



Survey Research Unit  
School of Public Affairs  
Baruch College / CUNY  
1 Bernard Baruch Way  
New York, NY 10010

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# Special Report # 12

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## Green Power

A survey in collaboration with They City University of New York's Million Solar Roofs Initiative



By Wilson Rickerson, MEEP, Gregg Van Ryzin, PhD, Allison Cohen, MPA and Tria Case, Esq.

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## Executive summary

This Special Report discusses findings of an eTownPanel online survey, conducted in collaboration with the City University of New York's Million Solar Roofs Initiative. This survey focused on general perceptions of energy use and cost, knowledge of green power, global warming and solutions for the energy problem.

Compared to respondents nationally, the survey found that New Yorkers reported being more concerned about the United States energy problem and more likely to do something about it. When asked who or what was responsible for the energy crisis, however, New York City and national respondents identified the same three amongst their five top choices: the Bush Administration, oil companies, and the general public.

**Methodological note:** The survey was conducted from June 14 through June 28, 2006, and included online responses from 1,239 panelists, 152 of whom live in New York City. The panelists were recruited using the Internet and other sources to participate in online research; they are not a random sample, and thus the results are not scientifically projectable to the larger population. However, results are adjusted by gender, race, age, and geography to more closely reflect the general demographic profile of the US and New York City.

## Background

The relationship between energy, the economy, and the environment has been brought into sharp focus by concerns over increased energy prices, climate change, air pollution, power outages, and energy independence. In New York City, these concerns are compounded by the challenges inherent in providing energy service to 8 million people living within an area of only 309 square miles.

According to the Mayor's Energy Policy Task Force Report (2004), there is not enough power line capacity to import the electricity that the City needs. As a result, the City is required to site 80% of its generating capacity within the City limits. The Task Force also reports that several thousand megawatts (MW) of new generating capacity must be built within the City by 2008 to prevent electricity shortages. This horizon has since been revised to 2012, but the challenge remains significant (Cardwell, 2006).

While the Task Force report outlines strategies for meeting future energy demand, these do not include consideration of "energy-related issues as... sustainable energy, clean air, [or] climate change policy." By not taking these issues into account, the Task Force discounts environmental risks and overlooks the City's largest potential source of local energy. According to a report prepared for the New York State Energy Research and Development Authority, energy efficiency and renewable energy could account for up to 47,589 GWh of electricity by 2022 (Plunkett et al., 2003). This would equate to approximately 74% of the City's total projected demand if the full technical potential were realized (Rickerson and Hughes, 2006).

In addition to supplying a significant proportion of the city's future energy demand, renewable energy and energy efficiency – so-called "green power" -- can also mitigate the risks inherent in

fossil fuel power plant development. Green power resources are typically small and distributed, rather than large and centralized. An electrical grid that integrates a large amount of renewable distributed generation is less vulnerable to fossil fuel shortages and to large-scale failures (Lovins and Lovins, 1982). A recent study, for example, concluded that the 2003 blackout could have been prevented if there had been a sufficient amount of solar electric systems distributed throughout the system (Perez et al., 2004).

Reliance on clean, distributed resources also create more jobs and local economic development opportunities than fossil fuel power plants do, while posing fewer environmental justice challenges (Kammen et al., 2004; NYC Apollo, 2004). Finally, installing efficient and renewable energy technologies reduces the air emissions that contribute to global climate change, acid rain, and asthma.

New York State and New York City have long been leaders in encouraging clean energy development. Addressing the challenges posed by our current energy system, however, may require more aggressive initiatives to support renewable energy and energy efficiency than those currently in place – particularly in light of New York City’s looming energy shortage.

The aim of this survey is to explore how public support for green power within New York City compares to that within the rest of the nation. The results of this survey are intended as a resource for City energy planners, energy advocates and researchers at The City University of New York (CUNY). CUNY has committed to facilitating the installation of 500 solar roofs around the City by 2010 as part of its Million Solar Roofs partnership with the US Department of Energy. CUNY has also purchased 18 million kilowatt-hours of green power and as part of the US EPA’s Green Power Partnership (2006). In addition to these commitments, CUNY is working with a wide range of City stakeholders to research the national, state, and local policies that impact renewable energy and climate change within New York City. CUNY’s green power programs are supported by the Center for Sustainable Energy at Bronx Community College (<http://csebcc.org>).

## Methodology

The survey was conducted from June 14 through June 28, 2006, and included online responses from 1,239 panelists, 152 of whom live in New York City. The panelists are part of the eTownPanel project and were recruited using the Internet and other sources to participate in online research, including web directory listings, Google ads, Craigslist postings, and announcements sent via email to membership lists of various nonprofit organizations in New York City that have partnered with eTownPanel over the years. It is important to point out that the panel of respondents is not a random sample, and so the results are not scientifically projectable to the larger population. However, results are weighted by gender, race, age, and geography to more closely reflect the general demographic profile of the US and New York City. Both national and New York City weights were constructed using simple post-stratification methods.<sup>1</sup>

**Table 1** presents the demographic profile of the survey respondents, both weighted and unweighted, and compares this profile to data from the US Census. As the unweighted results in

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<sup>1</sup> The weighting procedure involved two steps. First, weights were constructed to bring the sample into geographic balance based on the population of Census regions. This geographic weight was then applied to the data, and new weights were calculated to align the sample to the Census in terms of gender, race, and age. This weighting procedure was carried out separately for New York City and the nation. Income was not used as a weighting variable because of missing data and other limitations on the income question.

Table 1 show, respondents nationally are disproportionately white, female, and in the 25 to 44 and 45-64 age group. Respondents nationally over-represent the northeast and under-represent blacks, Asians, those 18-24 years of age, those 65 and older, and those in the lowest income group. The weighted results, by design, more closely mirror the Census figures nationally. The unweighted New York City respondents, compared to Census figures for New York City, are disproportionately white, female, between 45 to 64 years of age, and the highest income group. The results under-represent blacks, Asians, Hispanics, those 65 and older, and the lowest income group. The weighted results again bring the profile of New York City respondents into line with Census figures for the city (except for income, which was not a weighting variable). The following results in this report for both New York and the nation are all weighted results.

## Findings

The findings below are reported separately for the nation as a whole and for New York City. This section begins with general perceptions of energy usage and cost. It concludes with solutions to the current energy crisis.

### Current Energy Usage and Costs

As **Figure 1** shows, the majority of respondents (81% for New Yorkers and 82% nationwide) spend at least \$50 per month on their energy bill.

A majority of both New York City and nationwide respondents (67% for New Yorkers and 78% for nationwide respondents) reported that they do not voluntarily purchase a share of electricity from green power sources (**Figure 2**). However, almost one fifth of New Yorkers either voluntarily purchase their electricity from green power or plan to do so in the next six months, compared to only 6% of respondents nationwide. This indicates that perhaps New Yorkers are more concerned about the impact of their energy use, or more aware of the availability of green power resources .

When respondents were asked how much more they would pay per month for an renewable energy system, such as solar power, a majority of the respondents in New York and around the nation were willing to pay at least \$1 extra per month (**Figure 3**). However, New Yorkers were willing to pay more overall, with 64% saying they would pay at least \$5 extra per month, compared to only 43% nationwide.

### Energy Resources

When respondents were asked what energy sources they supported investing in, 70% of respondents said they supported investment in “solar energy systems” and 63% reported supporting investments in “land-based wind energy systems” (**Figure 4**). A majority of respondents also favored investing in “offshore wind energy systems”, “tidal and wave energy, and large hydropower plants”. A majority of respondents did not however, support investment in power plants fueled by oil or coal.

### Current Energy Crisis

When asked “how much have you heard or read lately about the energy crisis,” almost half of the respondents from New York reported they had heard or read a great deal about the energy crisis. This is almost double the number nationwide who reported having read a great deal. (**Figure 5**)

Almost 90% of all respondents both nationwide and from New York City reported having at least heard or read a little bit about the current energy crisis.

When asked how serious the United States energy problem is, the vast majority of respondents both from New York (90%) and nationwide (86%) agreed that the energy problem in the United States was at least “fairly serious” (**Figure 6**). However, New Yorkers think it is more serious: 72% of them said it was a “very serious” problem compared to only 41% of respondents nationwide.

While only 31% of respondents nationwide felt that it was likely that their city or town will face a critical energy shortage during the next five years, more than double the number (69%) of respondents from New York City expressed this concern (**Figure 7**).

When asked who they thought was responsible for the energy crisis, both respondents from the nation and from New York City had the same top three responses: “Bush or Bush Administration” (22% nationwide, 22% NYC), “oil companies” (22% nationwide, 18% NYC) and “the public” (13% nationwide, 12% NYC) (**Figure 8**). New York respondents also thought “big business” (12%) was to blame. Some respondents nationwide didn’t know who was to blame for the energy crisis (12%).

## Global Warming

When asked “how serious is the problem of global warming” over 80% of respondents both nationwide and from New York say that it is either a “fairly” or “very serious” problem (**Figure 9**). However, 72% of New Yorkers thought the problem of global warming is “fairly serious” compared to only 45% of respondents nationwide.

Over three fourths of respondents both nationwide and from New York City believe that energy use contributes to global warming “at least a little” (**Figure 10**). When compared to respondents nationwide, New Yorkers are more likely to put the blame on energy use as a contributor to global warming. Fully 68% of respondents from New York City (compared with only 37% of respondents nationwide) thought that energy use contributes “a great deal” to global warming.

## Solutions

In New York City, as **Figures 11** demonstrates, the most popular solutions for solving the nation’s energy problem are “spending more government money on developing solar and wind power, requiring that all new buildings incorporate energy efficiency and renewable energy, setting higher emissions and pollution standards for business and industry, setting higher auto emissions standards for automobiles, and more strongly enforcing federal environmental regulations. Nationwide (**Figure 12**), the top solutions are “setting higher auto emissions standards for automobiles, more strongly enforcing federal environmental regulations, spending more government money on developing solar and wind power, setting higher emissions and pollution standards for business and industry, and requiring that all new buildings incorporate energy efficiency and renewable energy. With regard to solutions, there was significant agreement between nationwide and New York City-based respondents.

## Conclusions

Public support for green power will be critical if clean energy development is to be accelerated. New Yorkers, more than respondents nationwide, are more likely to see the energy crisis and global warming as serious issues, more likely to support renewable energy policies and technologies as solutions, and more willing to pay more to support these solutions.

The support for green power revealed by this survey echoes the results of other national surveys. In over 600 surveys, renewable energy has consistently been supported by the majority of Americans during the past 25 years (Farhar, 1996,1999). Recent polls have found that 77% of Americans believe that renewable energy should be a “top priority” for US energy policy (Opinion Research Corporation, 2006), while 98% believe that requiring 20% of our electricity to come from renewable sources by 2025 is important for the country (McInturf and McCleskey, 2006).

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**About eTownPanel.** eTownPanel is a university-based, nonprofit project that aims to expand the potential of the Internet as a tool for measuring the quality of life in communities across the US and for providing citizen-driven feedback on the performance of local governments. eTownPanel also serves as a cost-effective research tool for local nonprofit organizations and government agencies that seek to understand what citizens think about important local issues. The project currently focuses on New York City but will soon include additional cities and towns from across the US.

For more information visit [www.ETownPanel.com](http://www.ETownPanel.com) or email [info@ETownPanel.com](mailto:info@ETownPanel.com)

TABLE 1. Demographic profile of survey respondents (percents)

	<b>The Nation (n=1239)</b>			<b>New York City (n=152)</b>		
	<b>Census</b>	<b>Weighted</b>	<b>Unweighted</b>	<b>Census</b>	<b>Weighted</b>	<b>Unweighted</b>
<b>Northeast</b>	19.0	20.0	44.2	100.0	100.0	100.0
<b>South</b>	35.6	35.9	23.4	0.0	0.0	0.0
<b>Midwest</b>	22.9	20.5	17.9	0.0	0.0	0.0
<b>West</b>	21.9	23.6	14.5	0.0	0.0	0.0
<b>White, non-Hispanic</b>	69.1	72.0	85.4	35.0	47.4	70.4
<b>Black or African American</b>	12.3	10.2	5.8	24.5	17.7	10.5
<b>Asian or Pacific Islander</b>	12.5	9.8	3.5	27.0	18.2	7.2
<b>Hispanic or Latino</b>	3.7	5.2	3.3	9.7	11.6	7.2
<b>Other</b>	2.4	2.8	2.0	3.8	5.1	4.6
<b>Female</b>	51.0	53.0	74.7	51.0	53.2	65.6
<b>Male</b>	49.0	47.0	25.3	49.0	46.8	34.4
<b>18 to 24 years</b>	13.4	13.1	6.1	13.3	17.4	4.7
<b>25 to 44 years</b>	40.7	41.2	49.6	44.4	33.9	37.6
<b>45 to 64 years</b>	29.6	31.5	40.6	28.5	21.4	53.7
<b>65 years and over</b>	16.7	14.2	3.8	13.8	27.3	4.0
<b>Less than \$25,000</b>	28.7	17.2	14.7	34.9	21.6	9.0
<b>\$25,000-\$49,999</b>	29.3	36.9	35.5	25.7	31.6	28.6
<b>\$50,000-\$74,9999</b>	19.5	23.0	26.5	16.7	21.7	22.6
<b>\$75,000 or more</b>	22.5	22.9	23.3	22.7	25.1	39.8

Note: Census figures from American FactFinder, 2000 Census Quick Tables, available at [www.census.gov](http://www.census.gov).  
 Weighted results reflect post-stratification adjustments for region, race, age, and gender.

FIGURE 1. "On average how much would you say your energy bill is per month?"

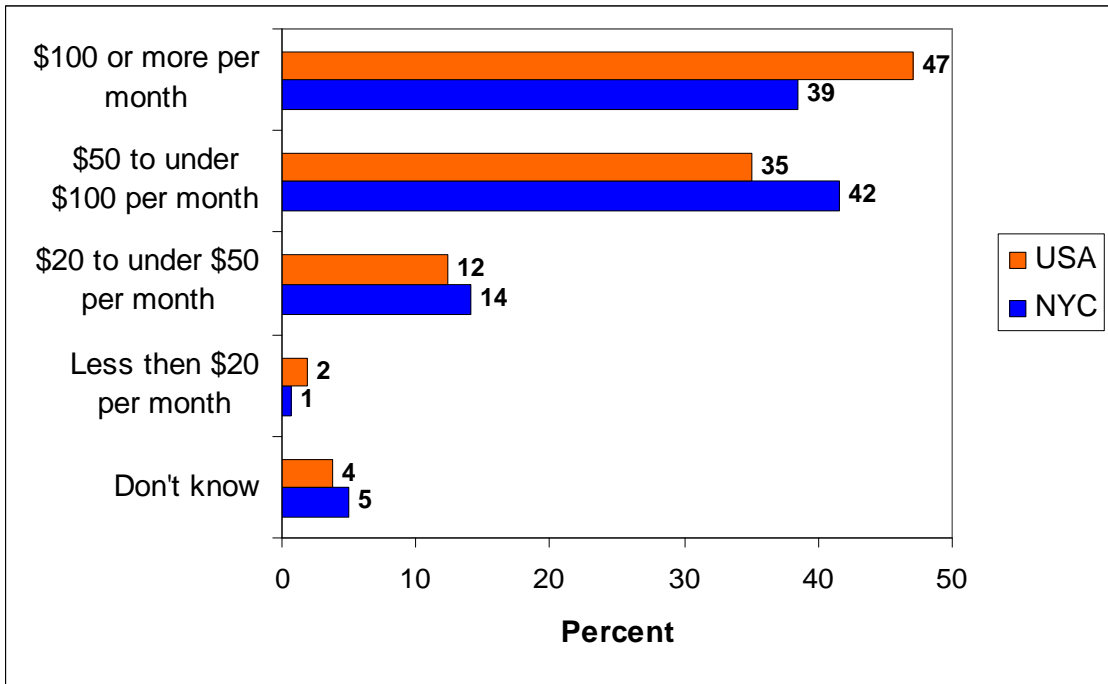


FIGURE 2. "Do you currently voluntarily purchase a share of your electricity from green power sources?"

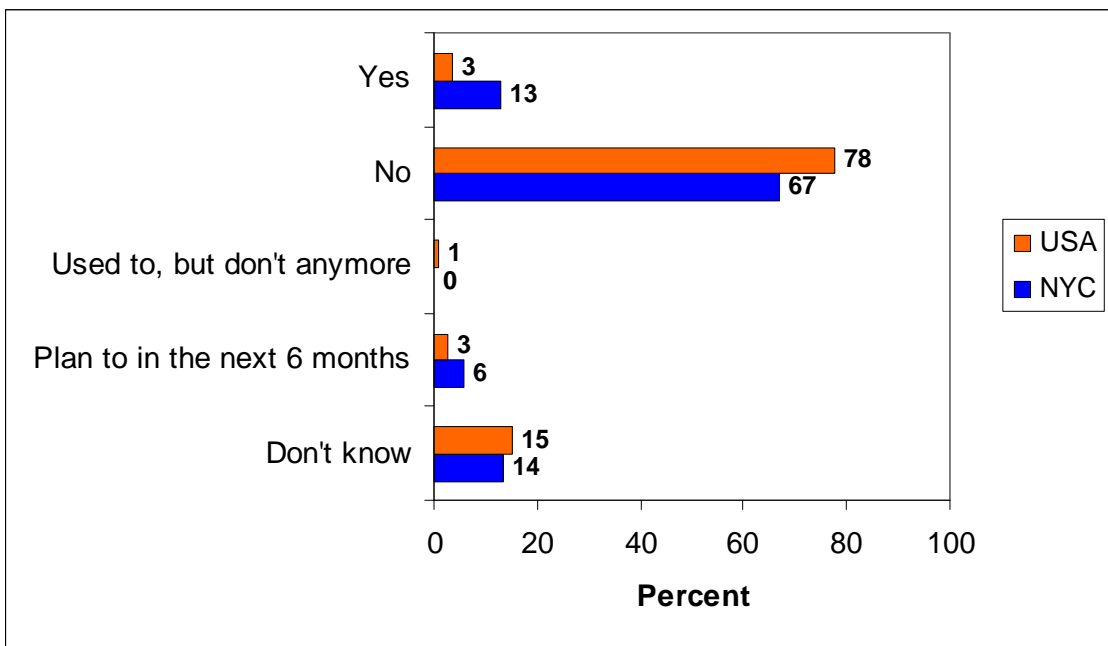




FIGURE 3. “Increased efforts to install renewable energy systems like solar power might lead to higher energy prices. How much more would you be willing to pay per month for this?”

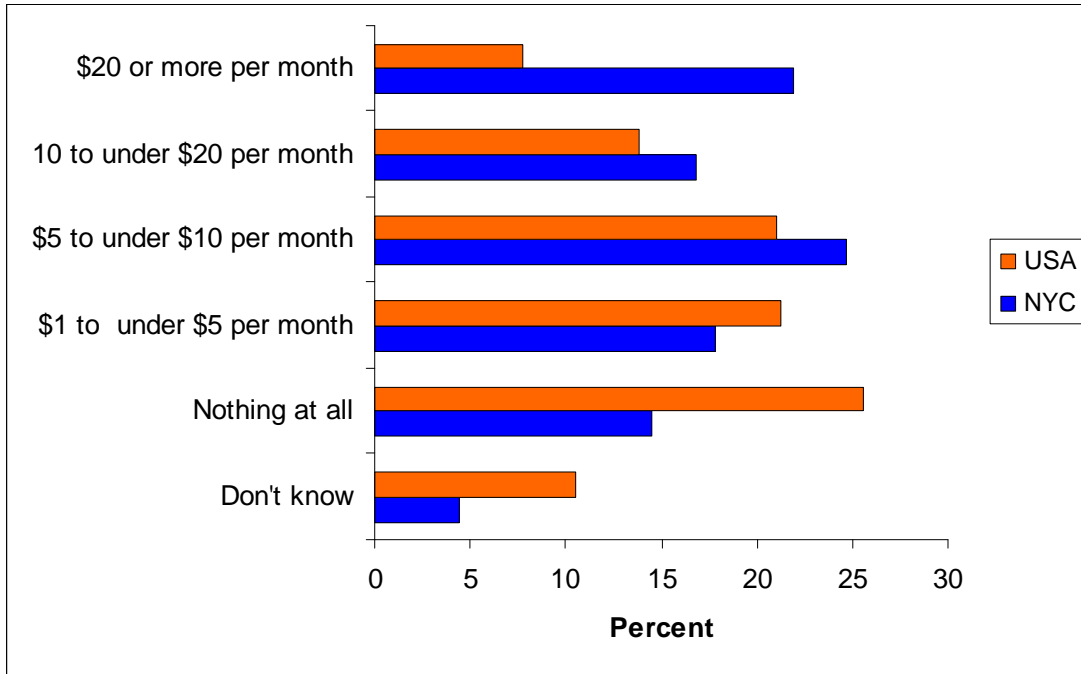


FIGURE 4. “How much you do support investment in the following energy resources...”

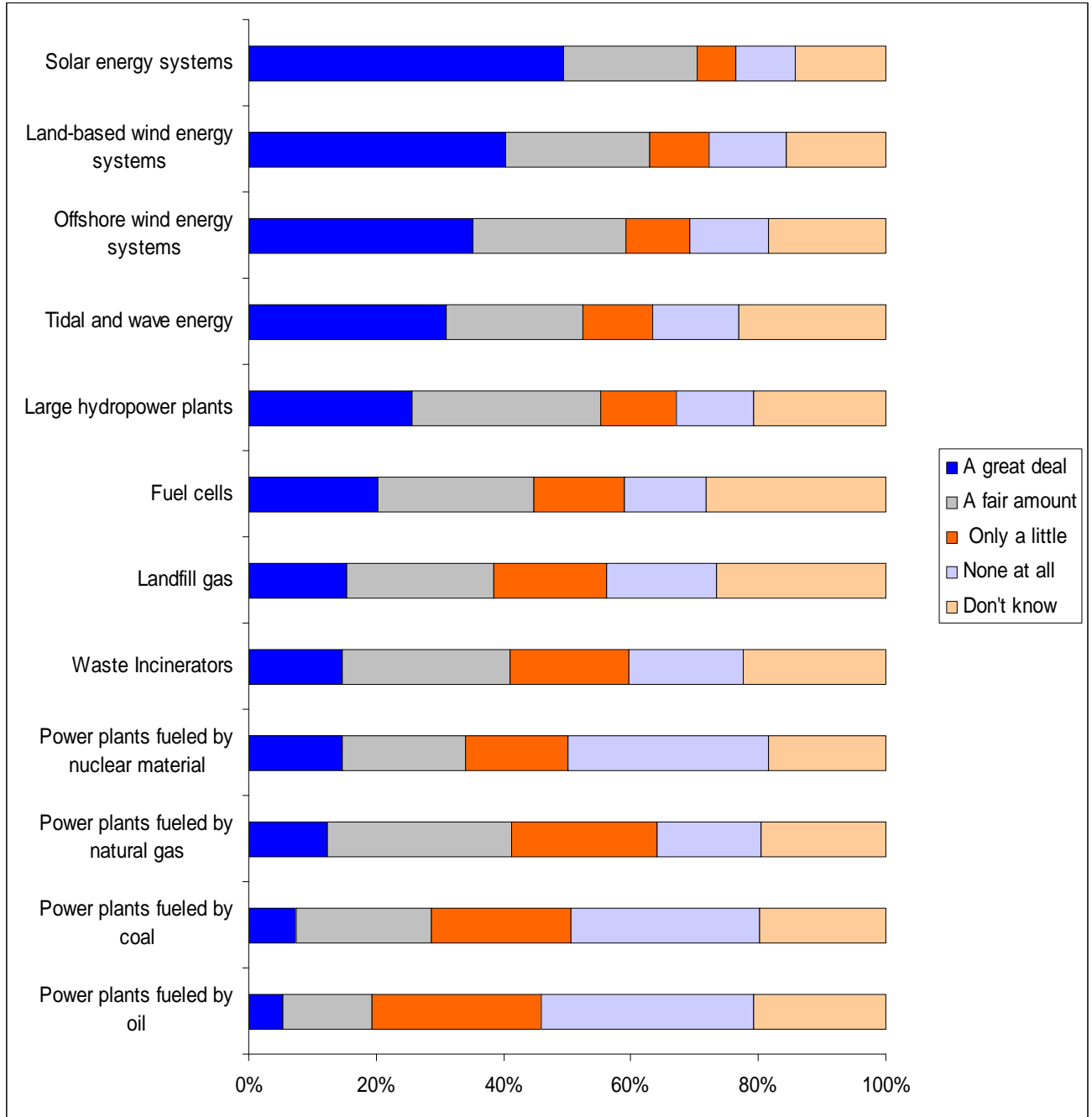


FIGURE 5. “How much have you heard or read lately about the energy crisis?”

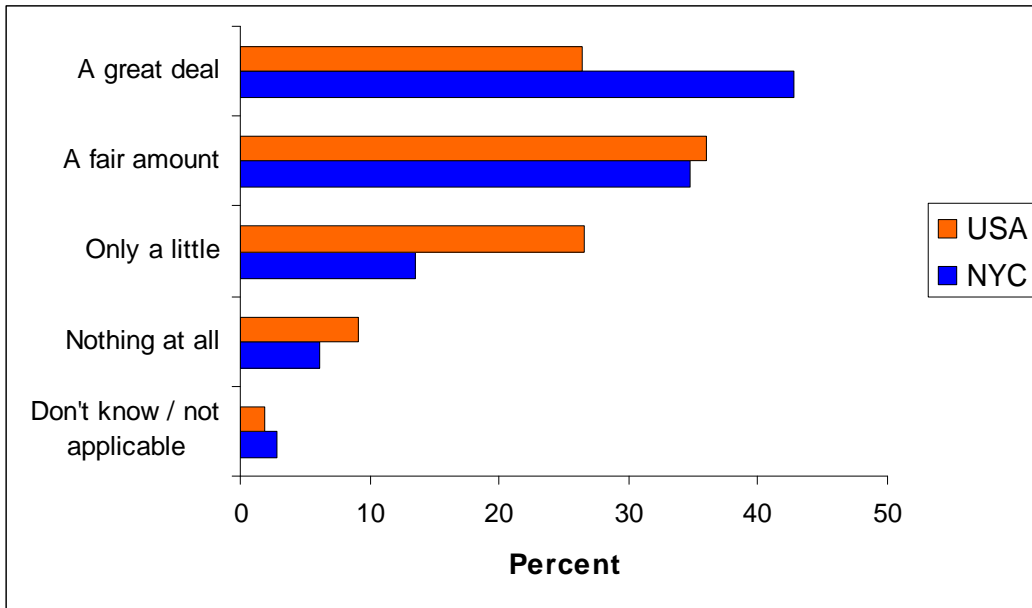


FIGURE 6. “In your opinion how serious is the United States energy problem these days?”

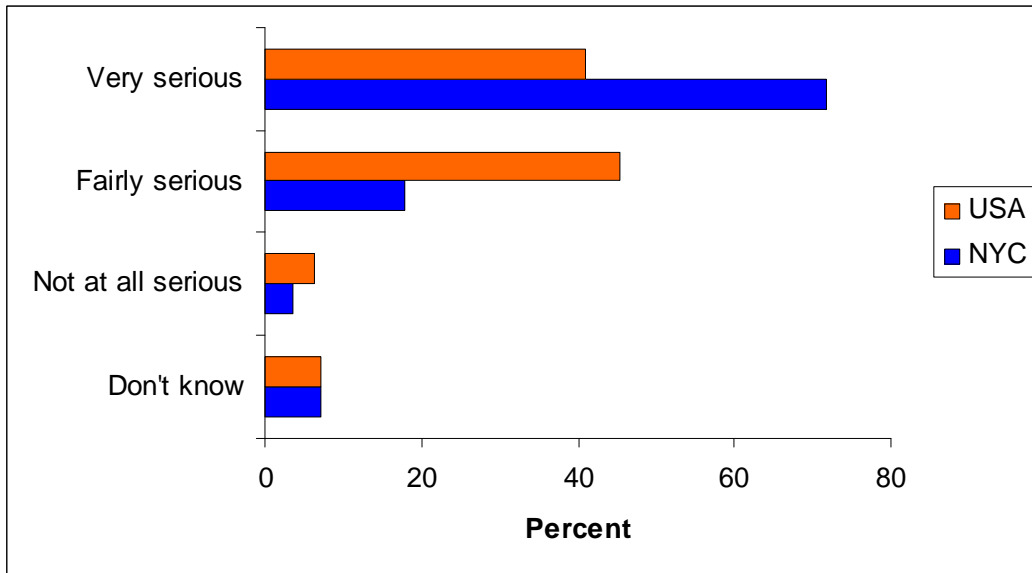


FIGURE 7. “Do you think that it is likely that your city or town will face a critical energy shortage during the next five years?”

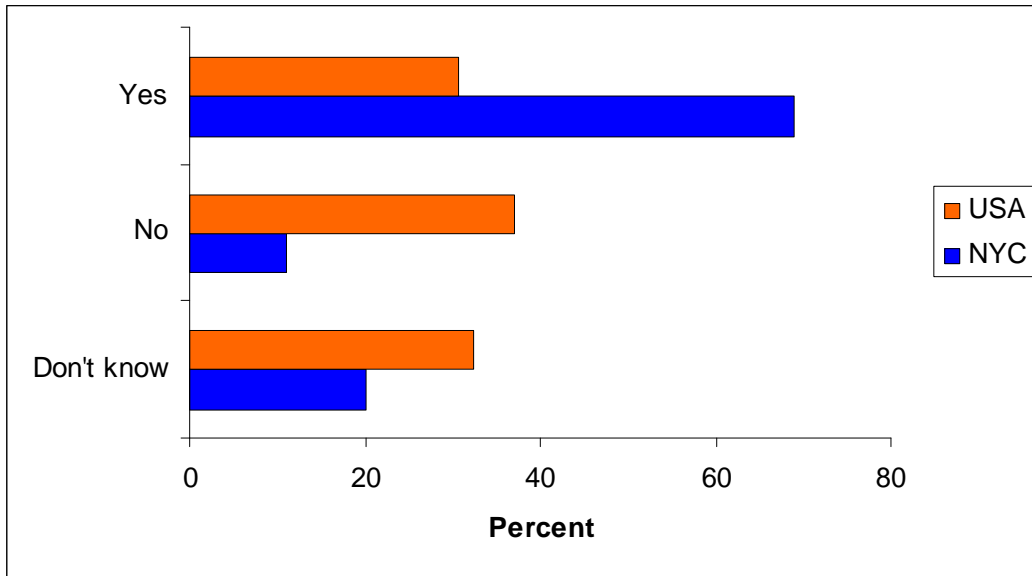


FIGURE 8. “Who or what do you think is the most responsible for the energy crisis”

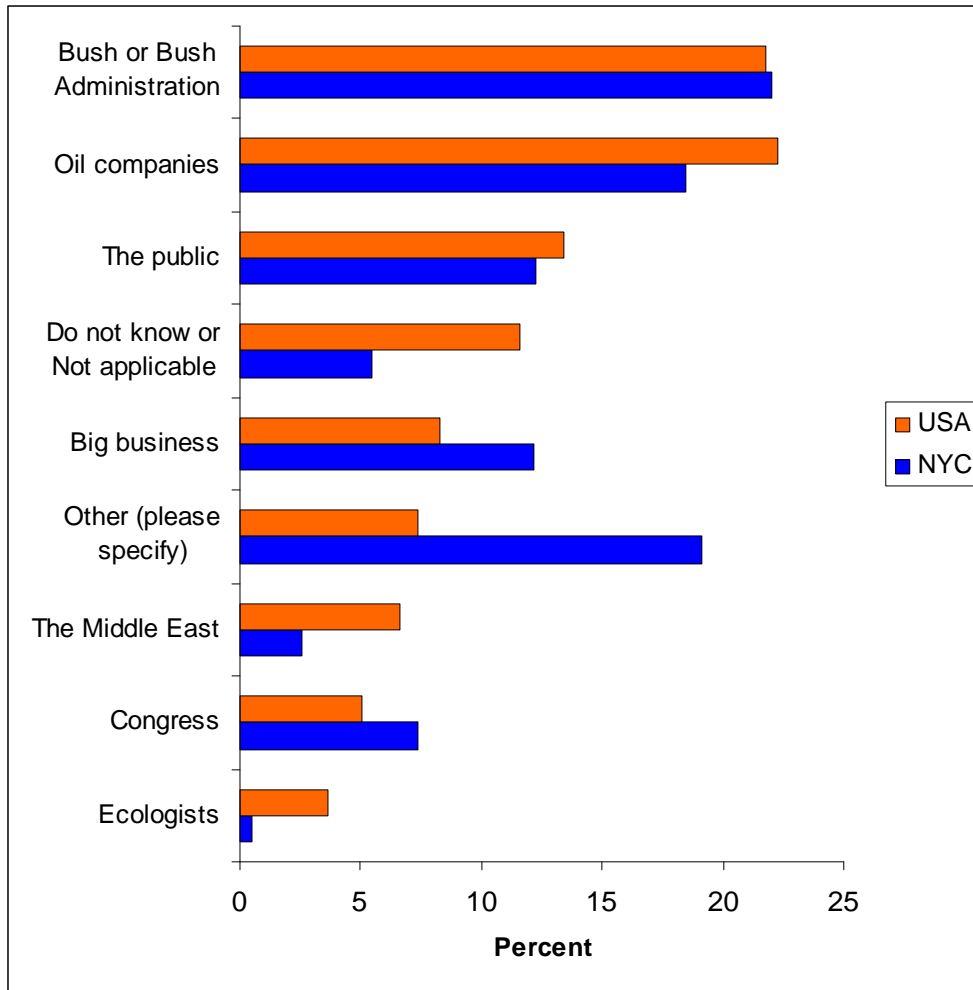


FIGURE 9. “In your opinion, how serious is the problem of global warming?”

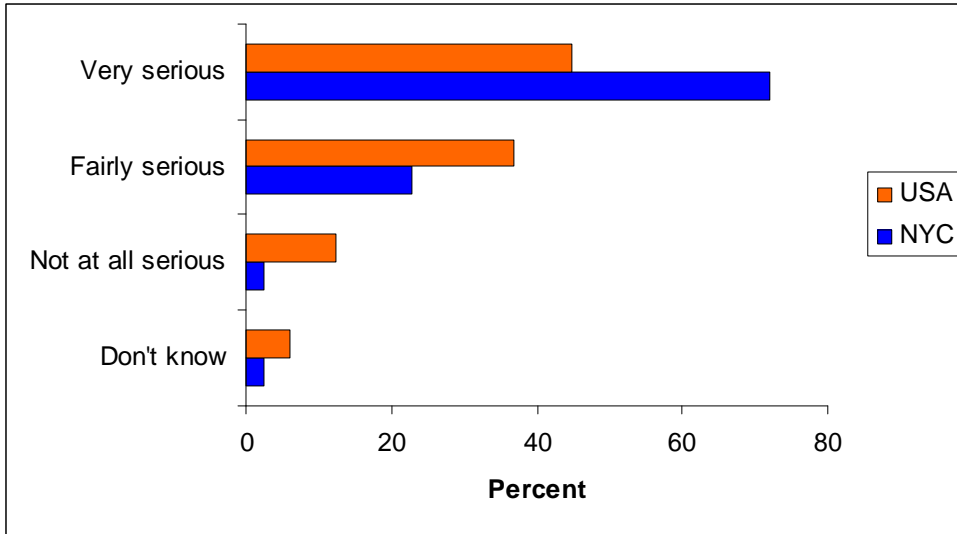


FIGURE 10. “In your view, how much does our energy use contribute to global warming?”

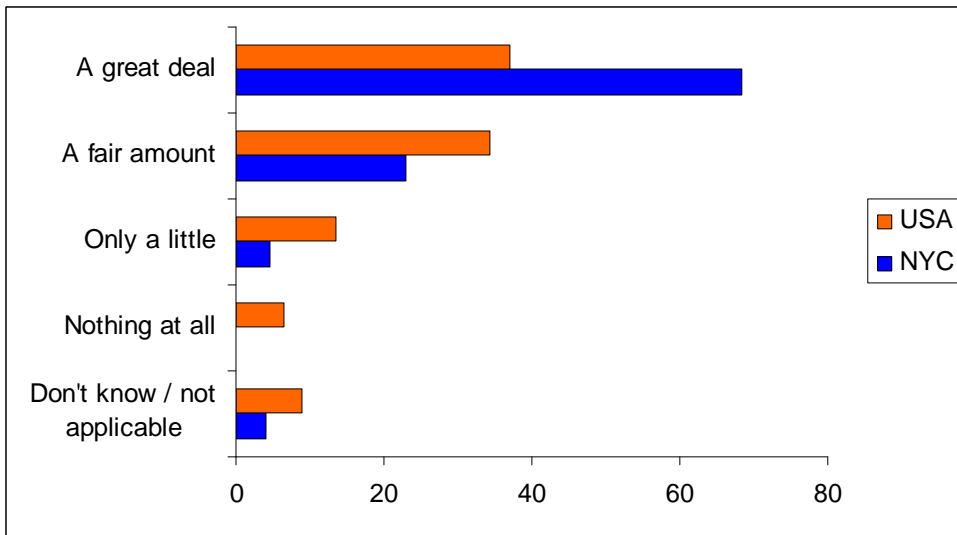


FIGURE 11. How much would you favor or oppose the following policies to solve the nations energy problems? (New York City)

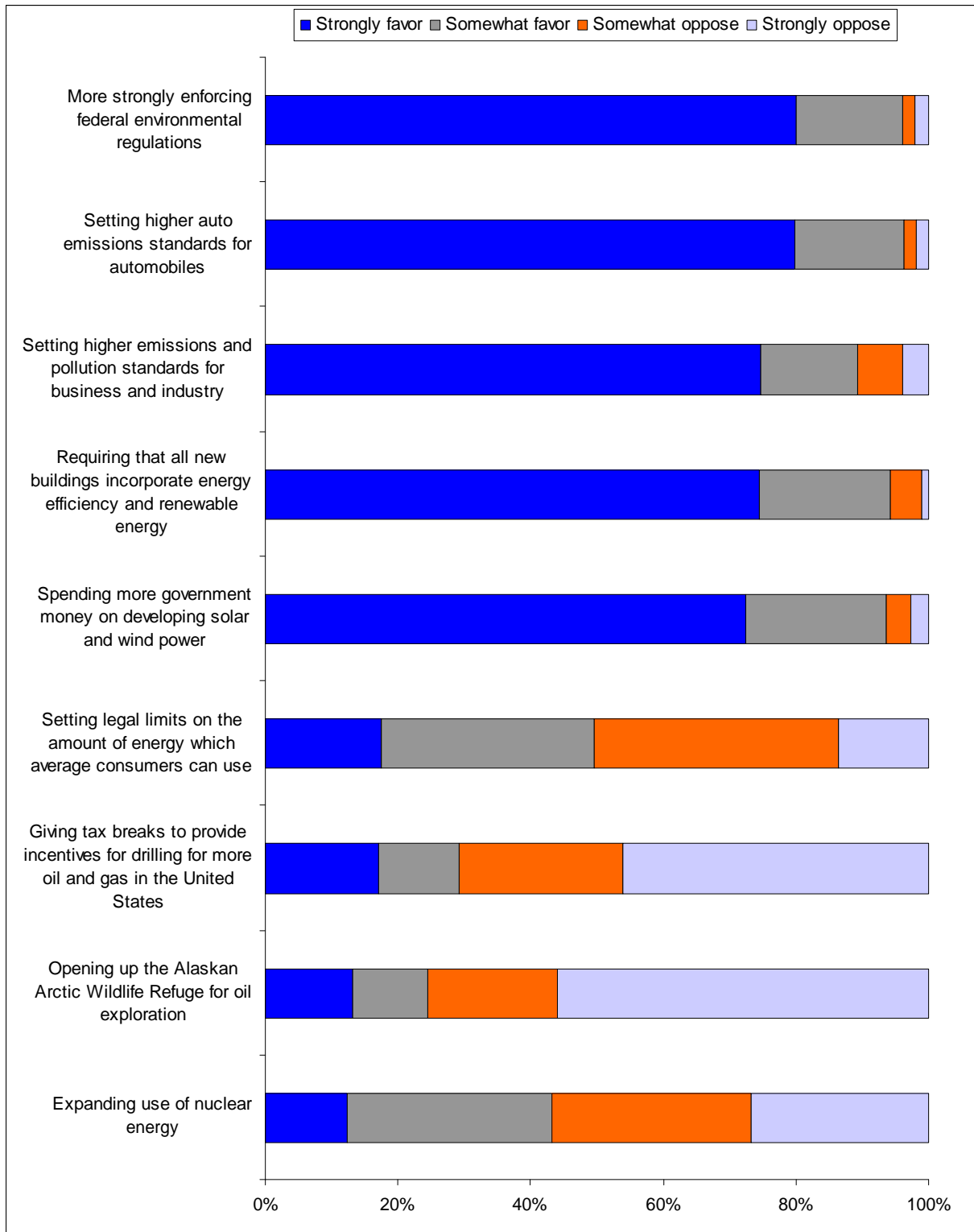
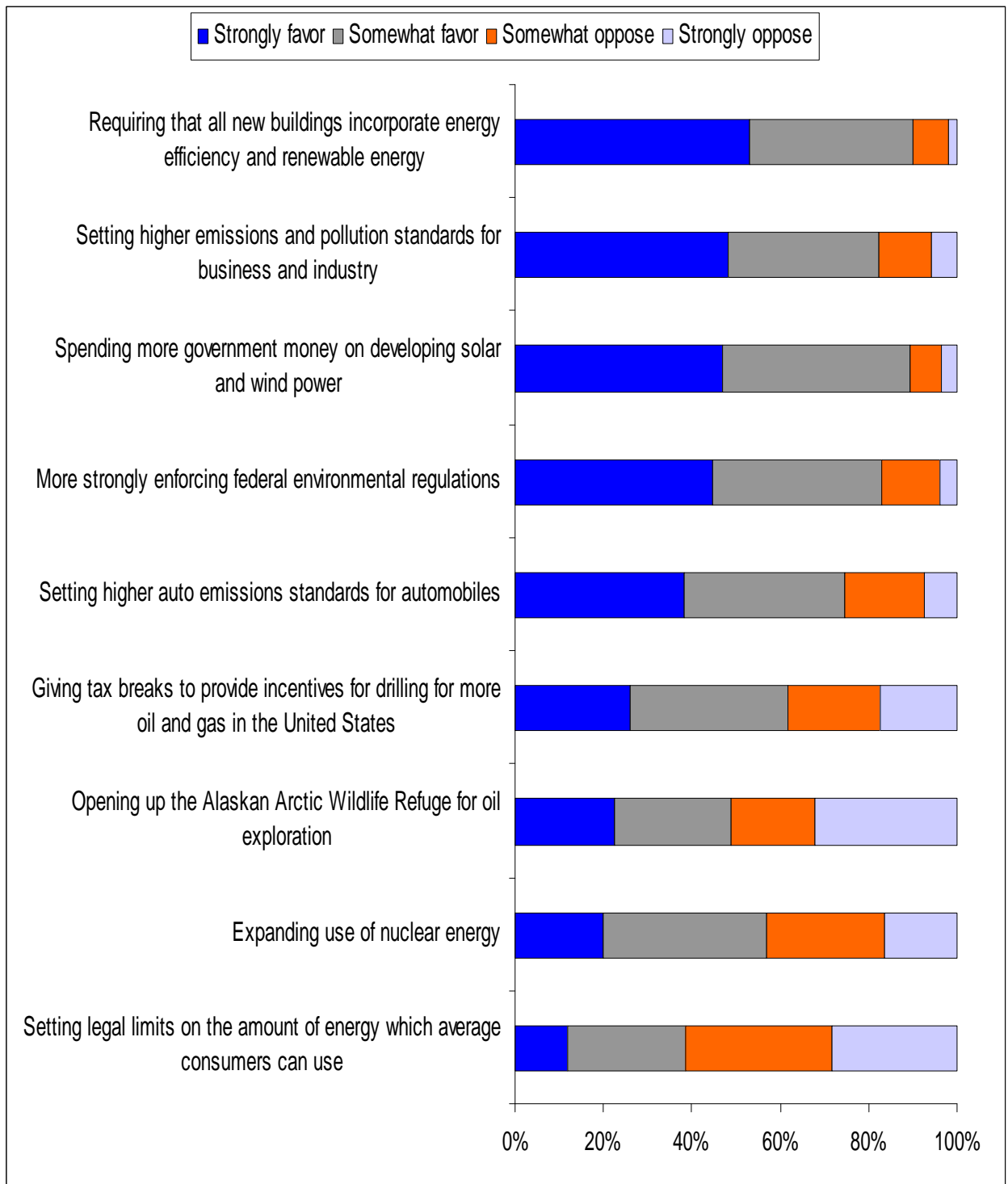


FIGURE 12. How much would you favor or oppose the following policies to solve the nations energy problems? (The Nation)





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