southern Florida

Phil Grossweiler, American Society of Mechanical Engineers Fellow, Energy and Economics Program Committee Chair

Jim Jensen, Principal, Jensen Associates Natural Gas Consulting

Allison Macfarlane, Associate Professor of Environment Science and Policy, George Mason University

Steven Nadel, Executive Director, American Council for an Energy-Efficient Economy

Becky Norton Dunlop, Vice President of External Relations, Heritage Foundation

Matt Simmons, Chairman, Simmons & Co. International

George Sterzinger, Executive Director, Renewable Energy Policy Project

Carl Weinberg, retired Manager of Research and Development for Pacific Gas & Electric

Kurt Zwally, Global Warming Solutions Manager, National Wildlife Federation