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Introduction

This report summarizes attitudes toward natural gas drilling in New York State, as assessed by the 2010, 2011 and 2012 Empire State Polls (ESP) conducted by the Survey Research Institute at Cornell University. Results of other findings can be found at <https://sri.cornell.edu/sri/esp.reports.cfm>.

Methodology

- Each year, 800 telephone interviews were conducted, equally divided between the downstate and upstate regions, and then weighted to reflect the actual population distribution within the state. For the ESP, “downstate” is defined as New York, Rockland, Kings, Richmond, Westchester, Suffolk, Queens, Nassau, and Bronx counties, with the remaining counties of the state defined as “upstate.”
- Using American Association for Public Opinion Research (AAPOR) standards, the cooperation rate was 74.5% in 2010, 71.4% in 2011, and 67.1% in 2012.
- The ESP utilizes a dual-frame random digit dial (RDD) sample of NYS households – covering landline and cell phone numbers. Eligible respondents must be residents of NYS and at least 18 years old.
- The margin of error (MOE) for questions with two response options among 800 respondents is 3.5% and is 4.9% for comparisons based on 400 respondents. The MOE may be smaller for some questions depending on the number of response options.

See Report 1: Introduction & Methodology for a full description at www.sri.cornell.edu.

Natural Gas Drilling

ESP 2010 and 2011 queried residents’ attitudes toward natural gas drilling. The question asked: Which statement best reflects your opinion about natural gas drilling in New York State? 1. The revenues that would come to NYS from natural gas drilling outweigh any risk of contaminating the drinking water, 2. The risk of contaminating the drinking water outweighs any revenues that would come to NYS

from natural gas drilling, 3. Do not know enough about the natural gas drilling issue.

Table 1 Attitude Toward Natural Gas Drilling in NYS

| Revenues versus Risks | Percent of Respondents | | | | | |
|-----------------------------------|------------------------|------|-----------|------|---------|------|
| | NYS* | | Downstate | | Upstate | |
| | 2011 | 2010 | 2011 | 2010 | 2011 | 2010 |
| Revenues outweigh risks | 27 | 25 | 25 | 20 | 30 | 35 |
| Risks outweigh revenues | 52 | 53 | 54 | 59 | 50 | 43 |
| Do not know enough about drilling | 21 | 22 | 22 | 21 | 20 | 22 |

* Weighting applied to match actual distribution of upstate vs. downstate. Due to rounding, distributions may not add up to 100.

- In both 2010 and 2011, about twice as many respondents across the entire state felt that the risk of water contamination outweighed any possible revenues from natural gas drilling compared to those who believed the revenues outweighed any risk of contamination (53% and 52% vs. 25% and 27% respectively, see Table 1).
- In 2010, there was a significant difference between downstate and upstate residents’ opinions. Downstate residents were three times more likely to report that the risk would outweigh the revenues (59%) compared to those who reported that the revenues outweigh the risk (20%). Far fewer Upstate residents reported that the risk would outweigh the revenues (43%) with 35% reporting that the revenues would outweigh the risk. This regional disparity decreased slightly in 2011 with more Upstate residents reporting that the risks outweigh the revenues than in the previous year. Approximately one out of five respondents reported they don’t know enough about the natural gas drilling regardless of region or year across the two years.



Table 2 Attitude Toward Natural Gas Drilling in NYS by Demographic Characteristics

| | Percent of all Respondents* | | | | | |
|-------------------------|-----------------------------|------|------------------------|------|-----------------------------------|------|
| | Revenues outweigh risk | | Risk outweigh revenues | | Do not know enough about drilling | |
| | 2011 | 2010 | 2011 | 2010 | 2011 | 2010 |
| Gender | | | | | | |
| Male | 29 | 30 | 52 | 49 | 19 | 21 |
| Female | 25 | 21 | 52 | 57 | 23 | 22 |
| Race | | | | | | |
| Non-white | 21 | 17 | 59 | 64 | 19 | 19 |
| White | 29 | 30 | 50 | 46 | 21 | 24 |
| Age | | | | | | |
| 18-24 | 19 | 14 | 69 | 68 | 12 | 18 |
| 25-34 | 31 | 20 | 45 | 58 | 24 | 23 |
| 35-44 | 25 | 28 | 53 | 49 | 22 | 23 |
| 45-54 | 29 | 25 | 55 | 56 | 16 | 18 |
| 55-64 | 24 | 28 | 55 | 48 | 21 | 23 |
| 65+ | 27 | 25 | 47 | 53 | 26 | 22 |
| Household income | | | | | | |
| Less than \$30,000 | 22 | 20 | 53 | 57 | 25 | 22 |
| \$30,000 to \$49,999 | 24 | 28 | 50 | 47 | 26 | 26 |
| \$50,000 to \$99,999 | 27 | 24 | 56 | 58 | 17 | 18 |
| \$100,000 or more | 28 | 32 | 52 | 47 | 20 | 21 |
| Ideology | | | | | | |
| Liberal | 18 | 18 | 66 | 60 | 15 | 22 |
| Moderate | 26 | 24 | 47 | 54 | 27 | 21 |
| Conservative | 39 | 34 | 41 | 44 | 20 | 22 |
| Political Party | | | | | | |
| Democrat | 16 | 16 | 64 | 64 | 19 | 20 |
| Independent | 28 | 30 | 53 | 47 | 19 | 23 |
| Republican | 48 | 41 | 31 | 34 | 21 | 25 |

* Weighting applied to match actual distribution of upstate vs. downstate. Due to rounding, distributions may not add up to 100.

- In 2010, more women than men (57% vs. 49% respectively) reported that the risk of water contamination exceeded the revenues that would be gained from natural gas drilling (see Table 2). No such gender disparity was found in 2011.
- In both 2010 and 2011, the majority of non-whites (64%

and 59% respectively) and about half of whites (46% and 50% respectively) felt that the risk of water contamination outweighed the revenues. More whites than non-whites felt that the revenues from drilling outweighed the risk of water contamination (30% vs. 17% in 2010 and 29% vs. 21% in 2011).

- Across age groups, most respondents felt that the risk of contaminating drinking water outweighed the revenues, in both 2010 and 2011.
- Respondents with a household income between \$50,000 and \$99,999 were more likely to state that the risk outweighed the benefits (58% in 2010 and 56% in 2011).
- Liberals are much more likely to report that the risk outweighs possible revenues, increasingly so since 2011 (60% in 2010 and 66% in 2011).
- This trend is reversed for Moderates with fewer reporting that they feel the risk outweighs the revenues in 2011 compared to 2010 (47% vs. 54% respectively).
- Among key demographic groups (gender, race, age, household income, and ideology), the majority, or at least the plurality, of every subgroup reported that the risk outweighed the revenues in both 2010 and 2011.
- The one exception to this observation is based on political party affiliation. The majority of Democrats (64% in both 2010 and 2011) and about half of Independents (47% in 2010 and 53% in 2011) believed that the risk of contaminating drinking water outweighed the revenues. However, the plurality of Republicans (41% in 2010 and 48% in 2011) believed that the revenues outweighed the risk of drinking water contamination.

Energy Preferences

ESP 2011 then queried residents' energy preferences. The question states: If you had to choose only one, which of the following factors would you say is most important to your energy preferences? 1. Keeping energy costs low, 2. Protecting the natural environment, 3. Protecting the quality of life in my community, 4. Reducing foreign imports, 5. Minimizing health risks from pollution or accidents.

Table 3 Energy Preferences

| Energy Preference | Percent of all Respondents | | |
|------------------------------------|----------------------------|-----------|---------|
| | NYS* | Downstate | Upstate |
| Keeping energy costs low | 16 | 15 | 19 |
| Protecting the natural environment | 25 | 28 | 20 |



| | | | |
|-----------------------------------------------------|----|----|----|
| Protecting the quality of life in my community | 18 | 19 | 15 |
| Reducing foreign imports | 22 | 19 | 27 |
| Minimizing health risks from pollution or accidents | 19 | 20 | 18 |

* Weighting applied to match actual distribution of upstate vs. downstate. Due to rounding, distributions may not add up to 100.

- While there was no clearly dominant priority across the state, one out of four respondents (25%) reported that the most important factor to their energy preferences was *protecting the natural environment* (see Table 3).
- Downstate residents were more likely to choose *protecting the natural environment* as the most important factor (28% vs. 20% of upstate residents), while upstate residents were more likely to choose *reducing foreign imports* as the most important factor (27% vs. 19% of downstate residents).
- The majority of respondents who chose factors among *protecting the natural environment*, *protecting the quality of life in my community*, and *minimizing health risks from pollution or accidents*, were also more likely to state that the risk of contaminating drinking water outweighed any possible revenues from natural gas drilling (63%, 61%, and 61% respectively).

| | | | | | |
|------------------------|----|----|----|----|----|
| Less than \$29,999 | 23 | 20 | 22 | 14 | 21 |
| \$30,000 to \$49,999 | 14 | 31 | 17 | 20 | 17 |
| \$50,000 to \$99,999 | 14 | 26 | 19 | 21 | 20 |
| \$100,000 or more | 17 | 22 | 12 | 28 | 20 |
| Ideology | | | | | |
| Liberal | 11 | 30 | 20 | 18 | 20 |
| Moderate | 20 | 24 | 14 | 20 | 22 |
| Conservative | 20 | 20 | 17 | 29 | 14 |
| Political Party | | | | | |
| Democrats | 13 | 30 | 21 | 15 | 20 |
| Independents | 16 | 26 | 13 | 22 | 22 |
| Republicans | 23 | 16 | 15 | 34 | 12 |

* Weighting applied to match actual distribution of upstate vs. downstate. Due to rounding, distributions may not add up to 100.

- Women were more likely to choose *protecting the quality of life in my community* or *minimizing health risks from pollution or accidents* as the most important factor (20% and 24% respectively – see Table 4), compared to men (15% and 13% respectively). Men were more likely to choose *keeping energy costs low* or *reducing foreign imports* as the most important factor (20% and 26% respectively), compared to women (13% and 17% respectively).
- Whites were more likely to choose *reducing foreign imports* as the most important factor than non-whites (24% vs. 14% respectively), while significantly more non-whites chose *protecting the natural environment* (33% vs. 22% of whites).
- The plurality of respondents aged 18 to 24 (41%) chose *protecting the natural environment* as the most important factor.
- Respondents with a household income between \$30,000 and \$49,999 and between \$50,000 and \$99,999 were more likely than the other income brackets to choose *protecting the natural environment* as the most important factor (31% and 26% respectively). Respondents with a household income of \$100,000 or more were more likely than the other income brackets to choose *reducing foreign imports* (28%).
- Liberals and moderates were more likely to choose *protecting the natural environment* as the most important factor (30% and 24% respectively). Conservatives, on the other hand, were more likely to choose *reducing*

Table 4 Energy Preferences by Demographic Characteristics

| | Percent of all Respondents* | | | | |
|-------------------------|-----------------------------|------------------------------------|------------------------------------------------|--------------------------|-----------------------------------------------------|
| | Keeping energy costs low | Protecting the natural environment | Protecting the quality of life in my community | Reducing foreign imports | Minimizing health risks from pollution or accidents |
| Gender | | | | | |
| Male | 20 | 25 | 15 | 26 | 13 |
| Female | 13 | 25 | 20 | 17 | 24 |
| Race | | | | | |
| Non-white | 16 | 33 | 17 | 14 | 20 |
| White | 17 | 22 | 18 | 24 | 19 |
| Age | | | | | |
| 18-24 | 14 | 41 | 15 | 15 | 15 |
| 25-34 | 14 | 19 | 19 | 24 | 24 |
| 35-44 | 23 | 24 | 13 | 17 | 23 |
| 45-54 | 15 | 24 | 12 | 28 | 21 |
| 55-64 | 15 | 27 | 24 | 17 | 17 |
| 65+ | 16 | 21 | 24 | 26 | 14 |
| Household income | | | | | |



foreign imports (29%).

- Democrats and Independents were also more likely to choose *protecting the natural environment* as the most important factor (30% and 26% respectively). Republicans, on the other hand, were more likely to choose *reducing foreign imports* (34%).

Impact of Shale Gas

In 2011, ESP also asked respondents to indicate how they expect shale gas development to impact the overall cost of living for New York State (whether it would get better, stay the same, or get worse – respondents were also able to answer that they were not familiar with the issue). In addition, ESP 2011 asked them to indicate if they agree or disagree with two statements: 1. The shale gas industry will provide economic opportunities that will help keep our children in NYS, 2. Only a few people in NYS will benefit from the shale gas development.

Table 5 Overall Cost of Living Impacted by Natural Gas Drilling by Demographic Characteristics

| Demographics | Percent of all Respondents* | | |
|-------------------------|-----------------------------|---------------|-----------|
| | Get Better | Stay the Same | Get Worse |
| <i>Overall</i> | 39 | 33 | 28 |
| <i>Gender</i> | | | |
| Male | 40 | 37 | 23 |
| Female | 39 | 30 | 32 |
| <i>Race</i> | | | |
| Non-white | 40 | 26 | 34 |
| White | 39 | 35 | 25 |
| <i>Age</i> | | | |
| 18-24 | 35 | 40 | 25 |
| 25-34 | 29 | 34 | 37 |
| 35-44 | 41 | 37 | 21 |
| 45-54 | 42 | 33 | 24 |
| 55-64 | 36 | 32 | 31 |
| 65+ | 43 | 27 | 30 |
| <i>Household income</i> | | | |
| Less than \$30,000 | 49 | 23 | 28 |
| \$30,000 to \$49,999 | 39 | 26 | 35 |
| \$50,000 to \$99,999 | 36 | 37 | 27 |
| \$100,000 or more | 38 | 39 | 23 |
| <i>Ideology</i> | | | |

| | | | |
|------------------------|----|----|----|
| Liberal | 32 | 33 | 35 |
| Moderate | 39 | 35 | 26 |
| Conservative | 49 | 33 | 19 |
| <i>Political Party</i> | | | |
| Democrat | 37 | 27 | 36 |
| Independent | 35 | 40 | 25 |
| Republican | 49 | 38 | 12 |

* Weighting applied to match actual distribution of upstate vs. downstate. Due to rounding, distributions may not add up to 100.

- The plurality of respondents (39% – see Table 5) who were familiar with the issue of shale gas development expected the cost of living to get better for NYS with this development. More than one out of four respondents (28%), on the other hand, expected the cost of living to get worse with shale gas development.
- The plurality of conservatives (49%) and moderates (39%) expected the cost of living to get better with shale gas development. Opinions of liberals were evenly divided (32% expected it to get better, 33% expected the same and 35% expected it to get worse).
- About half of Republicans (49%) expected the cost of living to get better with shale gas development. The plurality of independents (40%) expected the cost of living to stay the same. More than a third of Democrats either expected the cost of living to get better (37%) or worse (36%).

Table 6 Economic Opportunities of Shale Gas Industry by Demographic Characteristics

| Demographics | Percent of all Respondents* | | | | | |
|----------------|---------------------------------------------|---------|----------|----------------------------------------|---------|----------|
| | Industry will help keep our children in NYS | | | The Industry will benefit a few people | | |
| | Agree | Neutral | Disagree | Agree | Neutral | Disagree |
| <i>Overall</i> | 39 | 21 | 40 | 52 | 20 | 29 |
| <i>Gender</i> | | | | | | |
| Male | 42 | 21 | 37 | 48 | 20 | 32 |
| Female | 37 | 20 | 43 | 55 | 19 | 26 |
| <i>Race</i> | | | | | | |
| Non-white | 38 | 23 | 39 | 57 | 21 | 22 |
| White | 40 | 20 | 40 | 50 | 19 | 31 |
| <i>Age</i> | | | | | | |
| 18-24 | 46 | 28 | 26 | 39 | 29 | 31 |
| 25-34 | 32 | 25 | 43 | 56 | 26 | 18 |
| 35-44 | 46 | 16 | 37 | 56 | 18 | 26 |



| | | | | | | |
|-------------------------|----|----|----|----|----|----|
| 45-54 | 42 | 18 | 41 | 46 | 21 | 33 |
| 55-64 | 37 | 21 | 42 | 57 | 17 | 26 |
| 65+ | 33 | 23 | 44 | 54 | 13 | 33 |
| Household income | | | | | | |
| Less than \$30,000 | 41 | 24 | 34 | 41 | 22 | 37 |
| \$30,000 to \$49,999 | 41 | 21 | 37 | 55 | 20 | 25 |
| \$50,000 to \$99,999 | 37 | 17 | 46 | 54 | 22 | 25 |
| \$100,000 or more | 39 | 23 | 39 | 51 | 16 | 33 |
| Ideology | | | | | | |
| Liberal | 34 | 17 | 49 | 62 | 16 | 21 |
| Moderate | 32 | 30 | 38 | 45 | 26 | 29 |
| Conservative | 52 | 17 | 30 | 45 | 17 | 38 |
| Political Party | | | | | | |
| Democrat | 38 | 19 | 43 | 57 | 17 | 26 |
| Independent | 33 | 24 | 43 | 47 | 26 | 27 |
| Republican | 57 | 18 | 25 | 44 | 16 | 40 |

* Weighting applied to match actual distribution of upstate vs. downstate. Due to rounding, distributions may not add up to 100. Response categories were collapsed with Agree/Strongly Agree as "agree", Disagree/Strongly Disagree as "disagree" and Neither Agree Nor Disagree as "neutral."

- Respondents were divided on the question about whether the economic opportunities of the shale gas industry would help keep their children in NYS; two out five respondents (39% – see Table 6) agreed or strongly agreed with the statement and 40% of them disagreed or strongly disagreed.
- The plurality of liberals (49%) disagreed or strongly disagreed with the statement that the shale gas industry would help keep their children in NYS, while the majority of conservatives (52%) agreed or strongly agreed.
- The plurality of Democrats (43%) and Independents (43%) disagreed or strongly disagreed that the shale gas industry would provide economic opportunities that will help keep children in NYS, while the majority of conservatives (57%) agreed or strongly agreed with it.
- The majority of the respondents (52%) agreed or strongly agreed with the statement that only a few people in NYS will benefit from the shale gas

development. More than one out of four respondents (29%) disagreed or strongly disagreed with this statement.

- Liberals were more likely than moderates and conservatives to agree or strongly agree with the statement that only a few people in NYS will benefit from the shale gas development (62% of liberals vs. 45% of moderates and 45% of conservatives).
- Democrats were more likely than Independents and Republicans to agree or strongly agree with the statement that only a few people in NYS will benefit from the shale gas development (57% of Democrats vs. 47% of Independents and 44% of Republicans).

Impact of Marcellus Shale Gas Development

In 2012, the ESP queried further about the Marcellus Shale gas development with a three questions that were not asked in the previous years. First with the question: How do you expect Marcellus Shale gas development will impact overall quality of life in the communities that are impacted by natural gas drilling (get better, stay the same, or get worse)?

Table 7 Overall Quality of Life Impacted by Natural Gas Drilling

| Overall Quality of Life | Percent of Respondents | | |
|-------------------------|------------------------|-----------|---------|
| | NYS* | Downstate | Upstate |
| Get better | 32 | 35 | 28 |
| Stay the same | 23 | 24 | 21 |
| Get worse | 45 | 42 | 51 |

*Weighting applied to match actual distribution of upstate vs. downstate. Due to rounding, distributions may not add up to 100.

- The plurality of respondents (45% – see Table 7) expected Marcellus Shale gas development to worsen the overall quality of life in the communities impacted by drilling. However, almost one out three respondents (32%) expected the overall quality of life to get better in these communities.
- More upstate residents expected the overall quality of life to get worse (51%) than downstate residents (42%).

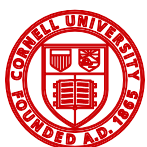


Table 8 Overall Quality of Life Impacted by Natural Gas Drilling by Demographic Characteristics

| Demographics | Percent of all Respondents* | | |
|-------------------------|-----------------------------|---------------|-----------|
| | Get Better | Stay the Same | Get Worse |
| <i>Gender</i> | | | |
| Male | 36 | 24 | 40 |
| Female | 29 | 21 | 50 |
| <i>Race</i> | | | |
| Non-white | 35 | 27 | 38 |
| White | 31 | 21 | 48 |
| <i>Age</i> | | | |
| 18-24 | 36 | 26 | 38 |
| 25-34 | 36 | 27 | 37 |
| 35-44 | 26 | 26 | 48 |
| 45-54 | 39 | 15 | 46 |
| 55-64 | 25 | 26 | 49 |
| 65+ | 34 | 20 | 46 |
| <i>Household income</i> | | | |
| Less than \$30,000 | 29 | 32 | 39 |
| \$30,000 to \$49,999 | 32 | 22 | 46 |
| \$50,000 to \$99,999 | 27 | 22 | 51 |
| \$100,000 or more | 42 | 18 | 40 |
| <i>Ideology</i> | | | |
| Liberal | 22 | 17 | 61 |
| Moderate | 36 | 27 | 37 |
| Conservative | 43 | 26 | 31 |
| <i>Political Party</i> | | | |
| Democrat | 27 | 24 | 50 |
| Independent | 33 | 21 | 46 |
| Republican | 43 | 22 | 35 |

*Weighting applied to match actual distribution of upstate vs. downstate. Due to rounding, distributions may not add up to 100.

- Women and Whites more often reported that they expect the overall quality of life to get worse with shale gas development (50% and 48%, respectively – see Table 8), compared to men and non-Whites (40% and 38%, respectively).
- Across income levels, respondents with a household income of \$100,000 or more most often expected a positive impact from shale gas development (42%, see

Table 8 for other income groups). Respondents with a household income between \$50,000 and \$99,999 were most likely to expect a negative impact from shale gas development (51%, see Table 8 for other income groups).

- Liberals were much more likely to expect the overall quality of life to get worse with shale gas development (61%), compared to moderates (37%) and conservatives (31%). Conservatives, on the other hand, were more likely to expect a positive impact (43% vs. 22% of liberals and 36% of moderates).
- Democrats and Independents were also more likely to expect a negative impact (50% and 46% respectively), compared to 35% of Republicans. Republicans, on the other hand, were more likely to expect the overall quality of life to get better (43%).

A follow-up question asked respondents: How sure are you about these effects on quality of life (very sure, somewhat sure, not very sure, not at all sure)? Nearly three out of four respondents were very or somewhat sure (73.3%). One in ten respondents (10%) were not at all sure about the quality of life effects.

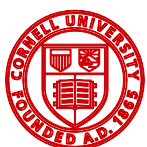
Finally, respondents were asked: Would you agree or disagree that local governments should be able to control whether or not to allow natural gas development in their jurisdiction? (However, note that the first 86 respondents answered a different version of this question: Would you agree or disagree that local governments should be able to control natural gas development in their jurisdiction? Results reported in Table 9 excluded responses of these 86 respondents).

Table 9 Local Government Should Control Gas Development

| Agreement | Percent of Respondents | | |
|------------------------------|------------------------|-----------|---------|
| | NYS* | Downstate | Upstate |
| Agree / Strongly agree | 61 | 60 | 63 |
| Neither agree nor disagree | 10 | 12 | 8 |
| Disagree / Strongly disagree | 28 | 28 | 29 |

*Weighting applied to match actual distribution of upstate vs. downstate. Due to rounding, distributions may not add up to 100.

The majority of respondents (61% – see Table 9) agreed or strongly agreed with the statement that local governments should be able to control whether or not to allow natural gas development in their jurisdiction. More than one out of four respondents, on the other hand, disagreed or strongly disagreed with it (28%).



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