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COLLEGE OF FOOD, AGRICULTURAL,  
AND ENVIRONMENTAL SCIENCES

# Perceptions of Oil and Gas Development Policies and Politics in the United States

## 2020 Survey Report

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This report summarizes the results of a 2020 online survey designed to gather information about the perceptions and conflicts surrounding oil and gas development that uses hydraulic fracturing (aka “unconventional oil and gas”) in the US, and the impacts of COVID-19 and recent geopolitical changes on oil and gas production. The survey was answered by individuals from a diverse range of sectors and interests across 15 states: Arkansas, California, Colorado, Indiana, Louisiana, Missouri, Montana, New Mexico, New York, North Dakota, Ohio, Oklahoma, Pennsylvania, Texas, and West Virginia. The survey is part of an ongoing study by the School of Public Affairs at the University of Colorado Denver and the School of Environment and Natural Resources and the John Glenn College of Public Affairs at The Ohio State University. Funding for this survey was provided by the National Science Foundation through the Decision, Risk, and Management Sciences Program (SES-1734310; SES-1734294). This study was approved by the Colorado Multiple Institute Review Board and Ohio State’s Institutional Review Board (2019E0120). Participation was entirely voluntary and individually identifiable information of the respondents is not presented nor published.

For more information about this project, please visit <https://shalepolicyconflict.org/>.

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# Methods

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The survey was sent to 1,431 individuals involved in or knowledgeable about oil and gas development that uses hydraulic fracturing—often referred to as unconventional oil and gas development, shale development, or fracking—across 15 shale-producing states. Potential respondents received an email with a link to the survey administered through Qualtrics, an online survey platform.

Respondents were identified using a purposive sampling approach based on the news media, online reports, public hearings and testimony, and recommendations from interviews our research team conducted in the first years of the project. As detailed in the findings below, respondents are affiliated with multiple levels of government, the oil and gas industry, environmental nonprofits, citizen-based groups, academia, and consulting firms, among others. The survey was open between April and June 2020, and three reminder emails were sent. A total of 263 individuals answered the survey, resulting in an 18% response rate. Not all respondents answered every question, therefore response rates vary by question.

Major topics covered in the survey include 1) general perceptions of oil and gas development, 2) perceptions of benefits and problems associated with oil and gas development, 3) the implications of COVID-19 and recent geopolitical changes on oil and gas production, 4) levels of conflict surrounding oil and gas issues, 5) respondents' willingness to compromise on different issues, and 6) perceptions of organizational influence. The survey also asked about 7) collaborations with other organizations, 8) participation in decision making venues, 9) high conflict policies, and 10) respondent attributes, including state, sector affiliation, education, and political leanings.

Key findings are found below in the body of the report, and additional results are reported in the Appendix.

# Findings

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## General Description of Respondents

As noted above, this survey includes individuals from 15 states; however, almost half of respondents (45%) come from Colorado (see Appendix). Researchers associated with this study have a well-developed list of survey respondents who participated in prior surveys. Thus, more respondents received the survey and responded in Colorado as compared with other states

Environmental or conservation organizations are also overrepresented among respondents (see Appendix, Q19), possibly reflecting better availability of contact information, as compared with the oil and gas industry, and the fact that government agencies are sometimes restricted in responding to surveys.

For purposes of our analysis, we divided respondents into four groups: **government**, including all levels and branches of government (n = 68); **industry**, including oil and gas companies and professional associations (n = 23); **environmental groups**, including environmental and conservation nonprofits, along with organized citizen groups (n = 94); and **others**, which includes academics, consultants, lawyers, and more (n = 78).

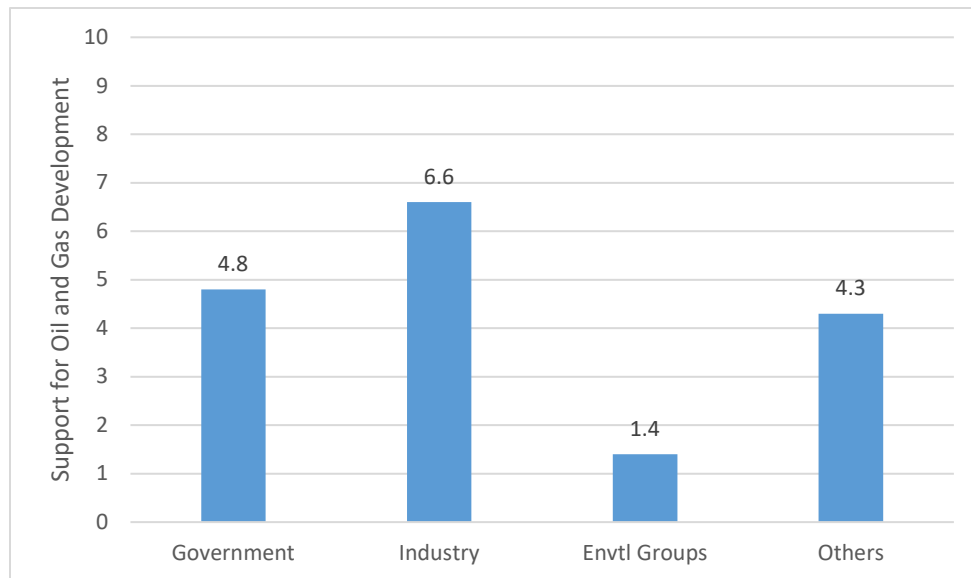
Although the survey specifically targeted those active in or knowledgeable about oil and gas development, many respondents (47% of those responding to this question) reported spending not more than 10% of their professional time on this topic (Appendix, Q21). Just over 20% of respondents report spending at least half of their time on oil and gas development.

On average, respondents are highly educated with 71% reporting having a graduate degree (Appendix, Q23). Over 90% of respondents have at least a bachelor's degree. Furthermore, overall, respondents report slightly left-of-center views, with industry representatives leaning conservative and environmental groups on average reporting views midway between extremely liberal and moderate (Appendix, Q22). Government and others report more moderate political views.

## General Perceptions of Oil and Gas Development

Regarding general opinions about oil and gas development, respondents from industry groups favor some expansion, while respondents from environmental groups favor contraction. Government respondents scored near the center of the spectrum, believing that oil and gas development should continue at its current rate. “Others” prefer a modest contraction.

*Considering the trends in development over the past few years, what comes closest to your current position in relation to unconventional oil and gas development in [your state]? Scale: 0 – 10 (0 – Stop all activity; 5 – Continue at current rate; 10 – Expand extensively)*

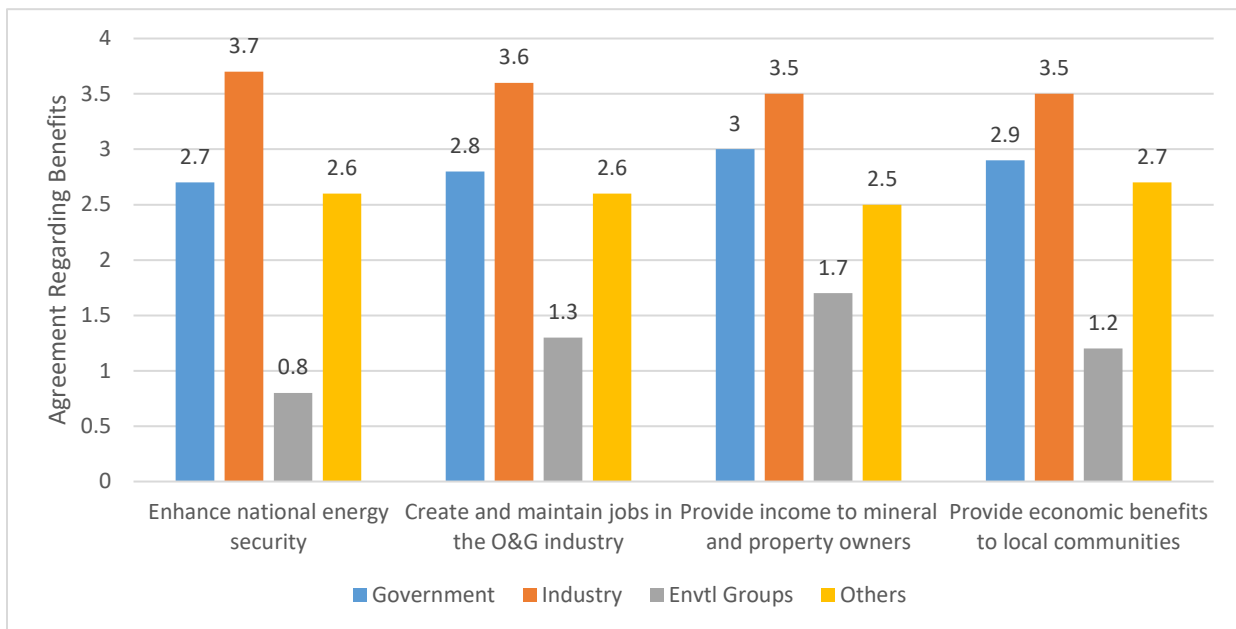


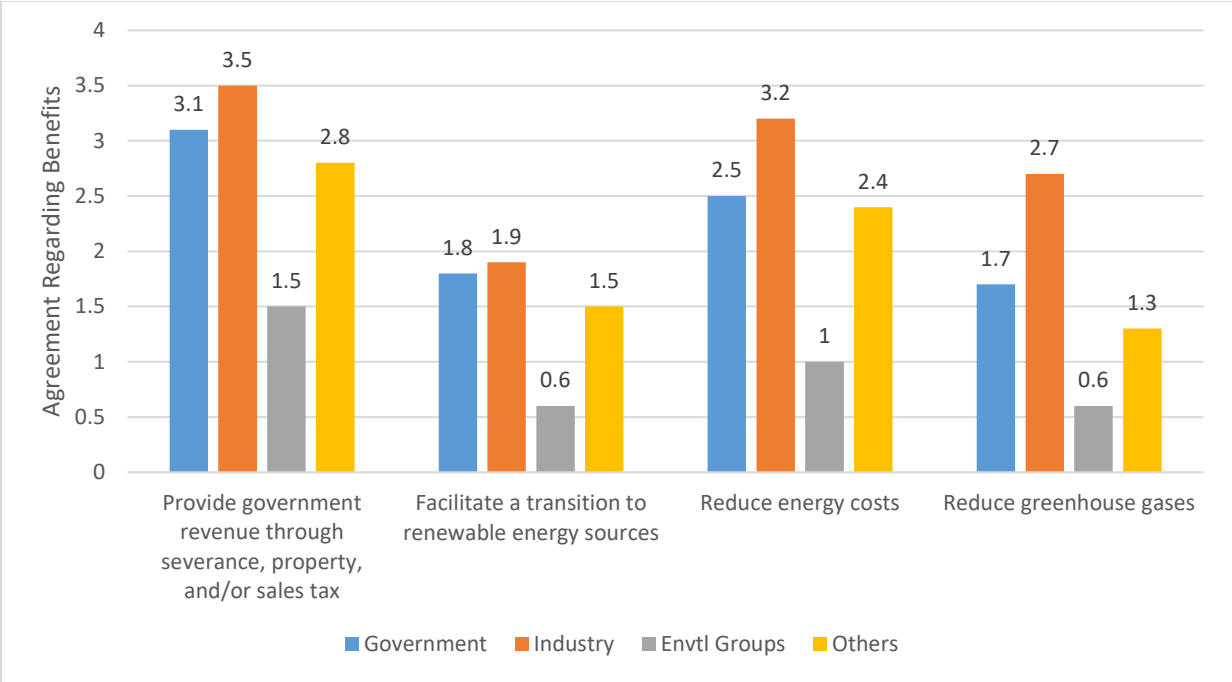
**Figure 1. Level of support for oil and gas development.**

## Perceived Benefits of Oil and Gas Development

The next part of the survey explored perceptions about the potential benefits of oil and gas development. Respondents reported the highest level of agreement regarding economic benefits, including income to mineral and property owners, government revenue, and economic benefits to local communities. Respondents are least inclined to agree that the benefits of oil and gas development include facilitating a transition to renewable energy sources and reducing greenhouse gases. The largest differences in perception of benefits are between industry and environmental groups with the largest difference surrounding the potential for oil and gas development to enhance national energy security.

***In general, to what extent do you agree or disagree that the following are potential benefits of oil and gas development that uses hydraulic fracturing (unconventional oil and gas development)? Scale = 0 – 4 (0 - strongly disagree; 1 - somewhat disagree; 2 - neither agree nor disagree; 3 - somewhat agree; 4 - strongly agree)***



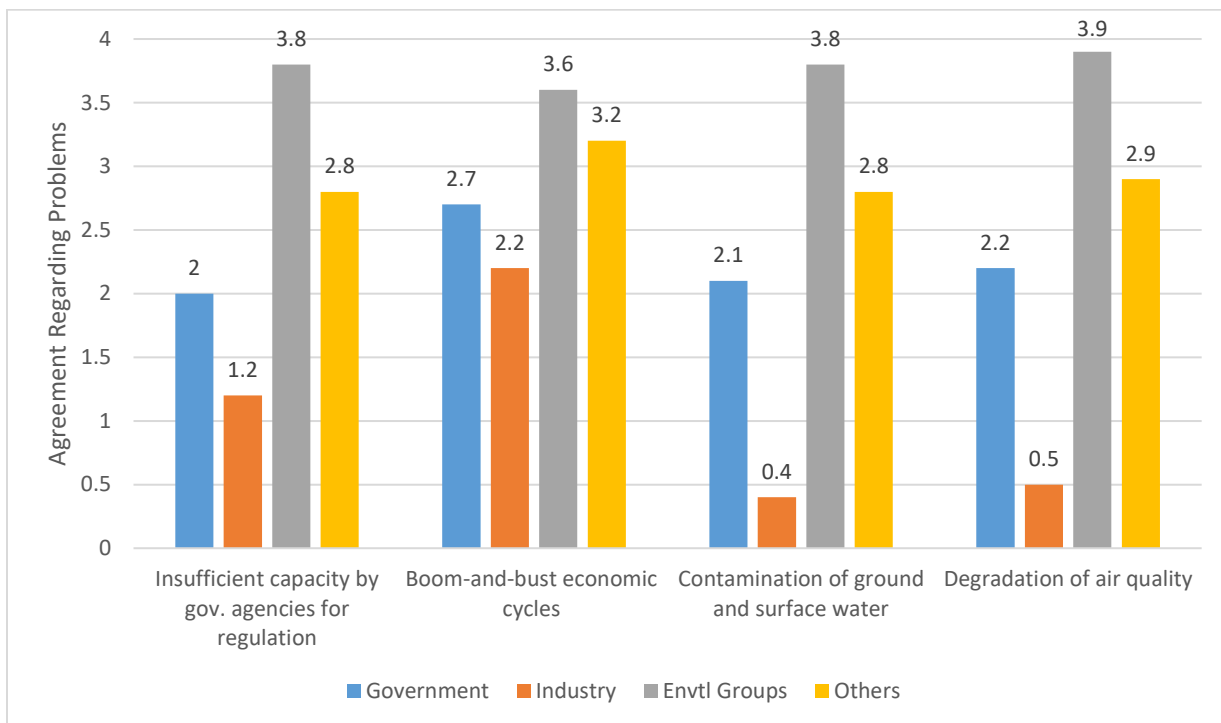


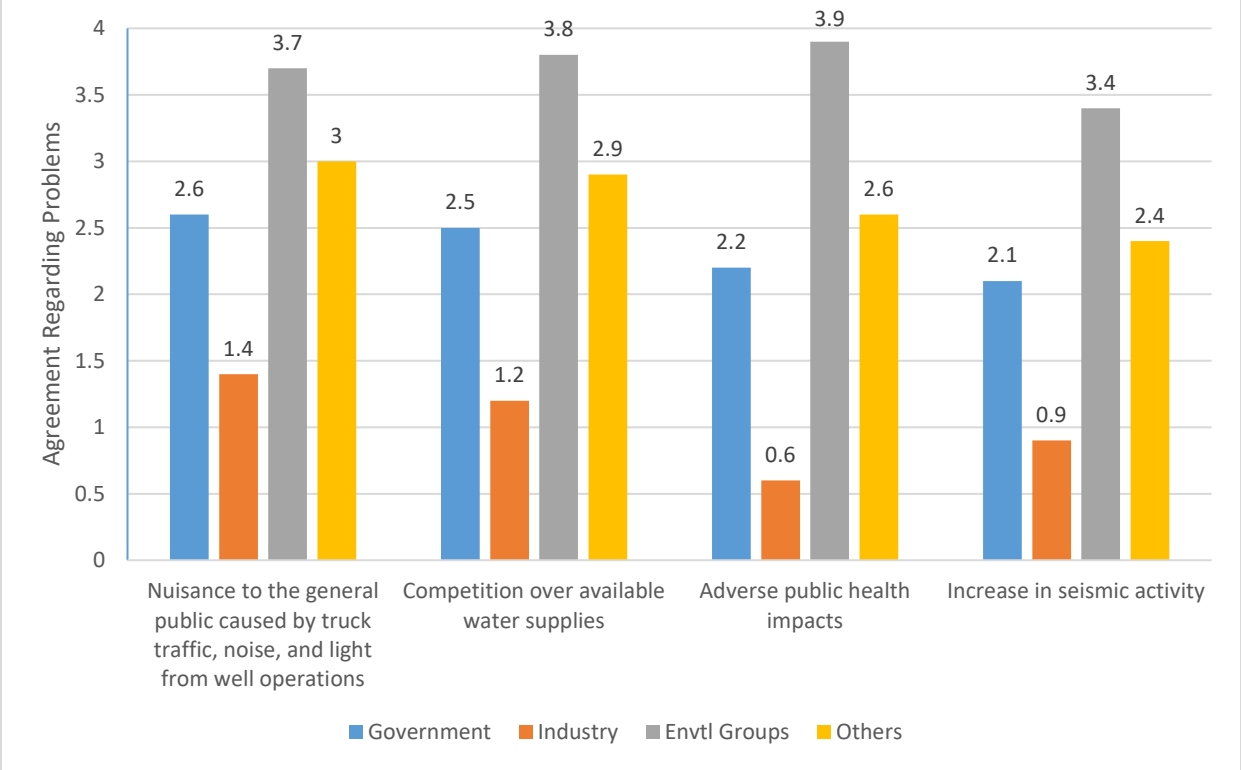
**Figures 2a-b. Perceived benefits of oil and gas development.**

## Perceived Problems with Oil and Gas Development

Next, the survey explored perceptions of potential problems associated with oil and gas development. Respondents tend to agree that boom-and-bust economic cycles, nuisance issues, and competition over available water supplies are potential problems. The largest divergence in perceptions between industry and environmental groups relate to ground and surface water contamination, air quality degradation, and adverse public health impacts.

***In general, to what extent do you agree or disagree that the following are potential problems related to oil and gas development? Scale = 0 – 4 (0 - strongly disagree; 1 - somewhat disagree; 2 - neither agree nor disagree; 3 - somewhat agree; 4 - strongly agree)***





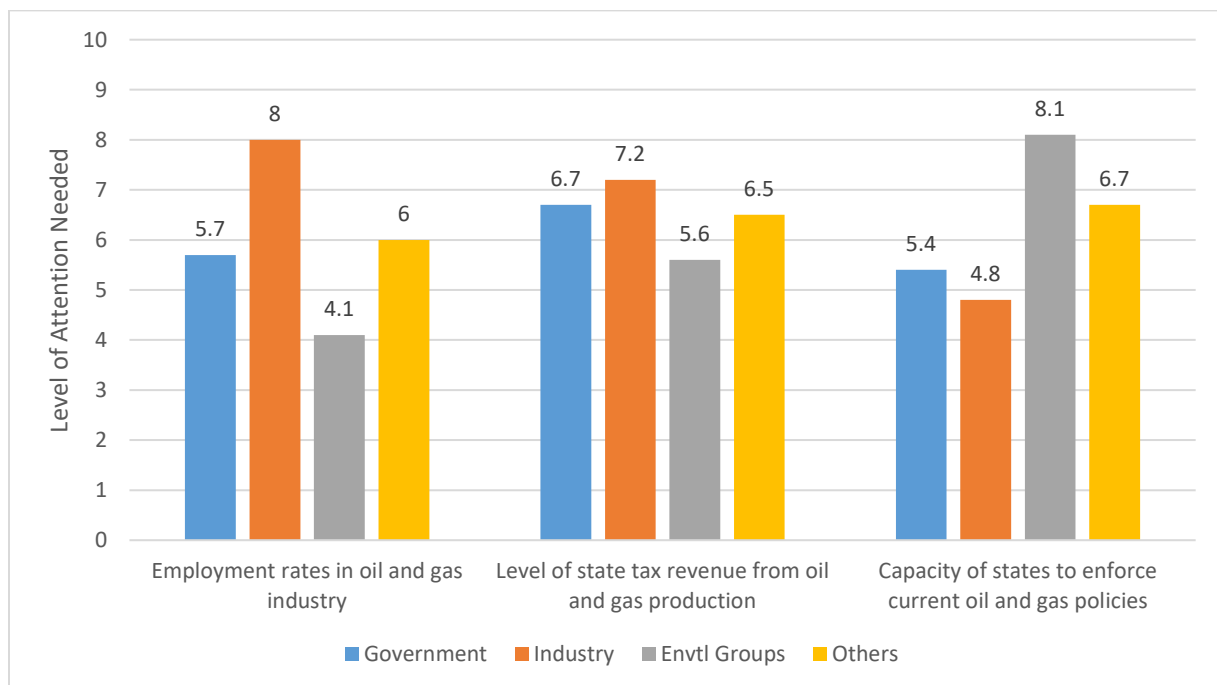
**Figures 3a-b. Perceived problems associated with oil and gas development.**

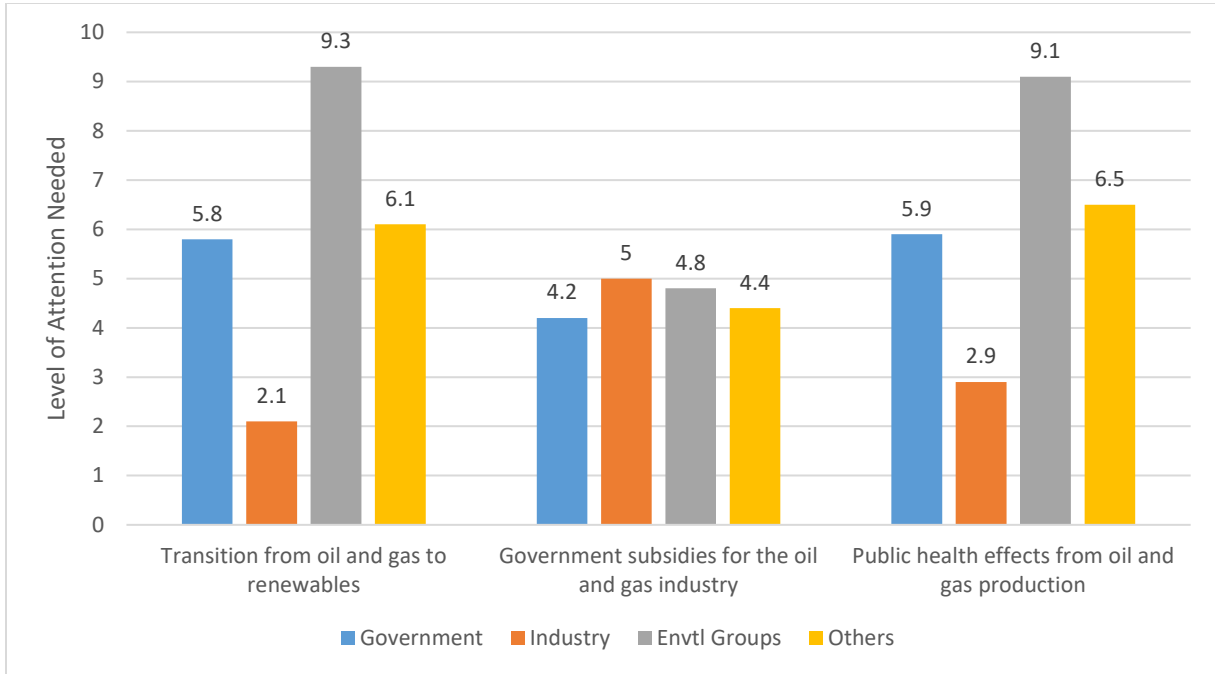


## Implications of COVID-19 and Recent Geopolitical Changes

The survey also included questions about how COVID-19 and recent geopolitical changes may affect the level of attention that some topics related to oil and gas production deserve. Overall, respondents rated the issue “public health effects from oil and gas production” as the one most deserving of immediate attention, followed closely by “transition from oil and gas to renewables.” According to respondents, the issue least deserving of immediate attention is “government subsidies for the oil and gas industry.” The largest differences in responses are between industry and environmental group respondents. Issues with the largest divergence in opinion are “transition from oil and gas to renewables” and “public health effects from oil and gas production”, with environmental groups believing these are most deserving of immediate attention. For respondents from the industry sector, the issues deserving immediate attention are “employment rates in the oil and gas industry” and “level of state tax revenue from oil and gas production.”

***Given the ongoing COVID-19 pandemic and recent geopolitical changes, to what extent are the following issues related to unconventional oil and gas development deserving of immediate attention by policy makers? Scale: 0 – 10 (0 - Deserves no attention at all; 5 - Deserves moderate attention; 10 - Deserves immediate attention)***

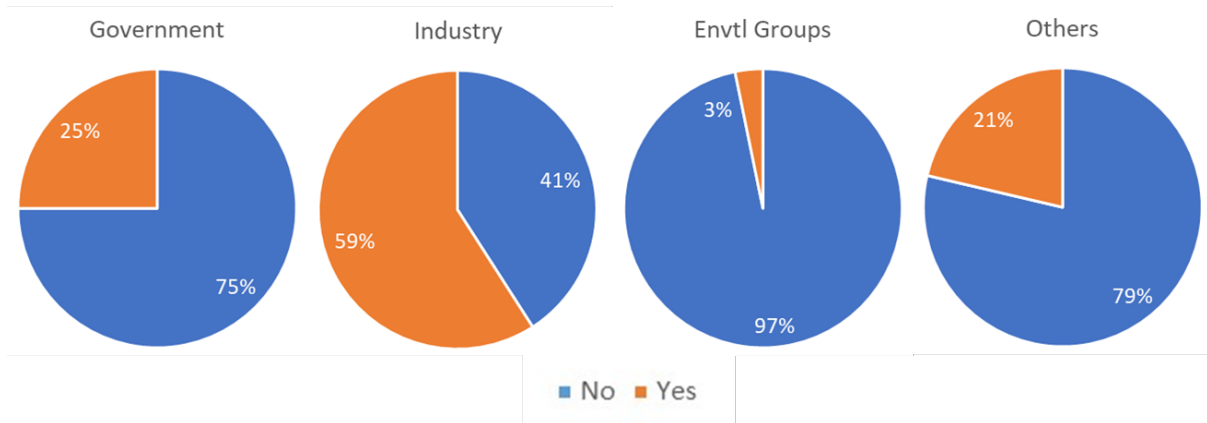




**Figures 4a-b. Issues deserving of attention given COVID-19 and geopolitical changes.**

We also included a question about potential benefits or opportunities associated with the COVID-19 pandemic and recent geopolitical changes.

*Given the ongoing COVID-19 pandemic and recent geopolitical changes, do you see any new benefits associated with unconventional oil and gas development?*



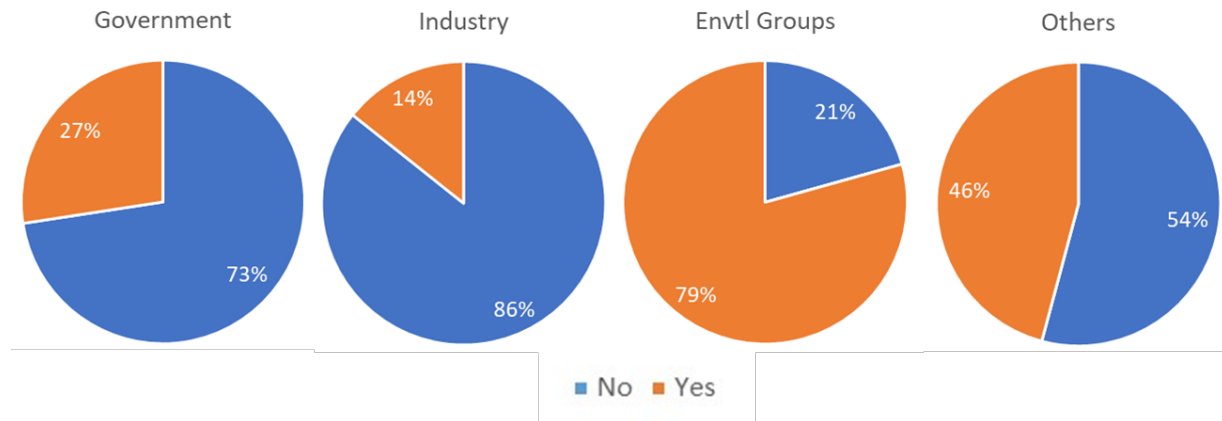
**Figure 5. Proportions of respondents seeing new benefits associated with oil and gas development.**

The vast majority of respondents (81%) do not see new benefits associated with oil and gas development in the context of the COVID-19 pandemic and recent geopolitical changes, although most respondents from the business sector believe that there are benefits. Sample responses among those that do see new benefits include the following:

- US Energy Independence.
- Ensures ongoing energy security; continues potential to develop LNG export markets to supply allies with natural gas (versus Russian NG, for example).
- Only the operators who use more advanced technology will be able to survive post-COVID 19. In general, the larger companies tend to be more environmentally responsible than the smaller companies who cannot devote resources to cleaning up spills or environmental best practices.
- The free-market reaction will lead to consolidation across the industry and a more measured approach to development.
- Oil & gas development will lead the financial recovery in the United States once commodity prices recover.
- As the market responds to COVID-19, the decreasing cost of fossil fuels further shows cost benefits for continued use of natural gas and oil in manufacturing and transportation. It also provides more economic balance for the transition to more natural gas as a predominant fuel for electric energy.
- Without reliable, affordable, energy from fossil fuels, the millions of Americans that have been able to continue working by telecommuting would not be possible.
- The reduction of production activities and the burning of fuel overall has eased the burden of environmental impacts on frontline communities.
- Keeps people working domestically; continues to reduce dependence on foreign sources of supply and produces tax revenues for each state, county, and municipality.

In addition to asking about possible benefits, we inquired about new problems derived from the COVID-19 pandemic and recent geopolitical changes.

***Given the ongoing COVID-19 pandemic and recent geopolitical changes, do you see any new problems associated with unconventional oil and gas development?***



**Figure 6. Proportions of respondents seeing new problems associated with oil and gas development.**

Approximately 51% of respondents reported new problems. Sample responses regarding these new problems include the following:

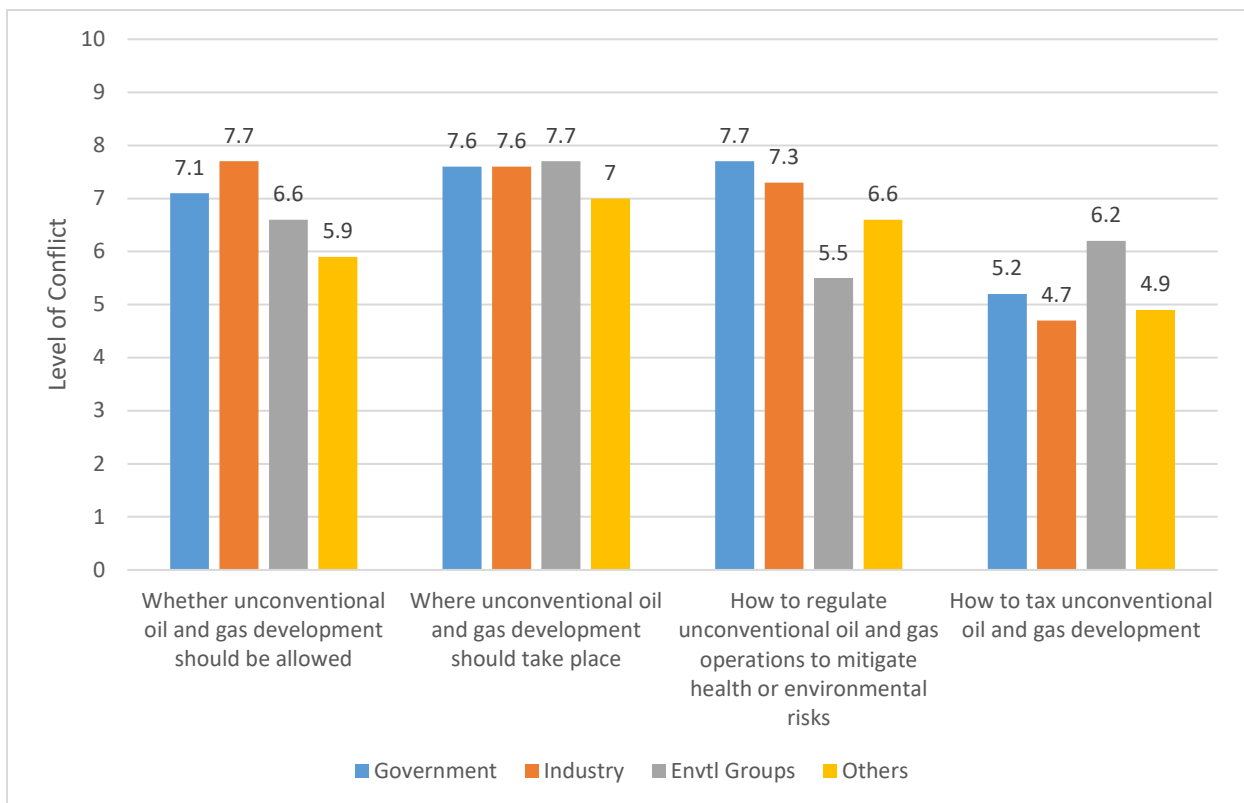
- Decreased capacity for monitoring and enforcement of environmental regulations.
- Government services will be cut and underfunded significantly for the foreseeable future, reducing essential government oversight.
- Increased levels of under-regulation or deregulation; that is, a lack of enforcement for existing regulations and/or lack of political influences to keep pollution prevention at adequate levels. Also, there could be a push to bail these companies out on the public dime.
- Oil and gas companies are reducing workforce which reduces their capacity to maintain safety and public health.
- Potential for operators to shut-in wells until prices recover, which reduces that operator's cash flow and can lead to an abandoned wells or incomplete reclamation/remediation of sites.
- Heightened risks of environmental contamination and fugitive emissions.
- The price drop has significantly impacted the economic base for many rural areas.
- The price collapse has adversely affected state revenue and the ability to provide essential services.
- Increased risk to people who are already vulnerable to air pollution and other public health threats.

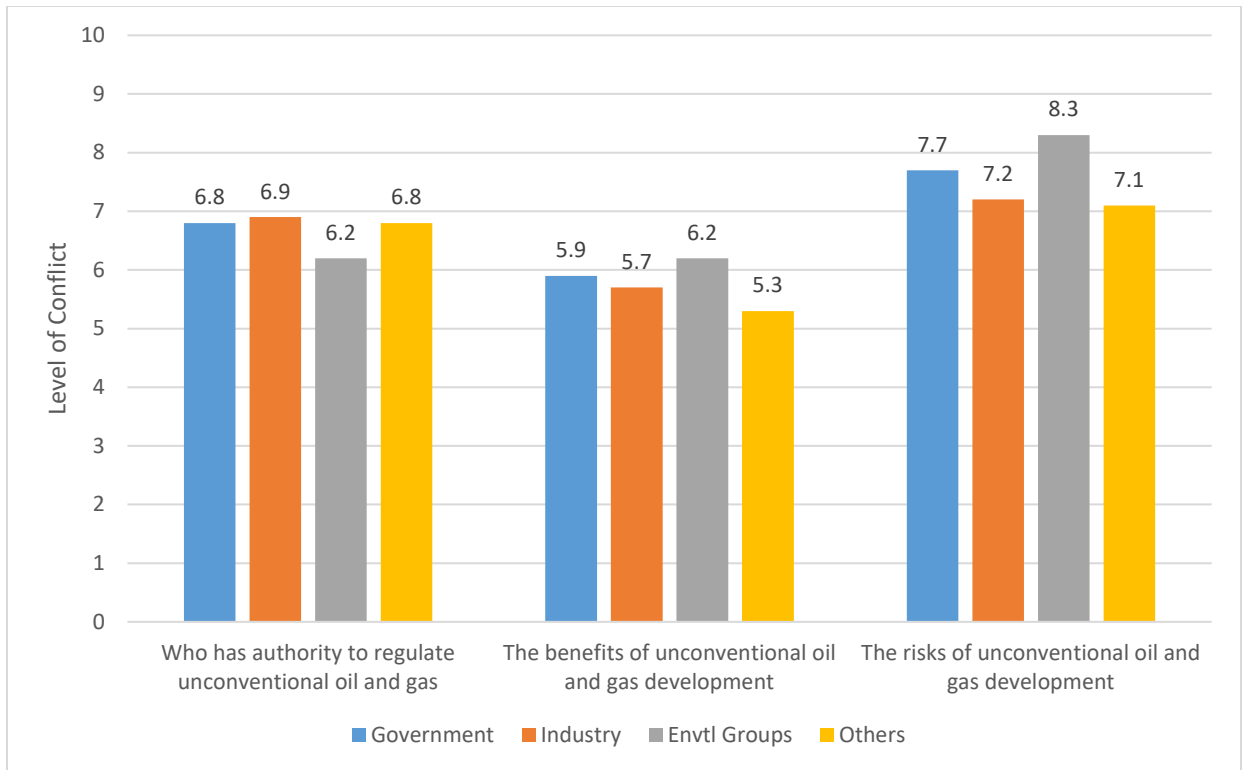
- As many of the communities impacted by oil and gas development see decreases in air quality and increases in respiratory issues, and are largely rural or underserved communities when it comes to healthcare already, the negative health impacts of drilling are magnified as COVID-19 increases those same health risk and impacts already overburdened hospitals.
- Workers working in unsafe conditions and potentially bringing COVID-19 to locals
- Focus shifting away from more promising renewable energy and not feeling a sense of urgency to completely move away from fossil fuels.
- The broad reduction of energy use for transportation is hurting our energy markets.

## Perceptions of Conflict Associated with Oil and Gas Development

One of the main goals of our research project is to gauge the level of conflict associated with the topic of oil and gas production across the U.S., as well as the perceived effects that conflict may have on individual and organizational agendas. The next set of questions address these research questions.

***Over the last three years, how much conflict has existed in your state regarding each of the following issues related to unconventional oil and gas development? Scale: 0 – 10 (0 – No conflict; 5 – Moderate conflict; 10 – A lot of conflict)***



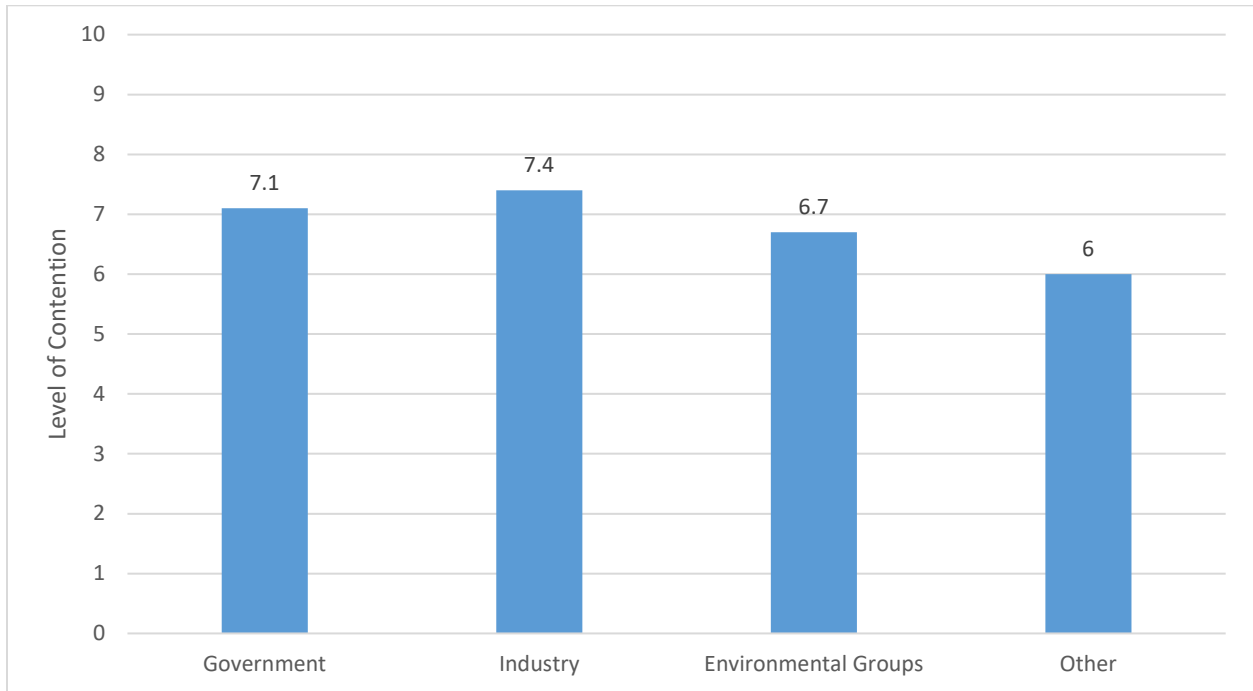


**Figure 7a-b. Level of conflict surrounding issues related to oil and gas development.**

Figures 7a and 7b show that respondents report that the highest levels of conflict are associated with the risks of oil and gas development, followed by where oil and gas development should take place and how to regulate the practice to mitigate health or environmental risks. Lower levels of conflict are observed with how to tax oil and gas development and the benefits of oil and gas development. Disparities in perceptions of conflict between industry and environmental groups are strongest when it comes to how to regulate and how to tax, and overall, “others” tend to perceive lower levels of conflict compared to the other three sectors.

We also asked respondents about the level of conflict surrounding oil and gas development generally, as compared with other issues in their states.

*Compared to other political issues in [your state] please rank the level of contention over the last three years about unconventional oil and gas development. Scale: 0 – 10 (0 – Far less contentious; 5 – Equally contentious; 10 – Far more contentious)*



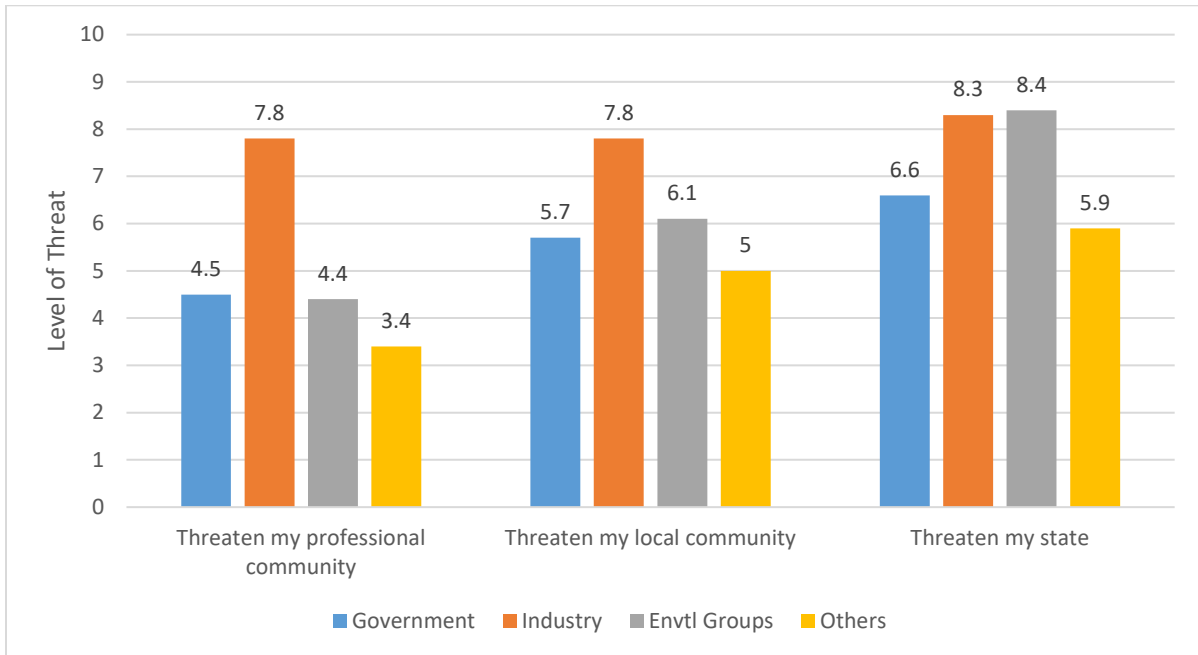
**Figure 8. Level of conflict associated with oil and gas development as compared with other issues.**

Figure 8 shows that all respondent groups indicate that oil and gas development is more contentious than other political issues in their states (overall mean = 6.6). Industry reports the highest levels of contention, and “others” report the lowest levels.



Finally, we asked about respondents' perceptions of threat from the views and actions of those whom they disagree with on issues related to oil and gas development.

*To what degree do the views and actions of those you disagree with on unconventional oil and gas development threaten each of the following? Scale: 0 – 10 (0 – Not at all; 5 – A moderate amount; 10 – A great deal)*



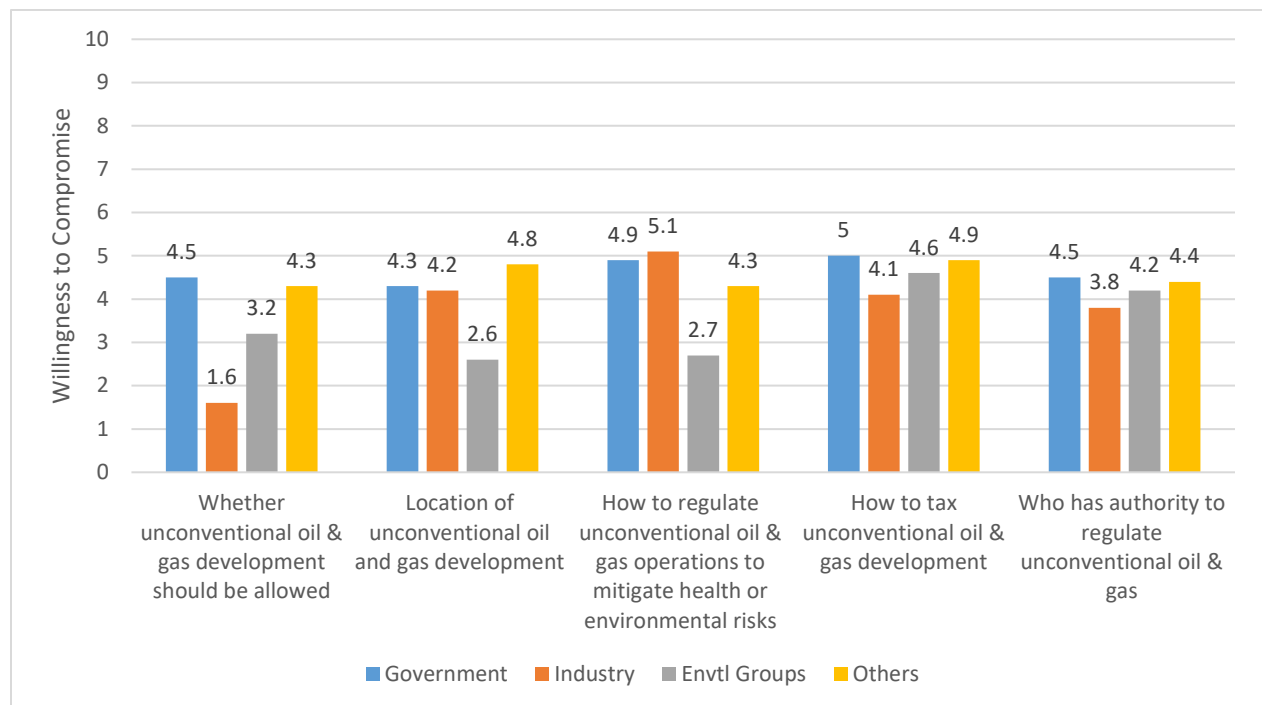
**Figure 9. Perceptions of threats from oil and gas development.**

Overall, respondents believe that the biggest threats are to their states, as opposed to their professional or local communities. Industry tends to report the highest levels of threat, and “others” report the lowest levels.

## Willingness to Compromise on Positions

With respect to respondents' willingness to compromise their positions to find common ground with those they disagree with, the highest score out of 10 on any sector's willingness to compromise on an issue is 5.1. In only two cases are respondent groups at least somewhat willing to compromise. Government respondents are somewhat willing to compromise on how to tax oil and gas development, and industry respondents are somewhat willing to compromise on how to regulate the practice. Environmental groups are more willing than industry to compromise regarding whether to allow development, while industry is more willing to compromise than environmental groups regarding siting and how to regulate oil and gas development. There were fewer differences across all four sectors in terms of willingness to compromise on how to tax oil and gas development and who has authority to regulate the practice.

*To what extent are you willing to compromise your position to find common ground or reach agreement with people you disagree with on the following issues related to unconventional oil and gas development? Scale: 0 – 10 (0 – Not at all; 5 – Somewhat willing; 10 – Very willing)*

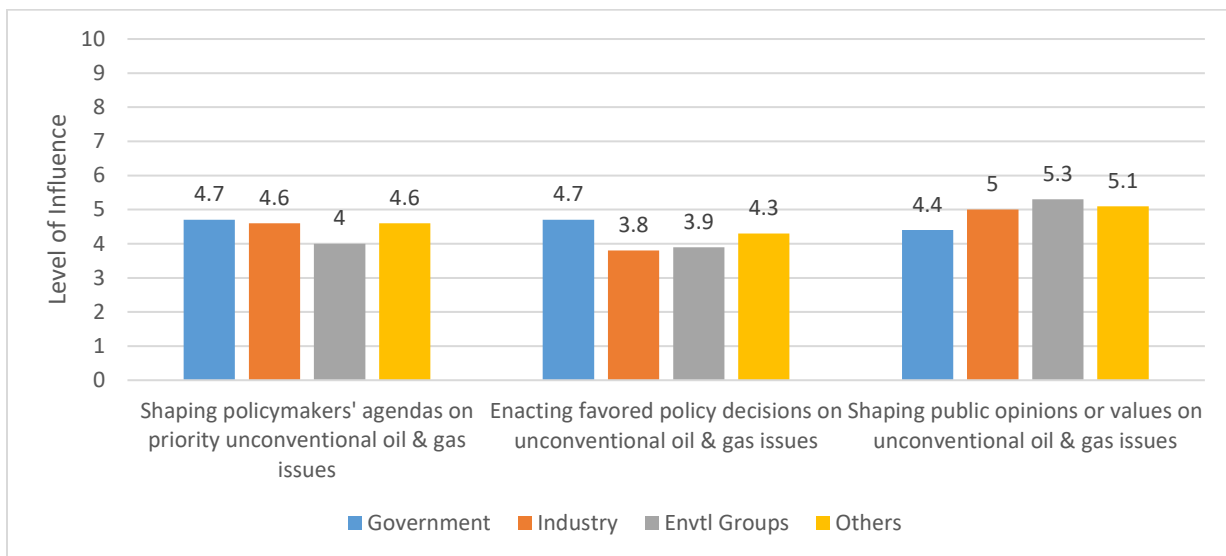


**Figure 10. Willingness to compromise positions on issues related to oil and gas development.**

## Organizational Influence

The highest category of reported influence is shaping public opinion or values on oil and gas issues. However, respondents only reported being moderately influential in this category of activity. Furthermore, while industry reports more influence than environmental groups in shaping policy agendas, environmental groups report more influence in shaping public opinion. Furthermore, both government and “others” report similar and sometimes higher levels of influence than industry and environmental groups.

*In the past three years, how influential has your organization been in each of the following in your state? Scale: 0 – 10 (0 – Not at all; 5 – Moderately influential; 10 – Very influential)*



**Figure 11. Perception of organizational influence in topics related to oil and gas development.**

# Conclusions

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This 2020 survey report on oil and gas development reports findings about general perceptions of oil and gas development, perceived benefits and problems associated with the practice, implications of COVID-19 and recent geopolitical changes, levels of conflict, willingness to compromise, and organizational influence.

Concerning *positions* related to oil and gas development, *perceived benefits*, *perceived problems*, and the *implications of COVID-19* and recent geopolitical changes, we see the biggest differences in perceptions and preferences between industry and environmental groups. This is certainly not surprising, but it suggests that oil and gas development remains a high conflict policy issue, particularly with respect to public health and environmental issues. Furthermore, while respondents described a limited number of new benefits stemming from COVID-19 and other recent changes, more respondents reported new problems with the practice.

Measuring *perceptions of conflict* directly, we see that across almost all issues and sectors, respondents report at least moderate levels of conflict surrounding oil and gas development issues, particularly when it comes to risks associated with the practice. Respondents report that oil and gas development is more contentious than other political issues in their states, and they believe that their states, as compared with other entities, are most threatened by opponents' positions. Similarly, across sectors and issues, respondents report low levels of willingness to compromise, suggesting that overall, oil and gas development is likely to continue to be a contentious issue in years to come. Finally, respondents also report that their organizations are, at best, moderately influential in shaping oil and gas development policy and politics.

# Appendix

Table 1. Survey respondents by state.

State	Frequency	Percent
Arkansas	2	0.8%
California	31	11.8%
Colorado	119	45.3%
Indiana	4	1.5%
Louisiana	8	3.0%
Montana	11	4.2%
New Mexico	17	6.5%
New York	9	3.4%
North Dakota	11	4.2%
Ohio	10	3.8%
Oklahoma	9	3.4%
Pennsylvania	11	4.2%
Texas	13	4.9%
West Virginia	8	3.0%
Total	263	

**Q1. Given the ongoing COVID-19 pandemic and recent geopolitical changes, to what extent are the following issues related to unconventional oil and gas development deserving of immediate attention by policy makers? Scale: 0 – 10 (0 - Deserves no attention at all; 5 - Deserves moderate attention; 10 - Deserves immediate attention)**

Table 2. Mean responses regarding issues deserving of immediate attention by policy makers (by sector, with standard deviations in parentheses).

	Overall	Government	Industry	Environmental Groups	Other
Employment rates in oil and gas industry	5.4 (3.1)	5.7 (3.3)	8.0 (2.1)	4.1 (2.8)	6.0 (2.8)
Level of state tax revenue from oil and gas production	6.3 (3.0)	6.7 (3.1)	7.2 (2.2)	5.6 (3.1)	6.5 (2.9)
Capacity of states to enforce current oil and gas policies	6.7 (2.9)	5.4 (3.2)	4.8 (2.3)	8.1 (2.3)	6.7 (2.8)
Transition from oil and gas to renewables	6.9 (3.5)	5.8 (3.5)	2.1 (1.9)	9.3 (1.3)	6.1 (3.5)
Government subsidies for the oil and gas industry	4.5 (3.6)	4.2 (3.2)	5.0 (3.2)	4.8 (4.0)	4.4 (3.5)
Public health effects from oil and gas production	7.0 (3.2)	5.9 (3.2)	2.9 (1.9)	9.1 (1.5)	6.5 (3.1)

**Q2. In general, to what extent do you agree or disagree that the following are potential benefits of oil and gas development that uses hydraulic fracturing (unconventional oil and gas development)?** *Scale = 0 – 4 (0 - strongly disagree; 1 - somewhat disagree; 2 - neither agree nor disagree; 3 - somewhat agree; 4 - strongly agree)*

Table 3. Mean responses regarding potential benefits of oil and gas development (by sector, with standard deviations in parentheses).

	Overall	Government	Industry	Environmental Groups	Others
Enhance national energy security	2.1 (1.6)	2.7 (1.5)	3.7 (0.7)	0.8 (1.2)	2.6 (1.5)
Create and maintain jobs in the oil and gas industry	2.2 (1.5)	2.8 (1.3)	3.6 (0.9)	1.3 (1.2)	2.6 (1.4)
Provide income to mineral and property owners	2.4 (1.4)	3.0 (1.2)	3.5 (1.0)	1.7 (1.3)	2.5 (1.4)
Provide economic benefits to local communities	2.3 (1.5)	2.9 (1.3)	3.5 (1.0)	1.2 (1.3)	2.7 (1.3)
Provide government revenue through severance, property, and/or sales tax	2.4 (1.4)	3.1 (1.2)	3.5 (1.1)	1.5 (1.3)	2.8 (1.3)
Facilitate a transition to renewable energy sources	1.3 (1.5)	1.8 (1.5)	1.9 (0.9)	0.6 (1.2)	1.5 (1.5)
Reduce energy costs	2.0 (1.5)	2.5 (1.3)	3.2 (1.1)	1.0 (1.2)	2.4 (1.4)
Reduce greenhouse gases	1.2 (1.4)	1.7 (1.4)	2.7 (1.1)	0.6 (1.2)	1.3 (1.4)

**Q3. Given the ongoing COVID-19 pandemic and recent geopolitical changes, do you see any new benefits associated with unconventional oil and gas development?** *Responses: 0 = No; 1 = Yes*

Table 4. Mean responses regarding new benefits associated with oil and gas development (by sector, with standard deviations in parentheses).

	Overall	Government	Industry	Environmental Groups	Other
Proportion of respondents seeing new benefits	.19 (.39)	.25 (.44)	.59 (.50)	.03 (.18)	.21 (.41)

**Q4. In general, to what extent do you agree or disagree that the following are potential problems related to unconventional oil and gas development?** *Scale = 0 – 4 (0 - strongly disagree; 1 - somewhat disagree; 2 - neither agree nor disagree; 3 - somewhat agree; 4 - strongly agree)*

Table 5. Mean responses regarding potential problems associated with oil and gas development (by sector, with standard deviations in parentheses).

	Overall	Government	Industry	Environmental Groups	Other
Insufficient capacity by government agencies for regulation	2.8 (1.4)	2.0 (1.6)	1.2 (1.3)	3.8 (0.5)	2.8 (1.3)
Boom-and-bust economic cycles from natural gas development	3.1 (1.1)	2.7 (1.3)	2.2 (1.2)	3.6 (0.7)	3.2 (0.9)
Contamination of ground and surface water	2.8 (1.5)	2.1 (1.7)	0.4 (0.7)	3.8 (0.4)	2.8 (1.3)
Degradation of air quality	2.9 (1.5)	2.2 (1.6)	0.5 (0.6)	3.9 (0.4)	2.9 (1.4)
Nuisance to the general public caused by truck traffic, noise, and light from well operations	3.0 (1.2)	2.6 (1.4)	1.4 (1.0)	3.7 (0.6)	3.0 (1.0)
Competition over available water supplies	3.0 (1.3)	2.5 (1.6)	1.2 (1.3)	3.8 (0.5)	2.9 (1.2)
Adverse public health impacts	2.8 (1.5)	2.2 (1.6)	0.6 (0.7)	3.9 (0.4)	2.6 (1.4)
Increase in seismic activity	2.6 (1.3)	2.1 (1.5)	0.9 (1.1)	3.4 (0.7)	2.4 (1.1)

**Q5. Given the ongoing COVID-19 pandemic and recent geopolitical changes, do you see any new problems associated with unconventional oil and gas development?** *Responses: 0 = No; 1 = Yes*

Table 6. Mean responses regarding new problems associated with oil and gas development (by sector, with standard deviations in parentheses).

	Overall	Government	Industry	Environmental Groups	Other
Proportion of respondents seeing new problems	.51 (.50)	.27 (.45)	.14 (.36)	.79 (.40)	.46 (.50)

**Q6. Considering the trends in development over the past few years, what comes closest to your current position in relation to unconventional oil and gas development in [your state]? Scale: 0 – 10 (0 – Stop all activity; 5 – Continue at current rate; 10 – Expand extensively)**

Table 7. Mean responses regarding current positions regarding stopping or expanding oil and gas development (by sector, with standard deviations in parentheses).

	Overall	Government	Industry	Environmental Groups	Others
Position regarding oil and gas development	3.5 (2.9)	4.8 (3.1)	6.6 (2.6)	1.4 (1.4)	4.3 (2.6)

**Q7. To what degree do the views and actions of those you disagree with on unconventional oil and gas development threaten each of the following? Scale: 0 – 10 (0 – Not at all; 5 – A moderate amount; 10 – A great deal)**

Table 8. Mean responses regarding perceptions of threats from opponents (by sector, with standard deviations in parentheses).

	Overall	Government	Industry	Environmental Groups	Other
Threaten my professional community	4.4 (3.6)	4.5 (4.0)	7.8 (2.5)	4.4 (3.3)	3.4 (3.3)
Threaten my local community	5.8 (3.4)	5.7 (3.6)	7.8 (2.5)	6.1 (3.2)	5.0 (3.5)
Threaten [your state]	7.2 (3.1)	6.6 (3.4)	8.3 (2.5)	8.4 (2.3)	5.9 (3.2)



**Q8. To what extent are you willing to compromise your position to find common ground or reach agreement with people you disagree with on the following issues related to unconventional oil and gas development? Scale: 0 – 10 (0 – Not at all; 5 – Somewhat willing; 10 – Very willing)**

Table 9. Mean responses regarding willingness to compromise with opponents (by sector, with standard deviations in parentheses).

	Overall	Government	Industry	Environmental Groups	Other
Whether unconventional oil and gas development should be allowed	3.7 (2.9)	4.5 (3.3)	1.6 (2.4)	3.2 (2.3)	4.3 (2.9)
Location of unconventional oil and gas development	3.8 (2.9)	4.3 (3.1)	4.2 (2.4)	2.6 (2.4)	4.8 (2.9)
How to regulate unconventional oil and gas operations to mitigate health or environmental risks	3.9 (3.1)	4.9 (3.2)	5.1 (3.0)	2.7 (2.8)	4.3 (2.8)
How to tax unconventional oil and gas development	4.8 (2.9)	5.0 (3.0)	4.1 (2.5)	4.6 (2.9)	4.9 (2.9)
Who has authority to regulate unconventional oil and gas	4.3 (3.0)	4.5 (3.4)	3.8 (3.2)	4.2 (2.8)	4.4 (2.7)

**Q9. Please list up to 5 organizations that you tend to collaborate with regarding unconventional oil and gas policy issues in [your state]. For each of them please tell us approximately how often you interact from less than annually to daily.**

Results from Q9 are not reported to protect confidentiality of survey respondents. Data will be analyzed later to understand the extent and size of respondent networks.

**Q10. In the past three years, how influential has your organization been in each of the following in [your state]? Scale: 0 – 10 (0 – Not at all; 5 – Moderately influential; 10 – Very influential)**

Table 10. Mean responses regarding organizational influence (by sector, with standard deviations in parentheses).

	Overall	Government	Industry	Environmental Groups	Other
Shaping policymakers' agendas on priority unconventional oil and gas issues	4.4 (3.0)	4.7 (3.7)	4.6 (3.1)	4.0 (2.7)	4.6 (2.8)
Enacting favored policy decisions on unconventional oil and gas issues	4.2 (3.1)	4.7 (3.6)	3.8 (2.7)	3.9 (2.8)	4.3 (3.0)
Shaping public opinions or values on unconventional oil and gas issues	5.0 (2.9)	4.4 (3.2)	5.0 (2.5)	5.3 (2.9)	5.1 (2.7)

**Q11. If [your state]’s courts or the judiciary are considering a decision on unconventional oil and gas issues, how likely is your organization to:**

*Scale: 0 – 3 (0 – Not likely; 1 – Somewhat likely; 2 – Likely; 3 – Very likely)*

Table 11. Mean responses regarding participation in state judiciary (by sector, with standard deviations in parentheses).

	Overall	Government	Industry	Environmental Groups	Other
Work within court processes, such as by acting as lead or co-lead counsel, filing a brief, or serving as a party	1.0 (1.1)	1.1 (1.2)	1.3 (1.2)	1.0 (1.1)	0.8 (1.1)
Work outside court processes, such as by demonstrating, protesting, or providing support to those directly involved	0.9 (1.1)	0.6 (1.0)	0.8 (1.2)	1.4 (1.1)	0.5 (0.9)

**Q12. If [your state]’s legislature is considering a decision on unconventional oil and gas issues, how likely is your organization to:**

*Scale: 0 – 3 (0 – Not likely; 1 – Somewhat likely; 2 – Likely; 3 – Very likely)*

Table 12. Mean responses regarding participation in state legislature (by sector, with standard deviations in parentheses).

	Overall	Government	Industry	Environmental Groups	Other
Work within the legislature, such as by lobbying, testifying, or drafting bills	1.7 (1.2)	1.6 (1.2)	2.3 (1.0)	1.6 (1.1)	1.6 (1.2)
Work outside the legislature, such as by mobilizing the public, protesting, or advocating through the media	1.3 (1.2)	0.7 (1.2)	1.3 (1.3)	1.8 (1.0)	1.0 (1.1)

**Q13. If rulemaking bodies in [your state] are considering a decision on unconventional oil and gas issues, how likely is your organization to:**

*Scale: 0 – 3 (0 – Not likely; 1 – Somewhat likely; 2 – Likely; 3 – Very likely)*

Table 13. Mean responses regarding participation in state agencies (by sector, with standard deviations in parentheses).

	Overall	Government	Industry	Environmental Groups	Other
Work within rulemaking bodies, such as by meeting with agency staff, participating in rulemaking processes, or drafting rules	1.7 (1.1)	1.7 (1.2)	2.1 (1.1)	1.7 (1.2)	1.5 (1.0)
Work outside rulemaking bodies, such as by mobilizing the public, protesting, or advocating through the media	1.2 (1.2)	0.7 (1.1)	1.1 (1.3)	1.8 (1.0)	0.8 (1.0)

**Q14. If [your state]’s Governor’s office is considering a decision on unconventional oil and gas issues, how likely is your organization to:**

*Scale: 0 – 3 (0 – Not likely; 1 – Somewhat likely; 2 – Likely; 3 – Very likely)*

Table 14. Mean responses regarding participation in Governors’ offices (by sector, with standard deviations in parentheses).

	Overall	Government	Industry	Environmental Groups	Other
Work within the Governor’s office, such as by meeting with the Governor or the Governor’s staff, or participating in task forces or committees	1.5 (1.1)	1.7 (1.2)	1.9 (1.3)	1.3 (1.1)	1.4 (1.1)
Work outside the Governor’s office, such as by mobilizing the public, protesting, or advocating through the media	1.1 (1.1)	0.6 (1.0)	1.2 (1.3)	1.8 (1.0)	0.8 (1.0)

**Q15. If a ballot initiative or referendum in [your state] on unconventional oil and gas development is being considered, how likely is your organization to:<sup>1</sup>**

*Scale: 0 – 3 (0 – Not likely; 1 – Somewhat likely; 2 – Likely; 3 – Very likely)*

Table 15. Mean responses regarding participation in ballot initiatives (by sector, with standard deviations in parentheses).

	Overall	Government	Industry	Environmental Groups	Other
Initiate a ballot measure, such as by drafting a ballot measure, organizing signature collection, and going through official processes	0.6 (1.0)	0.4 (0.9)	1.3 (1.3)	0.7 (1.0)	0.6 (0.9)
Support or oppose a ballot measure, such as by collecting signatures, demonstrating, or campaigning for or against a measure	1.1 (1.2)	0.7 (1.1)	1.8 (1.3)	1.5 (1.1)	0.9 (1.1)

<sup>1</sup> This question was only asked in the following states: Arkansas, California, Colorado, Montana, New Mexico, North Dakota, Ohio, and Oklahoma.

**Q16. Compared to other political issues in [your state] please rank the level of contention over the last three years about unconventional oil and gas development. Scale: 0 – 10 (0 – Far less contentious; 5 – Equally contentious; 10 – Far more contentious)**

Table 16. Mean responses regarding level of contention of oil and gas development (by sector, with standard deviations in parentheses).

	Overall	Government	Industry	Environmental Groups	Other
Level of Contention	6.6 (2.7)	7.1 (2.9)	7.4 (3.0)	6.7 (2.3)	6.0 (2.9)

**Q17. Over the last three years, how much conflict has existed in your state regarding each of the following issues related to unconventional oil and gas development? Scale: 0 – 10 (0 – No conflict; 5 – Moderate conflict; 10 – A lot of conflict)**

Table 17. Mean responses regarding level of conflict surrounding oil and gas issues (by sector, with standard deviations in parentheses).

	Overall	Government	Industry	Environmental Groups	Other
Whether unconventional oil and gas development should be allowed	6.6 (2.9)	7.1 (3.0)	7.7 (3.5)	6.6 (2.6)	5.9 (3.0)
Where unconventional oil and gas development should take place	7.4 (2.8)	7.6 (2.9)	7.6 (3.4)	7.7 (2.3)	7.0 (3.0)
How to regulate unconventional oil and gas operations to mitigate health or environmental risks	7.4 (2.5)	7.7 (2.4)	7.3 (3.3)	5.5 (2.6)	6.6 (2.5)
How to tax unconventional oil and gas development	5.2 (2.6)	5.2 (2.8)	4.7 (2.4)	6.2 (2.6)	4.9 (2.4)
Who has authority to regulate unconventional oil and gas	6.6 (2.9)	6.8 (3.1)	6.9 (4.0)	6.2 (2.6)	6.8 (2.6)
The benefits of unconventional oil and gas development	5.8 (2.9)	5.9 (3.2)	5.7 (3.5)	6.2 (2.7)	5.3 (2.6)
The risks of unconventional oil and gas development	7.7 (2.7)	7.7 (3.0)	7.2 (3.3)	8.3 (2.0)	7.1 (2.8)

**Q18. Considering unconventional oil and gas development policies adopted in [your state] over the past three years, please list 1 to 3 state-level policies (such as laws, regulations, ballot initiatives, court decisions) that have sparked the greatest level of social or political conflict (please be as specific as possible).**

A complete list of all topics is not included due to the number of different responses and variation by state. Responses will be analyzed in future publications. As examples, topics frequently mentioned in Colorado include the following:

- SB19-181, which among other things, granted local governments additional control over oil and gas development within their jurisdictions and changed the mission of the Colorado Oil and Gas Conservation Commission (COGCC) to emphasize the protection of public health and the environment
- Proposition 112 (2018), which would have required any new oil and gas development to be at least 2,500 feet from occupied buildings
- *COGCC v. Martinez*, 433 P.3d 22 (Colo. 2019), which adjudicated the COGCC’s duties in relation to economic development and protecting public health and the environment
- December 2019 revisions to Regulation 7 of the Colorado Air Quality Control Commission, which target the oil and gas industry

**Q19. Which of the following most closely describes the organization you work for?**

Table 18. Respondents by organizational affiliation.

Organization Type	Frequency	Percent
Federal government agency	0	-
State government agency	15	5.7%
State legislature	0	-
State governor's office	0	-
County government	29	11.0%
City government	19	7.2%
Tribal government	1	0.4%
State court	0	-
Oil and gas industry OR industry professional association	23	8.8%
Environmental or conservation organization	83	31.6%
Real estate developer	2	0.8%
Agriculture organization	0	-
Organized citizen group	11	4.2%
University or college	32	12.2%
Consulting firm or think tank	11	4.2%
News media	0	-
Other	37	12.2%
Total	263	

**Q20. Please list the states in which you are active in unconventional oil and gas policy:**

Many respondents reported activity in multiple states or jurisdictions. Results will be used for analysis in future publications.

**Q21. Approximately what percentage of your professional time do you spend every week on activities relating to unconventional oil and gas development?**

Table 19. Respondents by percent professional time spent on activities related to oil and gas development.

Percent Time	Frequency	Percent
0% to 10%	100	46.7%
11% to 20%	36	16.8%
21% to 30%	18	8.4%
31% to 40%	7	3.3%
41% to 50%	10	4.7%
51% to 60%	8	3.7%
61% to 70%	9	4.2%
71% to 80%	1	0.5%
81% to 90%	7	3.3%
91% to 100%	18	8.4%
Total	214	

**Q22. When it comes to politics how liberal or conservative are you?**

*Scale: 0 – 10 (0 – Extremely liberal; 5 – Moderate; 10 – Extremely conservative)*

Table 20. Mean responses regarding political leanings (by sector, with standard deviations in parentheses).

	Overall	Government	Industry	Environmental Groups	Others
Political leaning	4.0 (2.5)	5.1 (2.6)	5.8 (1.6)	2.7 (2.1)	4.4 (2.1)

**Q23. Please indicate the highest level of education you have attained:**

Table 21. Respondents by level of education.

<b>Education Level</b>	<b>Frequency</b>	<b>Percent</b>
High school graduate	1	0.5%
Some college	14	6.3%
Bachelor's degree	50	22.3%
Master's degree	85	38.0%
J.D.	39	17.4%
M.D.	1	0.5%
Ph.D.	34	15.2%
Total	224	