



Buechner Institute for Governance

Lessons on Learning from a Public Forum on Hydraulic Fracturing

A Buechner Breakfast Evaluation Report

Christopher M. Weible, Tanya Heikkila, & Brian J. Gerber
May 6, 2013



School of Public Affairs
UNIVERSITY OF COLORADO DENVER

www.spa.ucdenver.edu/BIG



Buechner Institute for Governance

**Lessons on Learning from
a Public Forum
on Hydraulic Fracturing**

**A Buechner Breakfast Evaluation
Report**

Introduction

Hydraulic fracturing is a technology used to crack subsurface shale and other porous formations to release oil and natural gas. The technology has spurred a precipitous growth of the oil and natural gas industry over the past several years in Colorado and across much of the United States – and much of this growth has occurred within highly populated regions. The result has been intense political debates about the location of wellheads in relation to private property and habitats, the use and disclosure of chemicals in fluids used to fracture shale formation, unknown health effects, concerns about water supply and quality, questions about which level of government should have regulatory authority, and additional issues of governance, especially the formulation of regulations and the monitoring and enforcement of rules. Public debates have been intense with protesters disrupting public meetings, and citizens expressing fear and distrust of the industry and regulatory officials.

With the aim of providing a venue for a civil discussion on the topic, the School of Public Affairs at the University of Colorado Denver and the Buechner Institute for Governance sponsored a public forum as part of their “Buechner Breakfast First Friday”(BBFF) events. This public forum was entitled “Energy Development, Hydraulic Fracturing, and the Environment: Issues of Politics and Policy.” The event included five distinguished panelists: Elise Jones, Boulder County Commissioner; Tisha Schuller, President and CEO of the Colorado Oil and Gas Association; Ginny Brannon, Assistant Director for Water and Energy at the State Department of Natural Resources; Melinda A. Quiat, CEO of Quiat Companies; and Geoff Wilson, general counsel for the Colorado Municipal League. The co-moderators were associate professors Tanya Heikkila and Chris Weible of the School of Public Affairs.

The event attracted 160 people representing governments, nonprofit and private organizations, academia and consulting firms, and other interests. Lasting for approximately 60 minutes, the first 30 minutes featured questions and answers between the moderators and the panelists. Questions posed to the panelists focused on the major issues or problems they see with respect to this topic and recommended solutions. During the last 30 minutes, the panelists answered questions from the audience.

A key question for policymakers, academics, and stakeholders is *whether and how people participating in public forums and other public engagement events are learning and changing their understandings or positions on the topic*. Therefore, midway through the event, a two-page evaluation instrument (see Appendix) was given to the audience members to assess what they learned from the public forum. The first three questions on the evaluation asked about the importance of the topic to the audience members, their familiarity with the topic, and their position on the topic. The next two questions asked audience members to indicate what part of the event helped them learn the most about the topic and then to indicate their level of learning. Respondents also recorded their organizational affiliation (government, nonprofit, private, academia/consulting, or other). Finally, they were given an opportunity to share their additional thoughts, considerations, and opinions in an open-ended question. Out of 160 attendees, 76 completed the evaluation instrument (response rate of 48%). This report summarizes those responses and serves as an evaluation of audience perceptions of the panel and whether the event might have had any effects on how this topic is understood.

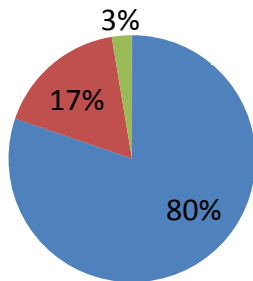
Importance and Familiarity of Hydraulic Fracturing in Colorado

Figures 1 and 2 summarize the audience members’ responses to two questions about the importance of oil and gas development and hydraulic fracturing to them, as well as their familiarity with the topic. A large majority of respondents viewed hydraulic fracturing as “extremely important” to them (61 respondents total), as shown in Figure 1. No audience member commented that the topic was “not important at all” and only two audience members considered the topic “somewhat important.” This high level of stated topic importance is not surprising given the voluntary attendance at the event.

However, as shown in Figure 2, 39% of respondents indicated that they were “very familiar” with the topic of oil and gas development and hydraulic fracturing in Colorado, but 58% of the audience said they were either “moderately” or “somewhat” familiar with the topic. The remaining 3% of respondents indicated that they were “not familiar at all” with the topic.

Figure 1. Importance of Issue

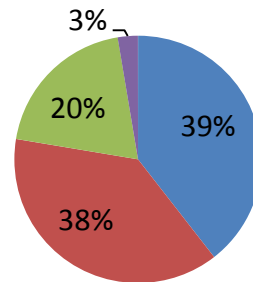
How important to you is today's topic of oil and gas development and hydraulic fracturing in Colorado?



- Extremely important
- Moderately important
- Somewhat important
- Not important at all

Figure 2. Familiarity with the Issue

How familiar are you with today's topic: oil and gas development and hydraulic fracturing in Colorado?



- Very familiar
- Moderately familiar
- Somewhat familiar
- Not familiar at all

Little variation was found in the responses on the importance of the topic across the five categories of audience member affiliation: government (n = 14), nonprofit (n = 9), private (n = 30), academia and consulting (n = 16), and other (n = 7). All affiliation categories had a mean score on the importance of the topic between 1 and 1.3, where a score of “1” indicated “extremely important” and a score of “4” indicated “not important at all.” The original measurement instrument is available in the Appendix.

In terms of familiarity with hydraulic fracturing, attendees from nonprofit organizations reported being only somewhat familiar with the topic (average = 2.7, with a value of “1” indicating “very familiar” and a value of “4” indicating “not familiar at all”), whereas attendees from government, the private sector, and the other category indicated very to moderate familiarity (average = 1.6 to 1.7).

Position on Hydraulic Fracturing in Colorado

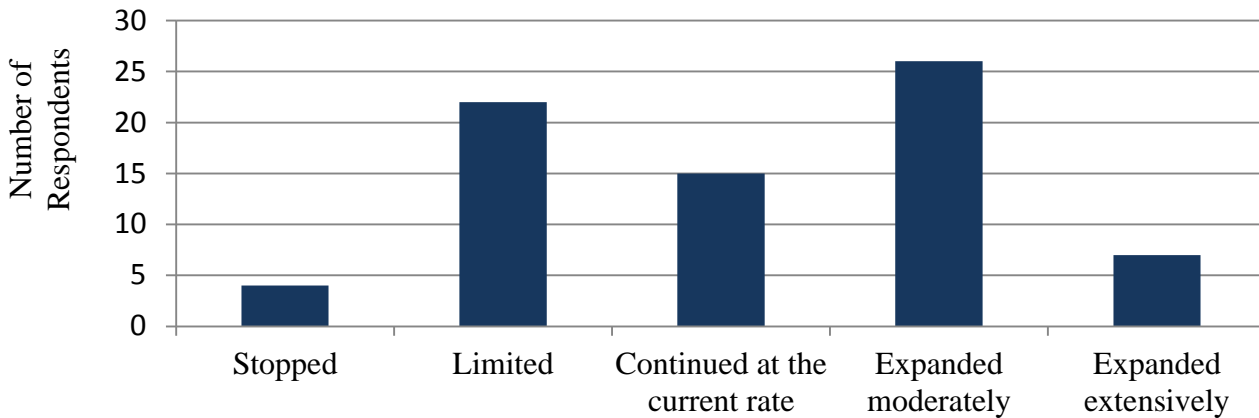
Figure 3 presents a distribution graph of the positions on hydraulic fracturing among the responding members of the audience. Respondents were asked: “What comes closest to your current position in relation to oil and gas development that uses hydraulic fracturing in Colorado? It should be (1) Stopped; (2) Limited; (3) Continued at the current rate; (4) Expanded Moderately, or (5) Expanded Extensively.” The vertical axis on Figure 3 indicates the number of audience members responding for a particular answer category. The horizontal axis lists the categories from left to right.

The distribution shows a respondent preference for relatively little change from current policy in Colorado. The majority of respondents preferred that hydraulic fracturing should be “Limited,” “Continued at the current rate,”

or “Expanded moderately” in the state. The fewest respondents expressed the extremes of “Stopped” or “Expanded extensively.”

Figure 3. Distribution of Position on Hydraulic Fracturing

What comes closest to your current position in relation to oil and gas development that uses hydraulic fracturing in Colorado? It should be ...



The mean scores for respondents’ positions on hydraulic fracturing by the five affiliation categories is shown in Table 2. The results indicate differences between affiliation categories. Respondents with government, private, and academia/consulting affiliations supported, on average, continued development at the current rate. Respondents affiliated with nonprofits supported development in some limited capacity, and the “other” category supported moderate expansion.

Table 2. Mean Scores for Position on the Topic by Audience Member Affiliation

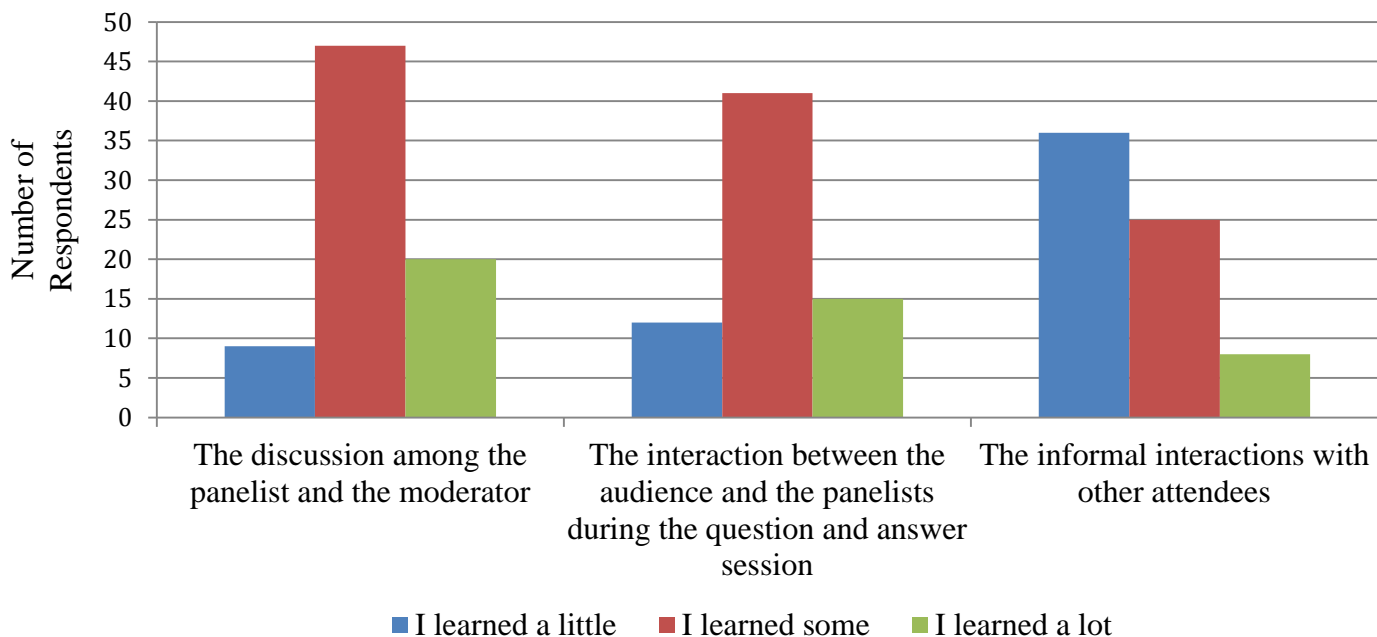
	What comes closest to your current position in relation to oil and gas development that uses hydraulic fracturing in Colorado? It should be ...
	1 = Stopped 2 = Limited 3 = Continued at the current rate 4 = Expanded Moderately 5 = Expanded Extensively
Government	3.1
Nonprofit	2.4
Private	3.3
Academia/Consulting	2.9
Other	4

Learning About Hydraulic Fracturing in Colorado in the Public Forum

Respondents were asked two sets of questions regarding their learning in the BBFF public forum. The first focused on the processes of learning. The prompt for the question was the following: “What parts of today’s Buechner Breakfast did you learn the most?” Respondents were asked to rate three process categories on a three-point scale: 1 = I learned a little; 2 = I learned some; and 3 = I learned a lot. The number of responses within each of these categories is shown in Figure 4.

The results indicate that most respondents learned from the discussion among the panelists and the moderators and through interactions between the audience and the panelists during the question and answer session. Most respondents indicated that they learned only a little from other attendees.

Figure 4. Sources of Learning on Hydraulic Fracturing in the Public Forum



There was very little difference between the affiliations regarding their processes of learning. The average score by affiliation category ranged from 2.0 (nonprofit) to 2.5 (other) for learning from the discussion among the panelists and the moderators; from 1.9 (government and nonprofit) to 2.4 (other) for learning from the interactions between the audience and the panelists during the question and answer session; and from 1.3 (government) to 1.6 (nonprofit and other) for learning from the interactions with other attendees.

The second set of questions about learning involves the extent that the event affected understandings and positions among attendees on hydraulic fracturing. Table 3 presents the mean scores per affiliation category for five descriptions of learning. All five questions were asked on five-point scales where 1 = Strongly Disagree and 5 = Strongly Agree.

On average, the highest level of agreement across the questions was with the respondents’ ability to ask better questions about the topic. Respondents also generally agreed that the experience left them more committed to their position on the topic; that they gained a better understanding of the topic though their position remained

the same; and that they could better understand different positions. They disagreed or strongly disagreed that the experience changed their position substantially.

Table 3. Mean Scores for Among of Learning from the Buechner Breakfast by Affiliation

After attending today's Buechner Breakfast about oil and gas development and hydraulic fracturing ...	Average
Scale: 1 = Strongly disagree, 2 = Disagree, 3 = Neither disagree nor agree, 4 = Agree, 5 = Strongly agree	
I am more committed to my prior position on the issue.	3.8
I gained a better understanding about the issue but my position remains the same.	3.9
I am more likely to ask better questions about the issue.	4.1
I can better understand the issue from positions different than my own.	3.9
My position on the issue changed substantially.	1.8

Additional Thoughts, Considerations, or Opinions from Respondents

The final question on the survey provided space for respondents to answer the following question: “If you have any additional thoughts, considerations, or opinions you would like to share with us about natural gas development that uses hydraulic fracturing, please provide them below.”

A majority of the responses were complimentary of the event. Samples include the following:

- “I thought this discussion was very well done. I would be interested in a larger or longer conversation with panelists about this issue.”
- “This was a thoughtful, generally respectful discussion. The moderator questions were fair and equitable to all parties.”
- “Great informative discussion. Thanks.”
- “The complexity of the issue was demonstrated by the panel, which was very helpful. Thoughtful panel. Really good!”
- “Nice to see a civil conversation.”
- “If there were more discussions like this on O & G development there would be far less rhetoric and vitriol.”

While the most of the written responses were positive and constructive, some were critical.

- “This was a lynching. The panel was overwhelmingly apologists and cheerleaders for the industry. Very disappointing.”
- “Panel missed on having a strong contrarian view of the issue.”
- “I think all of the panelists did a good job of explaining their positions but a lot of it is about PR! I would like to see research and more info from scientists doing nonbiased research (stats and numbers).”
- “Should have reviewed financial impact of industry, taxes, employment, etc.”

Conclusion

The evaluation of the BBFF panel on the politics and policies related to oil and gas development in Colorado attracted a diverse audience with varied professional backgrounds. The audience members who responded to

the evaluation questionnaire overwhelmingly agreed on the importance of the topic to Colorado. A plurality of the audience members responding to the questionnaire reported having substantial prior knowledge of the topic, and when asked about their position on the subject, very few of the respondents held the positions that oil and gas development should either be banned completely or expanded significantly. Instead, most respondents stated that their own current view of oil and gas development in Colorado, including the controversial question of hydraulic fracturing, should either be limited, remain the same, or expanded moderately.

Our evaluation of learning by audience members found that the panel was successful in informing audience members' understandings of the topic, but the panel did not necessarily serve to change the basic positions of respondents. This is not a surprising finding, as much of the public policy literature recognizes that fundamental beliefs are difficult to change. However, it can be argued that the enhanced understandings gained through public forums such as the BBFF can contribute to the broader policy dialogue on this topic and to developing positive and constructive discussions. This is evident by respondents reporting strong agreement with the statement that they are now suited to ask better questions about this policy topic because of the BBFF event. As such, we believe the breakfast was a success: An intention of the BBFF series is to foster greater public understanding of policy topics, and improving the ability of citizens to ask good questions is essential for developing greater awareness and understanding.

We recognize the limitations of the panel. For example, the panel did not represent all interests on the topic, and the time frame was too limited to allow for extensive engagement among the audience and panelists. Other types of forums are needed for diverging political interests to have informed and civil discussions for learning and finding common ground. We hope that the process and the lessons from our evaluation can inform future panels and discussions on this and other controversial policy topics in Colorado.

Acknowledgements

We wish to express our gratitude to the panelists who agreed to participate in the event. It was their honesty, composure, and deep expertise on the topic that made this Buechner Breakfast First Friday a success. We also want to thank the audience members for attending and for asking good questions. Jennifer Kagan, Jon Pierce, Mark Davis, David Carter, and Sam Gallaher were also instrumental in providing background information to the event and in administering the instrument and entering the collected data for analysis. Jennifer Kagan was particularly helpful in editing the final version of this report. Finally, we want to thank the Alfred P. Sloan Foundation for supporting research at the School of Public Affairs at the University of Colorado Denver. While the Foundation's funding did not directly support this public forum, its support for understanding the politics and policy on hydraulic fracturing in Colorado made this public forum possible.



Buechner Breakfast First Friday Survey
School of Public Affairs
University of Colorado Denver

Buechner Breakfast First Fridays serve to foster a better and broader community understanding of some of the most salient issues facing Colorado and the nation. We kindly ask that you complete this short survey to evaluate today’s Buechner Breakfast. The results will be used to help improve future Buechner Breakfasts and understand how they benefit the community. Your participation is completely voluntary and a summary of the results will be made available at the Buechner Institute for Governance website.

1. How important to you is today’s topic: oil and gas development and hydraulic fracturing in Colorado?

Extremely important	Moderately important	Somewhat important	Not important at all
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. How familiar are you with today’s topic: oil and gas development and hydraulic fracturing in Colorado?

Very familiar	Moderately familiar	Somewhat familiar	Not familiar at all
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. What comes closest to your current position in relation to oil and gas development that uses hydraulic fracturing in Colorado? It should be...

- Stopped
- Limited
- Continued at the current rate
- Expanded moderately
- Expanded extensively

4. What parts of today’s Buechner Breakfast did you learn the most?

	I learned <u>little</u>	I learned <u>some</u>	I learned <u>a lot</u>
a. The discussion among the panelists and the moderator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. The interaction between the audience and the panelists during the question and answer session	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. The informal interactions with other attendees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. After attending today's Buechner Breakfast about oil and gas development and hydraulic fracturing,...

	Strongly Disagree	Disagree	Neither Disagree or Agree	Agree	Strongly Agree
a. I am more committed to my prior position on the issue.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. I gained a better understanding about the issue but my position remains same.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. I am more likely to ask better questions about the issue.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. I can better understand the issue from positions different than my own.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. My position on the issue changed substantially.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Please indicate your primary organizational affiliation.

- Government
- Nonprofit
- Private
- Academia and consulting
- Other: _____

7. If you have any additional thoughts, considerations, or opinions you would like to share with us about natural gas development that uses hydraulic fracturing, please provide them below.

8. If you are willing to be contacted for a VERY SHORT follow-up survey, please provide your email address below. (This information will not be shared in any way.)

THANK YOU FOR TAKING THE TIME TO COMPLETE THIS SURVEY!

For more information on the Buechner Institute for Governance, please visit our website and learn more about:

- Current research projects
- Areas of expertise
- Leadership and professional development programs
- Our public policy forum series and other hosted events
- Solutions—Health policy journalism, ideas and analysis
- The Buechner Institute for Governance Advisory Board

www.spa.ucdenver.edu/BIG

303-315-2490

big@ucdenver.edu



**Buechner Institute
for Governance**

Lead.

Solve.

Change.



School of Public Affairs

UNIVERSITY OF COLORADO DENVER