Engagement With Content from Adamantine Energy: Surveying Energy and Non-Energy Students

Adán J. Rubio

Texas Tech University

Adamantine Energy

Executive Summary

Adamantine Energy is a remote energy policy consultancy for oil and gas companies attempting to increase audience engagement with its Twitter and LinkedIn posts, *Energy Thinks* podcast, and *Both of These Things Are True* email newsletters. The company targets an audience primarily consisting of current and prospective professionals in the oil and gas industry and other parts of the energy industry. Moreover, it wants to further understand people's views toward its content. Therefore, a study was conducted to determine how likely college students pursuing energy industry disciplines and non-energy industry disciplines were to engage with its content.

Because of the lack of research on college students' engagement with content about the energy industry and climate, this study's research questions investigated the likelihood of Texas Tech University students in energy degree programs and non-energy degree programs (i.e., media and communication degrees) engaging with company content. Student participants recruited via convenience sampling completed a survey that asked questions about their demographics, news consumption habits, and perceptions of company content. Results showed that the likelihood of engagement with most content did not significantly differ between energy and non-energy students. However, participants were more likely to engage with company social media posts after they were exposed to clips and excerpts of content.

Findings suggest that the company improves the first impressions of podcast content to further intrigue its audience. It also needs to provide access to content samples before users consume the full podcast episodes and newsletters. Additional research can be conducted to learn more about engagement, as this study could only focus on one podcast episode and one newsletter. This was a limitation along with the lack of petroleum engineering students surveyed and the sampling of non-Twitter users and non-LinkedIn users.

Engagement With Content from Adamantine Energy: Surveying Energy and Non-Energy Students

Energy companies, news outlets, and other groups utilize various media channels to distribute messages about the energy industry and climate-related issues to a specific audience. Adamantine Energy, a remote energy policy consultancy for oil and gas companies, produces a podcast, email newsletters, and Twitter and LinkedIn posts to deliver information about the energy transition and other industry topics. The content is meant to inform members of the company's audience, such as clients, oil and gas professionals, and others who might be interested in these topics. However, the ways audience members engage with the company's content can differ based on various factors.

Founded in 2015, Adamantine Energy, which helps clients adjust to the changing landscape of the oil and gas industry, continues to expand its clientele and remote staff (Adamantine Energy, n.d.-a, n.d.-b). According to Adamantine Energy (n.d.-b), the staff helps clients determine the source of industry problems and identify the strategies necessary to resolve these problems. The company also ensures clients develop the skills needed to overcome industry challenges on their own and work with stakeholders and other groups (Adamantine Energy, n.d.-b). In addition to the growth of its clientele and staff, the company wants to extend the reach of its informative content, such as social media posts, the *Energy Thinks* podcast, and *Both of These Things Are True* email newsletters. This study aims to identify how college students of different disciplines engage with this informative content. Findings could help members of the company understand how to adjust their content production to effectively reach different demographics.

When considering how college students engage with its informative content, the company may need to recognize a student's academic background. Some researchers have studied how

college students across different disciplines engage with digital content (e.g., Carpenter et al., 2016; Ha et al., 2018). Despite the lack of research on college students' engagement with energy industry and climate content, multiple studies regarding social media and communication demonstrate how people generally interact with this type of information (e.g., Andreev et al., 2010; Barrios-O'Neill & Schuitema, 2016; Fernandez et al., 2016; Mavrodieva et al., 2019).

To determine how college students of different disciplines engage with informative content from Adamantine Energy (i.e., social media posts, podcasts, newsletters), a survey was distributed to Texas Tech University students pursuing degrees related to the energy industry and students not pursuing degrees related to the energy industry (i.e., media and communication students). Past research has investigated how those with communication-related majors could have different social media habits than students with other majors (e.g., Lewis, 2010; Luo & Xie, 2019). Past research also provides foundational information regarding how people engage with podcasts, newsletters, and posts on social media accounts (e.g., García-Marín, 2020; Syrdal & Briggs, 2018; Verčič & Špoljarić, 2020). The survey, which gauges students' news consumption habits and their likelihood of engagement with Adamantine Energy content, could offer insight into the production changes the company needs to make to reach this demographic.

Literature Review

Engagement With Energy Industry and Climate Content

Various factors influence how one engages with digital content regarding the energy industry and climate. This study will explore the differences in how energy industry students and non-energy industry students engage with content about these topics.

Content Topic

On social media and other digital platforms, people encounter various topics regarding the energy industry, climate, and sustainability. There are multiple studies regarding the ways social media has influenced the presentation of these topics and the ways people have utilized information from these digital channels.

Researchers have studied the ways social media can influence information distribution in the energy industry. For example, social media can provide outlets for public discussions about issues, such as the energy transition and sustainability (Labonte & Rowlands, 2021). Regarding the implications of digital and social media research in the context of the energy industry, Barrios-O'Neill and Schuitema (2016) stated if policymakers have a better understanding of this type of media, they can "formulate more specific guidance on digital and social media for projects in development" (p. 1619). In addition, the use of social media can be an outlet for researchers wanting to learn more about corporate social responsibility issues (Smolak-Lozano & Paliwoda-Matiolańska, 2019).

In the context of the oil and gas industry specifically, researchers also determined how professionals have embraced digital and social media. To identify trends in collaboration between oil and gas professionals on social media, Microsoft and Accenture surveyed these professionals

and found they were attempting to figure out new collaboration methods via digital platforms (Andreev et al., 2010). Nearly 73 percent of the surveyed participants stated they understood the value social media has for their business (Andreev et al., 2010). According to Andreev et al. (2010), about 29 percent of participants have used social media to network, and about 25 percent have used social media to distribute information. However, social media was not always a popular option among these professionals, as Aleksandrenok (2021) stated some companies in the oil and gas industry deemed social media inefficient in marketing to their audience. Despite these viewpoints, social media can help these companies locally and globally connect with different audience members and share informative content about the industry (Aleksandrenok, 2021).

By analyzing multiple case studies, Derani and Naidu (2016) determined other ways companies utilized social media when faced with certain crises, such as oil spills. They concluded social media can develop relationships between companies and their shareholders and establish trust. Social media also can be used to provide information to people impacted by a company crisis (Derani & Naidu, 2016).

Along with digital platforms being used to distribute content about the energy industry, past studies have investigated the use of these platforms to spread climate-related news and information. Because some newspapers and other traditional news outlets are utilizing social media, Mavrodieva et al. (2019) deemed these outlets as capable of informing people about climate change. When investigating the impact of social media, which has been used for climate change awareness movements, such as COP21 and EH2015, one needs to learn more about its potential to influence user behavior (Fernandez et al., 2016). Once one determines users' needs and figures out how social media can influence user engagement, he or she can understand how to use the medium to expose people to climate change information (Fernandez et al., 2016). An improved

understanding of social media efforts also could benefit strategies aimed at "raising awareness about sustainability issues, reducing energy consumption, or increasing recycling rates" (Carpenter et al., 2016, p. 4875).

Previous research has shown how topics alone could have various effects on user engagement and behavior. However, a review of the literature regarding college students' engagement with digital content is necessary before investigating engagement with Adamantine Energy content.

College Students and Different Disciplines

To understand college students' views toward energy industry and climate topics in general, knowing their age may offer some insight. Most new college students in 2021 were considered Gen Z, or people born between the middle of the 1990s and early 2010s (McCrary, 2021). Regarding social media use and these topics, people who are a part of the Gen Z or millennial populations are exposed to more online content about climate change issues, thus they are having more conversations about action on climate change (Tyson et al., 2021). About 69 percent of Gen Z social media users experienced anxiety after their most recent exposure to climate change news (Tyson et al., 2021).

As for the differences between college students in energy and non-energy disciplines, there is a lack of literature regarding specific students' views toward digital content using these topics. However, the ways media and communication students, who will represent this study's non-energy student sample, perceive digital content have been investigated in past research. For example, Luo and Xie (2019) found more communication student participants, which comprised nearly 87.5 percent of active Twitter users, were proponents of Twitter being used as an educational tool than

education students, which comprised nearly 77 percent of active Twitter users. In addition, Ha et al. (2018) found nearly 55.7 percent of communication and business majors deemed social media as their preferred communication medium, and only 29.8 percent of students with other majors preferred social media.

According to Lewis (2010), students majoring in public relations and advertising, which are both communication-related disciplines, perceived social media more positively than students in other disciplines. Those who have taken courses on social media perceived this digital channel more positively than students who have not taken social media courses (Lewis, 2010). In addition, students in these courses perceived traditional media to be not as accurate as social media, which they believe monitors other mainstream media (Lewis, 2010).

This research focusing on Adamantine Energy content could identify differences in user engagement between energy and non-energy students. However, the type of content the company creates and distributes needs to be considered as well.

Engagement With Adamantine Energy Content

Adamantine Energy utilizes multiple digital channels to reach its audience. Its posts on Twitter and LinkedIn help spotlight other digital content, such as the *Energy Thinks* podcast and *Both of These Things Are True* email newsletters. When investigating views toward each type of content, reviewing the literature about common engagement habits for each provides a good foundation for this study.

Social Media User Engagement

Adamantine Energy's social media presence consists of company and staff accounts. On Twitter, the company is represented by the Energy Thinks Podcast account and Tisha Schuller's account. Schuller is the founder and CEO of Adamantine Energy, the host of *Energy Thinks*, and the author of *Both of These Things Are True* (Adamantine Energy, n.d.-c). On LinkedIn, most information about the company's podcast and newsletters is distributed via Schuller's account. However, the company has its own LinkedIn account as well.

As for engagement with social media content in general, researchers have deemed different factors as influential. For example, Syrdal and Briggs (2018) deemed content as the focal point of social media user engagement. In addition, they found consumers and marketers do not have similar definitions of engagement because consumers, who go through a thought process that involves emotion and involvement, can "interact with content with which they are not engaged and, in some cases, they have not even consumed" (p. 17). Other factors, such as the need to cultivate a self-image on a platform or the desire to help other people, also influence how one engages with content (Syrdal & Briggs, 2018).

Understanding engagement with informative content, which is the type of content Adamantine Energy creates and shares, also could provide insight into social media users' behaviors. Dolan et al. (2019) found a positive correlation between the use of informative content and the different types of social media engagement behavior, such as passive content consumption, liking posts, and sharing posts. However, findings did not reveal a positive relationship between informative content and social media engagement behavior in the form of comments (Dolan et al., 2019). Along with the need to interact with content on social media, people may use this digital channel to connect with others. Carpenter et al. (2016) stated social media is a channel that

provides opportunities to network with other people. In the context of sustainability discussions, different factors, such as people's desire to interact with others, could affect social media's effectiveness (Carpenter et al., 2016).

Regardless of people's motivations for engaging with social media posts, the platforms where interactions take place may need to be acknowledged when investigating user engagement. How people engage with certain content on social media depends on the platform where content consumption happens (Syrdal & Briggs, 2018). For example, Twitter has various options for user interaction, such as tweets, likes, comments, and shares (Labonte & Rowlands, 2021). The type of content posted on Twitter also could influence the type of engagement, as original content tends to result in people sharing their opinions, and shared content allows people to emphasize certain information (Labonte & Rowlands, 2021). Regarding the effort it takes to create content on Twitter, Muñoz-Expósito et al. (2017) stated there will be an improved interaction between an organization and its audience when that organization optimizes its digital content.

As for LinkedIn, there are different aspects of the platform to consider when investigating engagement. For example, LinkedIn is a platform good at lead generation and promoting companies and their brands (Aleksandrenok, 2021). Grasso (2016) found that the best content marketing strategy on LinkedIn, which people tend to use to network with other professionals, involves posting articles and visual media to pages. User engagement on LinkedIn increased when people simply posted content (Grasso, 2016). However, the type of content a company, such as Adamantine Energy, posts on its social media accounts could influence user engagement as well.

Energy Thinks Podcast

To understand engagement with the company's *Energy Thinks* podcast, a review of the literature regarding podcast content and motivations for interacting with this medium can provide some insight. Media consumption, especially in the context of podcasts, is a multidimensional concept that needs to be investigated in various contexts (Chan-Olmsted & Wang, 2020). Information-related motives have a positive relationship with listening to a podcast at home and a negative relationship with consuming a podcast outside of one's home (Chan-Olmsted & Wang, 2020). These motivators tend to influence more long-term commitment to podcast content, thus resulting in recurring engagement that happens in the form of podcast subscriptions (Chan-Olmsted & Wang, 2020). However, for *Energy Thinks*, which utilizes show notes to draw in listeners, other factors may play a role in engagement.

Jones et al. (2021) stated prospective podcast listeners decide if they will consume certain content, so using text summaries is one method of providing background information to a listener before they start an episode. Some content creators use promotional summaries for their podcasts to intrigue prospective listeners without having to spoil some of the episode's content, while others use traditional document summaries to highlight the main takeaways (Jones et al., 2021). People should consider multimodality for podcast text summaries (Jones et al., 2021). Also, podcasts that have a diverse vocabulary in their descriptions tend to have higher engagement (Reddy et al., 2021).

Regardless, content creators also may need to consider the introduction of a podcast episode. Within the first five minutes of a podcast episode, the listener drop-off rate is high (Charney, 2017). An episode with a good introduction is more likely to succeed than an episode that has great topics but does not entice listeners within the first few minutes (Charney, 2017).

Overall, engagement with a podcast considers the content's features, the listener's content consumption behaviors, and the podcaster's level of media literacy (García-Marín, 2020). Whether it be the communication in the podcast itself or the closeness between the content creator and their followers, multiple aspects determine the level of user engagement with a podcast (García-Marín, 2020).

Both of These Things Are True Newsletters

Followers of Adamantine Energy can access *Both of These Things Are True* digital newsletters in different ways: subscribing to weekly emails, visiting the company's website, or clicking the links shared via the company's social media accounts. Even though there are options for people to access these digital newsletters, engagement with this content depends on various factors. For example, Haile (2014) stated about one-third of people tend to devote less than 15 seconds to reading an article that they happen to click on. A person who reads an article for just three minutes is twice as likely to return to the content than someone who reads for only one minute (Haile, 2014).

Regarding digital newsletters, which have an impact on internal communication satisfaction, authors need to consider their target audience (Hansen & Goligoski, 2018; Verčič & Špoljarić, 2020). When creating email newsletters, which can be used to develop a supportive audience that engages with content, one needs to know the content's purpose, production requirements, and potential to fulfill the audience's needs (Hansen & Goligoski, 2018). When thinking about who engages with newsletter content, a person needs to realize that one email newsletter will not fulfill the needs of every audience member, as people have different needs (Hansen & Goligoski, 2018).

This literature regarding engagement with digital newsletters provides insight into the potential motivations that influence interactions with *Both of These Things Are True* content.

Research Questions

There is a lack of research regarding the differences between how energy and non-energy students interact with digital content. However, some research has investigated the content consumption behaviors of media and communication students, who will make up the sample of non-energy participants. Regardless, students from both groups will answer survey questions about their information and news consumption habits. They also will be exposed to company social media posts, podcast content, and newsletter content and be asked to judge their likelihood of engagement with this content. To determine differences in engagement likelihood between energy and non-energy students, the proposed research questions are as follows:

RQ1: How does the likelihood of engagement with Energy Thinks podcast social media posts and content differ between energy industry students and non-energy industry students?

RQ2: How does the likelihood of engagement with Both of These Things Are True social media posts and content differ between energy industry students and non-energy industry students?

Also, participants will judge their likelihood of engagement with social media posts before and after being exposed to podcast and newsletter content. Therefore, this research will address the following question:

RQ3: How does the likelihood of engagement with Adamantine Energy social media posts before viewing content differ from the likelihood of engagement after viewing content?

Methods

Participants

Via convenience sampling at Texas Tech University, students who pursued degrees related to the energy industry (e.g., energy commerce, energy law, wind energy) and students who did not pursue energy-related degrees (i.e., media and communication) were recruited to take an online survey. Etikan et al. (2016) stated convenience sampling, which typically is used for quantitative studies, emphasizes the need for a sample that is representative of the population. Convenience sampling's statistical power tends to increase with increasing sample sizes (Etikan et al., 2016). The sample for this study consisted of 32 energy students and 39 non-energy students. About 74.65 percent of all participants were 24 years old or younger, 22.54 percent were 25 to 40 years old, and 2.81 percent were 41 years old or older. Of all participants, 50.70 percent were female, and 49.30 percent were male. Nearly 64.79 percent of participants were undergraduate students, 21.13 percent were graduate students, and 14.08 percent were law students.

Out of the 32 energy students, 40.63 percent were energy commerce students, 31.25 percent were energy law students, 25 percent were wind energy students, and 3.12 percent pursued a Master of Science in Interdisciplinary Studies (MSIS) degree with a focus on energy. Out of the 39 non-energy students, 35.90 percent were undergraduate journalism students, 28.20 percent were undergraduate students pursuing other communication and media degrees, and 35.90 percent were graduate students pursuing communication-related degrees.

Energy students' active news and informative content consumption each day ranged from 1 to 14 hours ($M = 2.97$, $SD = 2.44$). Only 30 of the energy students actively used digital and social media to access news and information. Out of these energy students, active information consumption on social media each day ranged from 1 to 12 hours ($M = 3.25$, $SD = 2.13$). Regarding the 21 energy students who actively used Twitter and/or LinkedIn, about 33.33 percent used both platforms, 47.62 percent used Twitter but not LinkedIn, and 19.05 percent used LinkedIn but not Twitter.

On the other hand, non-energy students' active news and informative content consumption each day ranged from 1 to 10 hours ($M = 2.33$, $SD = 1.68$). All 39 non-energy students actively used digital and social media to access news and information. Out of these non-energy students, active information consumption on social media each day ranged from 1 to 10 hours ($M = 3.41$, $SD = 2.28$). Regarding the 26 non-energy students who actively used Twitter and/or LinkedIn, about 15.38 percent used both platforms, 65.38 percent used Twitter but not LinkedIn, and 19.23 percent used LinkedIn but not Twitter.

Energy students also indicated how actively they consumed content about the energy industry via a five-point scale with one being "Not Very Active" and five being "Very Active" ($M = 3.63$, $SD = 1.18$). The number of options on a scale does not matter if one's goal is to determine the mean scores of numerical responses (Dawes, 2002). Using a similar scale, these students also indicated their level of activeness in consuming climate-related content ($M = 2.13$, $SD = 1.26$). In addition, non-energy students indicated how actively they consumed content about the energy industry ($M = 1.56$, $SD = .79$) and the climate ($M = 1.87$, $SD = 1.17$). Across both groups, only nine participants indicated that they heard of Adamantine Energy or engaged with some of the company's content before taking the survey.

Procedures

Data collection took place from February 8, 2022, to the end of the day on March 15, 2022, at Texas Tech University. IRB exemption was granted months before data collection (see Appendix A). However, a modification to the initial IRB exemption was needed (see Appendix B). Once this modification was approved, convenience sampling was utilized, and the link to the Google Forms survey was distributed via multiple channels. Faculty and staff members from different departments on campus were asked to encourage participation by distributing the survey via mass email and social media. Due to receiving spam responses, the survey link was closed, and a new survey link was opened and distributed via the same channels other than social media. Some faculty allowed for QR codes with the new survey link to be shared with their classes. Completion of the survey was voluntary, and students could leave the survey at any time. As an incentive for completing the survey, participants who provided a Texas Tech University email and relevant responses to questions were entered in a drawing for a chance to win a $25 gift card for Amazon. Soon before data collection ended on March 15, 2022, faculty and staff members who helped with the initial survey distribution were asked to notify students about the upcoming deadline. After the collection of data, which was stored on a Google Sheets page, a participant was selected via a random number generator and contacted about their selection for the gift card. They received an e-gift card via email.

Measures

The online survey collected information regarding participants' demographics, student status, news consumption habits, and their likelihood of engagement with Adamantine Energy content. Multiple-choice questions, five-point scales, and open-ended questions were used in the survey. After answering questions about their demographics and news consumption habits, participants were exposed to different pieces of content from the company.

Participants were first shown screenshots of a post from the Energy Thinks Podcast Twitter account and a post from Schuller's LinkedIn account regarding the first episode of the podcast's third season (see Appendices C and D). Screenshots of social media posts in this survey were modified to omit the date information and engagement statistics seen on the original posts. The episode mentioned in these posts features David Victor, professor of innovation and public policy at the University of California, San Diego. Participants were then asked to gauge their likelihood of clicking on the link to the episode and their likelihood of engaging with the social media posts on a five-point scale with one being "Not Very Likely" and five being "Very Likely." Again, if a person is simply needing to generate the mean scores of numerical responses, the number of potential responses for the scale does not matter too much (Dawes, 2002). In addition to providing these numerical ratings, participants also were required to clarify their choices by giving written responses.

After viewing these social media posts, participants read a screenshot of show notes for the podcast episode and again were asked to gauge their likelihood of listening to the episode on the same five-point scale (see Appendix E). Following this question, they listened to a YouTube video clip of the episode's first three minutes and gauged their likelihood of listening to the rest of the episode on the five-point scale (see Appendix F). For the show notes and clip questions,

participants were required to clarify their choices with written responses. After responding to the show notes and clip questions, participants were exposed to the previous Twitter and LinkedIn posts and again were asked to gauge their likelihood of engagement with the posts on the five-point scale.

Once a participant completed the survey sections about the company's podcast, they were asked questions regarding *Both of These Things Are True* content that used the same five-point scales. Open-ended clarification questions also were asked. Participants gauged their likelihood of clicking on a link to "Both True — Stop Trying to Educate Them" seen in screenshots of an Energy Thinks Podcast tweet and a Schuller LinkedIn post (see Appendices G and H). They also gauged their likelihood of engagement with these social media posts. Participants then read a screenshot showing an excerpt of the newsletter and were asked to determine their likelihood of reading the rest of the newsletter (see Appendix I). After answering questions about the excerpt, participants again viewed the newsletter social media posts and gauged their likelihood of engagement with these posts. Once respondents completed this section of the survey, their Google Form responses were automatically recorded on a Google Sheets page.

Collected data from the Google Sheets document was transferred to the 28th version of SPSS for data analysis. To determine differences between energy and non-energy students' likelihood of engagement with podcast and newsletter content, independent sample *t* tests were conducted. When $\alpha = .05$, a sample size between 26 and 64 participants per group (i.e., energy and non-energy students) for an independent sample *t* test will result in a medium to large effect size (Cohen, 1992). Paired sample *t* tests were used to determine the differences between students' likelihood of engagement with social media posts before and after being exposed to podcast and

newsletter content. When $\alpha = .05$, a sample size between 30 to 85 participants for a paired sample *t* test will result in a medium to large effect size (Cohen, 1992).

Analysis

The proposed research questions are meant to help employees at Adamantine Energy better understand how their content is perceived by energy students, who are prospective industry professionals, and non-energy students. These questions prompt an investigation of participants' likelihood of engagement with company social media posts and content.

The first research question covers energy and non-energy students' likelihood of engagement with podcast-related social media posts and content. After viewing, for the first time, the Energy Thinks Podcast tweet about the Victor episode, the likelihood of energy students clicking the link and listening to the podcast ($M = 2.56$, $SD = 1.13$) did not significantly differ from the likelihood of non-energy students doing the same ($M = 2.18$, $SD = 1.00$), $t(69) = 1.51$, $p > .05$. Moreover, the likelihood of energy students engaging with the Energy Thinks Podcast tweet before reading the show notes and listening to the episode clip ($M = 1.66$, $SD = 1.00$) did not significantly differ from the likelihood of non-energy students engaging with the tweet ($M = 1.54$, $SD = .88$), $t(69) = .53$, $p > .05$. Similar insignificant differences were found when analyzing engagement with podcast content distributed via LinkedIn. After viewing Schuller's LinkedIn post about the Victor episode for the first time, the likelihood of energy students clicking the link and listening to the episode ($M = 2.56$, $SD = 1.11$) did not significantly differ from the likelihood of non-energy students doing the same ($M = 2.05$, $SD = 1.19$), $t(69) = 1.86$, $p > .05$. In addition, the likelihood of energy students engaging with Schuller's LinkedIn post before reading the show notes and listening to the episode clip ($M = 2.19$, $SD = 1.18$) did not significantly differ from the likelihood

of non-energy students engaging with the LinkedIn post (M = 1.85, SD = 1.16), $t(69) = 1.23$, $p > .05$.

After reading the show notes for the Victor episode, the likelihood of energy students listening to the podcast (M = 2.63, SD = 1.16) did not significantly differ from the likelihood of non-energy students listening to it (M = 2.26, SD = 1.29), $t(69) = 1.25$, $p > .05$. However, after listening to the first three minutes of the Victor episode, energy students were significantly more likely to continue listening to the rest of it (M = 3.09, SD = 1.15) than non-energy students (M = 2.49, SD = 1.25), $t(69) = 2.11$, $p < .05$.

After viewing and listening to these pieces of content, participants were shown the previous Twitter and LinkedIn posts about the Victor episode. The likelihood of energy students engaging with the Energy Thinks Podcast tweet after reading the show notes and listening to the episode clip (M = 2.59, SD = 1.29) did not significantly differ from the likelihood of non-energy students engaging with the tweet (M = 2.28, SD = 1.36), $t(69) = .98$, $p > .05$. In addition, the likelihood of energy students engaging with Schuller's LinkedIn post after reading the show notes and listening to the episode clip (M = 2.75, SD = 1.30) did not significantly differ from the likelihood of non-energy students engaging with the LinkedIn post (M = 2.31, SD = 1.32), $t(69) = 1.42$, $p > .05$.

The second research question covers energy and non-energy students' likelihood of engagement with newsletter-related social media posts and content. After viewing the Energy Thinks Podcast tweet regarding "Both True — Stop Trying to Educate Them" for the first time, the likelihood of energy students clicking the link and reading the newsletter (M = 2.66, SD = 1.36) did not significantly differ from the likelihood of non-energy students doing the same (M = 2.44, SD = 1.41), $t(69) = .67$, $p > .05$. Also, the likelihood of energy students engaging with the Energy Thinks Podcast tweet before reading the excerpt of this *Both True* newsletter (M = 1.81, SD = .93)

did not significantly differ from the likelihood of non-energy students engaging with the tweet (M = 2.21, SD = 1.38), $t(66.70) = 1.43$, $p > .05$. Similar insignificant differences were found when analyzing engagement with newsletter content distributed via LinkedIn. After viewing Schuller's LinkedIn post regarding this newsletter for the first time, the likelihood of energy students clicking the link to the newsletter and reading it (M = 2.69, SD = 1.40) did not significantly differ from the likelihood of non-energy students doing the same (M = 2.49, SD = 1.41), $t(69) = .60$, $p > .05$. Also, the likelihood of energy students engaging with Schuller's LinkedIn post before reading the *Both True* excerpt (M = 2.19, SD = 1.15) did not significantly differ from the likelihood of non-energy students engaging with the LinkedIn post (M = 2.18, SD = 1.37), $t(69) = .03$, $p > .05$.

The participants were given the newsletter excerpt to read after viewing these social media posts. The likelihood of energy students reading the rest of the newsletter after reading a brief excerpt (M = 3.22, SD = 1.10) did not significantly differ from the likelihood of non-energy students reading the rest of the newsletter (M = 2.69, SD = 1.30), $t(69) = 1.82$, $p > .05$.

After reading the newsletter excerpt, the likelihood of energy students engaging with the previous Energy Thinks Podcast tweet (M = 2.53, SD = 1.27) did not significantly differ from the likelihood of non-energy students engaging with the tweet (M = 2.36, SD = 1.27), $t(69) = .57$, $p > .05$. Moreover, the likelihood of energy students engaging with Schuller's LinkedIn post after reading the *Both True* excerpt (M = 2.69, SD = 1.47) did not significantly differ from the likelihood of non-energy students engaging with the LinkedIn post (M = 2.36, SD = 1.40), $t(69) = .96$, $p > .05$.

For the last research question, paired sample t tests were used to determine the differences in the likelihood of engagement with company social media posts before and after viewing podcast and newsletter content. These analyses consider energy and non-energy students' likelihood of

engagement together. Participants were more likely to engage with the Energy Thinks Podcast tweet about the Victor episode after reading the show notes and listening to the episode clip (M = 2.42, SD = 1.33) than they were before consuming this content (M = 1.59, SD = .93), $t(70) = 5.86$, $p < .05$. They also were more likely to engage with Schuller's LinkedIn post about the Victor episode after reading the show notes and listening to the episode clip (M = 2.51, SD = 1.32) than they were before consuming this content (M = 2.00, SD = 1.17), $t(70) = 3.95$, $p < .05$. Similar results were found when analyzing engagement with the *Both True* social media posts and the excerpt. Energy and non-energy students were more likely to engage with the Energy Thinks Podcast tweet about the newsletter after reading the excerpt (M = 2.44, SD = 1.26) than they were before reading the excerpt (M = 2.03, SD = 1.21), $t(70) = 3.37$, $p < .05$. They also were more likely to engage with Schuller's LinkedIn post about the newsletter after reading the excerpt (M = 2.51, SD = 1.43) than they were before reading the excerpt (M = 2.18, SD = 1.27), $t(70) = 3.18$, $p < .05$.

Interpretation

The findings indicate no significant differences between energy and non-energy students' likelihood of engagement with the Twitter and LinkedIn posts about the Victor podcast episode. Findings also show no significant differences between the students' likelihood of clicking on the episode link from these posts. Various factors could influence overall engagement with Adamantine Energy's social media posts and linked content. For example, Syrdal and Briggs (2018) stated that personal connections between social media users and content tend to make content more engaging. Also, the content a company or organization produces does not get as many responses from people as does user-generated content (UGC) (Syrdal & Briggs, 2018). If Adamantine Energy is focusing on an audience with experience in the energy industry,

understanding how to promote UGC and establish personal connections with social media users could be beneficial.

The results also show no significant differences between energy and non-energy students' likelihood of listening to the Victor episode after reading the show notes. Depending on the length of a podcast episode, prospective listeners need to make an informed decision before listening to it (Jones et al., 2021). Therefore, podcast summaries, such as show notes, could help a prospective listener make this decision (Jones et al., 2021). However, there is a lack of research about how participants of different disciplines engage with content based on show notes or summaries. For podcast research, especially research focusing on summaries, future work is needed to investigate various genres and cases (Jones et al., 2021).

As for content consumption after listening to a three-minute clip of the Victor episode, the findings indicate that energy students are more likely to continue listening to the episode after the first three minutes than non-energy students. Charney (2017) stated that the first five minutes of a podcast have the highest listener drop-off rate, so Adamantine Energy should attempt to quickly intrigue its *Energy Thinks* listeners. Regarding why energy students are more likely to continue listening to the episode than non-energy students, various factors could be in play. For example, topic-based biases influence user engagement, and specialized topics tend to spark less user engagement (García-Marín, 2020). Therefore, the significant difference between energy and non-energy students in this context may exist because of the specialized topics in the podcast, which could be more intriguing for energy students. In addition, García-Marín (2020) stated that a prospective listener's knowledge of a podcast topic could influence their engagement with the content, so energy students with more knowledge of the industry may be more likely to continue listening to the Victor episode.

Regarding newsletter content, the results show no significant differences between energy and non-energy students' likelihood of engagement with the Twitter and LinkedIn posts about "Both True — Stop Trying to Educate Them." Findings also indicate no significant differences in the likelihood of clicking on the newsletter link from these posts. Similar to the engagement with podcast content, there is a lack of research about how students of different disciplines engage with digital newsletters and related social media posts. Haile (2014) stated that people tend to click on and engage with informative online articles and webpages that cover the news. For Adamantine Energy, this can be noteworthy, as *Both True* newsletters tend to cover timely topics in the industry. Also, when working on social media outreach to spark user engagement with content, organizations need to consider the platforms where their core audience is active and learn how other groups reach these users (Hansen & Goligoski, 2018). Since the likelihood of engagement does not significantly differ between both groups of students, the company may need to prioritize the demographics of people that make up its target audience.

This study also shows no significant differences between energy and non-energy students' likelihood of finishing the newsletter after reading an excerpt. There is no past research investigating this type of insignificant difference. However, it may be necessary to note that one in three visitors read online articles that they land on for about 15 seconds before stopping (Haile, 2014). Based on this information, Adamantine Energy should at least consider the information and content included in the first few paragraphs of its newsletters.

Despite the insignificant differences between the two groups of students, the results show significant differences in social media user engagement before and after all participants consume podcast and newsletter content. More specifically, the findings indicate that participants are more likely to engage with Adamantine Energy's social media posts about podcasts and newsletters after

they are exposed to summaries, clips, and excerpts. Because of the lack of research about college students' engagement with energy industry and climate content, it can be difficult to determine the reasoning for this difference. However, Syrdal and Briggs (2018) conducted a study in which participants indicated their engagement with social media posts after reading and watching the linked content. They found that participants consider variables other than content consumption when engaging with social media posts. In addition to people's views toward the *Energy Thinks* and *Both True* content, more work is needed for Adamantine Energy to determine other factors, such as information sources, that potentially influence people's engagement with social media posts.

Limitations

This approach to understanding engagement with Adamantine Energy content has some limitations that need to be considered for potential future studies. For example, when recruiting energy students, attempts were made to reach those pursuing an MSIS degree with a focus on energy and degrees in energy commerce, petroleum engineering, energy law, and wind energy. Petroleum engineering is the one discipline not represented in this study, as there were difficulties with getting permission to distribute the survey via petroleum engineering faculty and other people. However, certain degrees at the university, such as energy law degrees, energy commerce degrees, and MSIS energy degrees, cover oil and gas topics.

In addition, some participants from both groups of students did not actively use Twitter or LinkedIn. This can be problematic, as this lack of exposure to these platforms could influence these participants' views toward the company's Twitter and LinkedIn content. Despite the hypothetical survey questions about engagement likelihood, future studies using this approach may

benefit from recruiting only Twitter and LinkedIn users, which was not feasible for this study's sampling.

Another limitation is the fact that the survey only could display content for one podcast episode and one newsletter. It was not feasible to showcase multiple podcast episodes and newsletters to participants in survey format, as doing so could have resulted in a higher number of participants not completing the form. However, the opportunity to ask participants questions about other episodes and newsletters can be beneficial to determine if the likelihood of engagement varies across different pieces of content.

Regardless of these limitations, this explorative study gives Adamantine Energy staff an idea of how those with different academic backgrounds view their content. Based on the findings, additional studies could be conducted to fill gaps in knowledge.

References

Adamantine Energy. (n.d.-a). *About* [LinkedIn page]. LinkedIn. Retrieved April 9, 2022, from https://www.linkedin.com/company/adamantine-energy/about/

Adamantine Energy. (n.d.-b). *About us*. Retrieved April 9, 2022, from https://energythinks.com/about/

Adamantine Energy. (n.d.-c). *Tisha Schuller*. Retrieved April 9, 2022, from https://energythinks.com/Team%20Members/tishaschuller/

Adamantine Energy. (2021, September 7). *Worthy adversary or grandmaster? A conversation with David Victor*. https://energythinks.com/podcasts/worthy-adversary-or-grandmaster-david-victor/

Aleksandrenok, T. (2021). *Digital marketing strategies in the energy sector. Case companies: Royal Dutch Shell PLC and Neste Oyj* [Master's thesis, Vassa University of Applied Sciences]. Theseus. https://www.theseus.fi/bitstream/handle/10024/507189/Final%20version%2c%20Tatiana%20Aleksandrenok.pdf?sequence=2&isAllowed=y

Andreev, A., Svendsen, P. O. E., Etkind, J., & Chalbaud, C. (2010, September 14). Social networking and online collaboration in the oil and gas industry. *The Way Ahead*. https://jpt.spe.org/twa/social-networking-and-online-collaboration-oil-and-gas-industry

Barrios-O'Neill, D., & Schuitema, G. (2016). Online engagement for sustainable energy projects: A systematic review and framework for integration. *Renewable and Sustainable Energy Reviews, 54*, 1611-1621. https://doi.org/10.1016/j.rser.2015.10.084

Carpenter, S., Takahashi, B., Cunningham, C., & Lertpratchya, A. P. (2016). The roles of social media in promoting sustainability in higher education. *International Journal of Communication, 10*, 4863-4881. https://ijoc.org/index.php/ijoc/article/view/4694

Chan-Olmsted, S., & Wang, R. (2020). Understanding podcast users: Consumption motives and behaviors. *New Media & Society,* 1-21. https://doi.org/10.1177/1461444820963776

Charney, T. (2017, March 27). *How to hook your podcast audience*. NPR Training. https://training.npr.org/2017/03/27/how-to-hook-your-podcast-audience/

Cohen, J. (1992). A power primer. *Psychological Bulletin, 112*(1), 155-159. https://doi.org/10.1037/0033-2909.112.1.155

Dawes, J. (2002). Five point vs. eleven point scales: Does it make a difference to data characteristics? *Australasian Journal of Market Research, 10*(1), 1-17. https://www.researchgate.net/profile/John-Dawes/publication/285731517_Five_point_vs_eleven_point_scales_Does_it_make_a_difference_to_data_characteristics/links/56739e2108ae04d9b09a86a2/Five-point-vs-eleven-point-scales-Does-it-make-a-difference-to-data-characteristics.pdf

Derani, N. E. S., & Naidu, P. (2016). The impact of utilizing social media as a communication platform during a crisis within the oil industry. *Procedia Economics and Finance, 35*, 650-658. https://doi.org/10.1016/S2212-5671(16)00080-0

Dolan, R., Conduit, J., Frethey-Bentham, C., Fahy, J., & Goodman, S. (2019). Social media engagement behavior: A framework for engaging customers through social media content. *European Journal of Marketing, 53*(10), 2213-2243. https://doi.org/10.1108/EJM-03-2017-0182

Energy Thinks Podcast [@EnergyThinks]. (2021a, September 7). *Big changes are in store for #oilandgas companies carrying out their #esg strategies. David Victor of @GPS_UCSD delves deep into* [Image attached] [Link attached] [Tweet]. Twitter. https://twitter.com/EnergyThinks/status/1435246180619980800

Energy Thinks Podcast [@EnergyThinks]. (2021b, November 1). *The #1 pushback I get from #oilandgas leaders to Adamantine's prescriptions goes something like: "But they don't understand where their* [Thumbnail with link attached] [Tweet]. Twitter. https://twitter.com/EnergyThinks/status/1455165580571406337

Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics, 5*(1), 1-4. https://doi.org/10.11648/j.ajtas.20160501.11

Fernandez, M., Piccolo, L. S. G., Maynard, D., Wippoo, M., Meili, C., & Alani, H. (2016). Talking climate change via social media: Communication, engagement and behaviour. In W. Nejdl (Ed.), *Proceedings of the 8th ACM Conference on Web Science* (pp. 85-94). Association for Computing Machinery. https://doi.org/10.1145/2908131.2908167

García-Marín, D. (2020). Mapping the factors that determine engagement in podcasting: Design from the users and podcasters' experience. *Communication & Society, 33*(2), 49-63. https://doi.org/10.15581/003.33.2.49-63

Grasso, E. (2016). *Increasing user engagement on social media* [Master's thesis, University at Albany, State University of New York]. Honors College at Scholars Archive. https://scholarsarchive.library.albany.edu/cgi/viewcontent.cgi?article=1051&context=honorscollege_business

Ha, L., Joa, C. Y., Gabay, I., & Kim, K. (2018). Does college students' social media use affect school e-mail avoidance and campus involvement? *Internet Research, 28*(1), 213-231. https://doi.org/10.1108/IntR-11-2016-0346

Haile, T. (2014, March 9). What you think you know about the web is wrong. *Time*. https://time.com/12933/what-you-think-you-know-about-the-web-is-wrong/

Hansen, E., & Goligoski, E. (2018, February 6). *Guide to audience revenue and engagement*. Columbia University Libraries. https://academiccommons.columbia.edu/doi/10.7916/D8BG410W

Jones, R., Zamani, H., Schedl, M., Chen, C.-W., Reddy, S., Clifton, A., Karlgren, J., Hashemi, H., Pappu, A., Nazari, Z., Yang, L., Semerci, O., Bouchard, H., & Carterette, B. (2021). *Current challenges and future directions in podcast information access*. arXiv. https://arxiv.org/abs/2106.09227

Labonte, D., & Rowlands, I. H. (2021). Tweets and transitions: Exploring Twitter-based political discourse regarding energy and electricity in Ontario, Canada. *Energy Research & Social Science, 72*, 1-13. https://doi.org/10.1016/j.erss.2020.101870

Lewis, B. K. (2010). Social media and strategic communication: Attitudes and perceptions among college students. *Public Relations Journal, 4*(3). https://prjournal.instituteforpr.org/wp-content/uploads/2010Lewis.pdf

Luo, T., & Xie, Q. (2019). Using Twitter as a pedagogical tool in two classrooms: A comparative case study between an education and a communication class. *Journal of Computing in Higher Education, 31*(1), 81-104. https://doi.org/10.1007/s12528-018-9192-2

Mavrodieva, A. V., Rachman, O. K., Harahap, V. B., & Shaw, R. (2019). Role of social media as a soft power tool in raising public awareness and engagement in addressing climate change. *Climate, 7*(10). https://doi.org/10.3390/cli7100122

McCrary, J. (2021, August 19). *10 trends in the era of Generation Z college students*. LeadSquared. https://www.leadsquared.com/generation-z-college-students/

Muñoz-Expósito, M., Oviedo-García, M. A., & Castellanos-Verdugo, M. (2017). How to measure engagement in Twitter: Advancing a metric. *Internet Research, 27*(5), 1122-1148. https://doi.org/10.1108/IntR-06-2016-0170

Reddy, S., Lazarova, M., Yu, Y., & Jones, R. (2021). *Modeling language usage and listener engagement in podcasts*. arXiv. https://arxiv.org/abs/2106.06605

Schuller, T. (2021a, September 7). *In this kickoff episode for Season 3 of the Energy Thinks podcast, I speak with force of nature David Victor,* [Image attached] [Link attached]. LinkedIn. https://www.linkedin.com/posts/tisha-schuller-315a543_climate-energyfuture-energythinkspod-activity-6841009901351829505-uMrf?utm_source=linkedin_share&utm_medium=member_desktop_web

Schuller, T. (Host). (2021b, September 7). Worthy adversary or grandmaster? A conversation with David Victor [Audio podcast episode]. In *Energy thinks*. Adamantine Energy. https://energythinks.com/podcasts/worthy-adversary-or-grandmaster-david-victor/

Schuller, T. (2021c, October 27). *Both true — Stop trying to educate them*. Adamantine Energy. https://energythinks.com/both-true-stop-trying-to-educate-them/

Schuller, T. (2021d, November 1). *The #1 pushback I get from #oilandgas leaders to @Adamantine's prescriptions goes something like: "But they don't understand where their* [Thumbnail with link attached]. LinkedIn. https://www.linkedin.com/posts/tisha-schuller-315a543_both-true-stop-trying-to-educate-them-activity-6860920561799901184-p9iY?utm_source=linkedin_share&utm_medium=member_desktop_web

Smolak-Lozano, E., & Paliwoda-Matiolańska, A. (2019). Symbolic or real? Sustainability and CSR in social media communication in the energy sector. A triangulated approach analysing hashtags and keywords. In I. Ruiz-Mora, G. Gonçalves, & I. Somerville, *Organizational and strategic communication research: Global trends* (pp. 17-46). Labcom Communication & Arts. http://labcom.ubi.pt/ficheiros/201907011147-2019_01_corporatesocialresponsibility_imouraggonc__alvesisommerville.pdf

Syrdal, H. A., & Briggs, E. (2018). Engagement with social media content: A qualitative exploration. *Journal of Marketing Theory and Practice, 26*(1-2), 4-22. https://doi.org/10.1080/10696679.2017.1389243

Tyson, A., Kennedy, B., & Funk, C. (2021, May 26). *Gen Z, millennials stand out for climate change activism, social media engagement with issue*. Pew Research Center. https://www.pewresearch.org/science/2021/05/26/gen-z-millennials-stand-out-for-climate-change-activism-social-media-engagement-with-issue/

Verčič, A. T., & Špoljarić, A. (2020). Managing internal communication: How the choice of channels affects internal communication satisfaction. *Public Relations Review, 46*(3). https://doi.org/10.1016/j.pubrev.2020.101926

Appendix A

Screenshot of IRB Exemption Email Approval

TEXAS TECH UNIVERSITY
Human Research Protection Program

Nov 29, 2021 12:49:16 PM CST

Rauf Arif
Media and Comm, Dean Ofc

Re: IRB2021-900 Engagement with Adamantine Energy Content

Findings: *Good luck with your research.*

Dear Dr. Rauf Arif, Adan Rubio:

The Human Research Protection Program determined that your project meets at least one of the federal exempt categories under 45 CFR 46
Category 2.(i). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording).
The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects.

The determination was made on November 29, 2021. Annual review is not required, and no expiration date will be listed on your letter.

The research must follow Texas Tech University's Operating Procedures, the Belmont Report, and 45 CFR 46. If changes to the approved protocol occur, a **Modification Submission** must be reviewed and approved by the IRB before implementation. Please contact the Human Research Protection Program to determine if a modification is needed or submit a Modification Submission in Cayuse IRB. Please be aware that changes to the research protocol may prevent the research from qualifying for exempt review and require submission of a new IRB application or other materials to the Texas Tech University IRB.

A goal of the IRB is to prevent negative occurrences during any research study. However, despite our best intent, unforeseen circumstances or events may arise during the research. If a deviation, unanticipated problem or adverse event happens during your research, please notify the Texas Tech University, Human Research Protection Program as soon as possible (45 CFR 46). We will ask for a complete explanation of the event and for you to submit an **Incident Submission** in Cayuse IRB.

Your study may be selected for a Post-Approval Monitoring (PAM). You will be notified if your study has been chosen for a PAM. A PAM investigator may request to observe your data collection procedures, including the consent process.

Once your research is complete, please use a **Closure Submission** to archive this study. IRBs that remain active are subject to audit by the IRB.

Sincerely,



Martin Binks, Ph.D.
Chair, Texas Tech University Institutional Review Board
Director, Nutrition & Metabolic Health Initiative (NMHI)
Professor, Department of Nutritional Sciences, College of Human Sciences

Human Research Protection Program
357 Administration Building
Lubbock, Texas 79409-1075
T 806.742.2064
www.hrpp.ttu.edu

Appendix B

Screenshot of IRB Modification Email Approval



TEXAS TECH UNIVERSITY
Human Research
Protection Program

Feb 8, 2022 7:53:35 AM CST

Rauf Arif
Media and Comm, Dean Ofc

Re: IRB2021-900 Engagement with Adamantine Energy Content
Findings: The modification is approved.

Dear Dr. Rauf Arif, Adan Rubio:

The proposed modification has been approved to the protocol referenced above within the exempt category of:
Category 2.(i). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording).
The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects.

Exempt research is not subject to annual review by the IRB. Any change to your protocol requires a **Modification Submission** for review and approval prior to implementation.

A goal of the IRB is to prevent negative occurrences during any research study. However, despite our best intent, unforeseen circumstances or events may arise during the research. If a deviation, unanticipated problem or adverse event happens during your research, please notify the Texas Tech University, Human Research Protection Program as soon as possible (45 CFR 46). We will ask for a complete explanation of the event and for you to submit an **Incident Submission** in Cayuse IRB.

Your study may be selected for a Post-Approval Monitoring (PAM). You will be notified if your study has been chosen for a PAM. A PAM investigator may request to observe your data collection procedures, including the consent process.

Once your research is complete, please use a **Closure Submission** to terminate this protocol.

Sincerely,



Martin Binks, Ph.D.
Chair, Texas Tech University Institutional Review Board
Director, Nutrition & Metabolic Health Initiative (NMHI)
Professor, Department of Nutritional Sciences, College of Human Sciences

Human Research Protection Program
357 Administration Building
Lubbock, Texas 79409-1075
T 806.742.2064
www.hrpp.ttu.edu

Appendix C

Screenshot of the Energy Thinks Podcast Tweet About the David Victor Episode



Note. Adapted from *Big changes are in store for #oilandgas companies carrying out their #esg strategies. David Victor of @GPS_UCSD delves deep into* [Image attached] [Link attached] [Tweet]. Twitter, by Energy Thinks Podcast [@EnergyThinks], 2021 (https://twitter.com/EnergyThinks/status/1435246180619980800) (Energy Thinks Podcast, 2021a). Reprinted with permission.

Appendix D

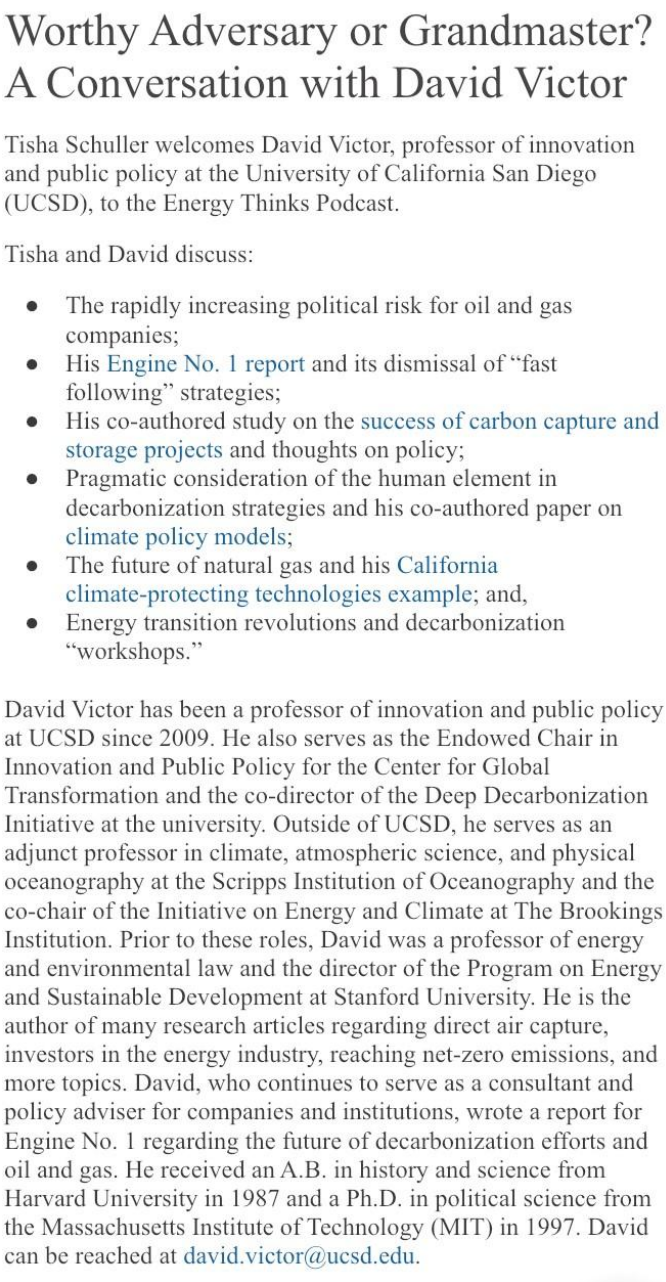
Screenshot of the Tisha Schuller LinkedIn Post About the David Victor Episode



Note. Adapted from *In this kickoff episode for Season 3 of the Energy Thinks podcast, I speak with force of nature David Victor,* [Image attached] [Link attached]. LinkedIn, by Tisha Schuller, 2021 (https://www.linkedin.com/posts/tisha-schuller-315a543_climate-energyfuture-energythinkspod-activity-6841009901351829505-uMrf?utm_source=linkedin_share&utm_medium=member_desktop_web) (Schuller, 2021a). Reprinted with permission.

Appendix E

Screenshot of Show Notes for the David Victor Episode



Worthy Adversary or Grandmaster? A Conversation with David Victor

Tisha Schuller welcomes David Victor, professor of innovation and public policy at the University of California San Diego (UCSD), to the Energy Thinks Podcast.

Tisha and David discuss:

- The rapidly increasing political risk for oil and gas companies;
- His Engine No. 1 report and its dismissal of "fast following" strategies;
- His co-authored study on the success of carbon capture and storage projects and thoughts on policy;
- Pragmatic consideration of the human element in decarbonization strategies and his co-authored paper on climate policy models;
- The future of natural gas and his California climate-protecting technologies example; and,
- Energy transition revolutions and decarbonization "workshops."

David Victor has been a professor of innovation and public policy at UCSD since 2009. He also serves as the Endowed Chair in Innovation and Public Policy for the Center for Global Transformation and the co-director of the Deep Decarbonization Initiative at the university. Outside of UCSD, he serves as an adjunct professor in climate, atmospheric science, and physical oceanography at the Scripps Institution of Oceanography and the co-chair of the Initiative on Energy and Climate at The Brookings Institution. Prior to these roles, David was a professor of energy and environmental law and the director of the Program on Energy and Sustainable Development at Stanford University. He is the author of many research articles regarding direct air capture, investors in the energy industry, reaching net-zero emissions, and more topics. David, who continues to serve as a consultant and policy adviser for companies and institutions, wrote a report for Engine No. 1 regarding the future of decarbonization efforts and oil and gas. He received an A.B. in history and science from Harvard University in 1987 and a Ph.D. in political science from the Massachusetts Institute of Technology (MIT) in 1997. David can be reached at david.victor@ucsd.edu.

Note. Adapted from *Worthy adversary or grandmaster? A conversation with David Victor*, by Adamantine Energy, 2021 (https://energythinks.com/podcasts/worthy-adversary-or-grandmaster-david-victor/) (Adamantine Energy, 2021). Reprinted with permission.

Appendix F

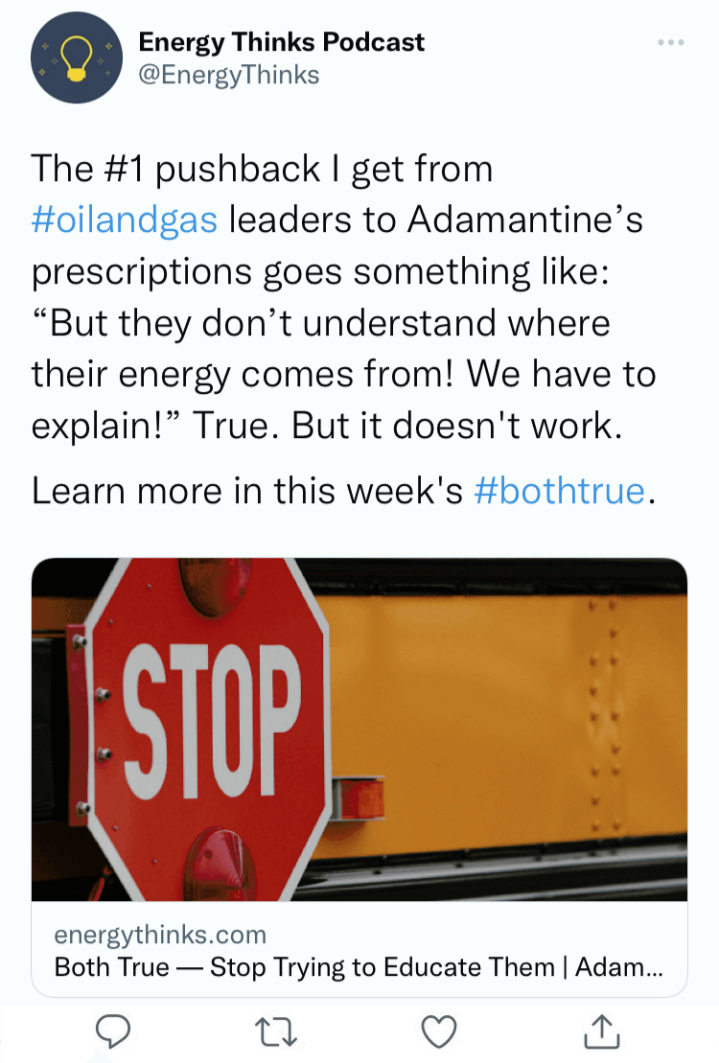
Image and Clip of the David Victor Episode



Note. Adapted from "Worthy adversary or grandmaster? A conversation with David Victor" [Audio podcast episode]. In *Energy Thinks*, by Tisha Schuller, 2021 (https://energythinks.com/podcasts/worthy-adversary-or-grandmaster-david-victor/) (Schuller, 2021b). Reprinted with permission.

Appendix G

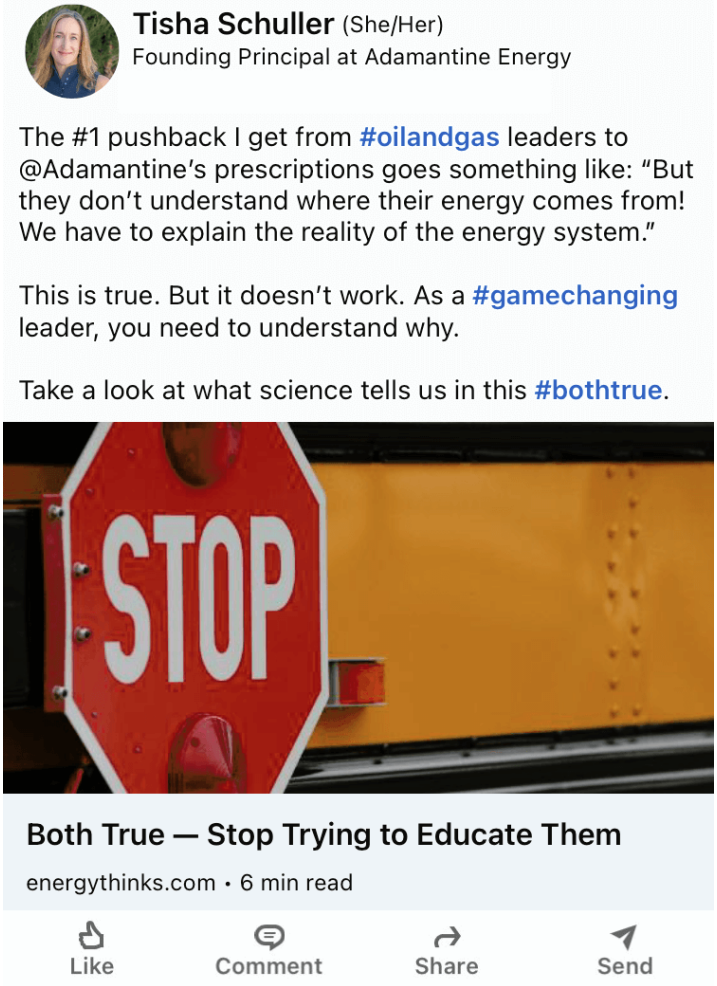
Screenshot of the Energy Thinks Podcast Tweet About the "Both True — Stop Trying to Educate Them" Newsletter



Note. Adapted from *The #1 pushback I get from #oilandgas leaders to Adamantine's prescriptions goes something like: "But they don't understand where their* [Thumbnail with link attached] [Tweet]. Twitter, by Energy Thinks Podcast [@EnergyThinks], 2021 (https://twitter.com/EnergyThinks/status/1455165580571406337) (Energy Thinks Podcast, 2021b). Reprinted with permission.

Appendix H

Screenshot of the Tisha Schuller LinkedIn Post About the "Both True — Stop Trying to Educate Them" Newsletter



Note. Adapted from *The #1 pushback I get from #oilandgas leaders to Adamantine's prescriptions goes something like: "But they don't understand where their* [Thumbnail with link attached]. LinkedIn, by Tisha Schuller, 2021 (https://www.linkedin.com/posts/tisha-schuller-315a543_both-true-stop-trying-to-educate-them-activity-6860920561799901184-p9iY?utm_source=linkedin_share&utm_medium=member_desktop_web) (Schuller, 2021d). Reprinted with permission.

Appendix I

Screenshot of the "Both True — Stop Trying to Educate Them" Excerpt

The #1 pushback I get from oil and gas leaders to Adamantine's prescriptions goes something like: "But they don't understand where their energy comes from! We have to *explain* the reality of the energy system."

This is true. But it doesn't work. As a game-changing leader, you need to understand why.

Both of these things are true:

- Energy literacy appears to have hit an all-time low, fueling unrealistic expectations (pun intended!) for an imminent transition to a zero-carbon energy system.
- "Education" campaigns to address energy literacy do not work — and might even make things worse.

We want our stakeholder audiences to understand the science and engineering behind the energy system! But there is a truckload of scientific data showing why our efforts to educate our stakeholders will fall flat or make our jobs even harder.

The situation

I spent five years on the front lines of educating the public when I served as president & CEO of the Colorado Oil & Gas Association (COGA). The most poignant lesson I learned: Even the most thoughtful educational forum could create a firestorm of anger and distrust. Let's look at what science tells us about why.

Note. Adapted from "Both true — Stop trying to educate them." Adamantine Energy, by Tisha Schuller, 2021 (https://energythinks.com/both-true-stop-trying-to-educate-them/) (Schuller, 2021c). Reprinted with permission.