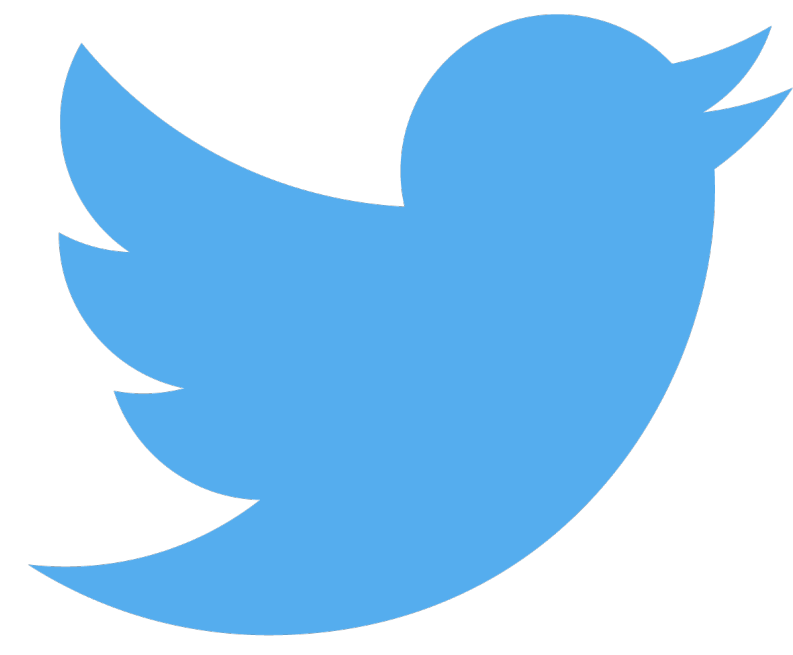


Portrayal of Nuclear Energy on Twitter



INTRODUCTION

Social media, particularly Twitter, has changed the way people share and consume political information. With more than 330 million monthly active users as of March 2019 and many political figures actively posting on the platform, Twitter has played a significant role in shaping political discussions in the past decade, especially in the United States (U.S.). While the demographics are small compared to Facebook or Pinterest, Twitter microblogging format thrives on short, easily digestible packets of information, which allows political opinion and narrative to spread rapidly across the site.

Twitter users are limited to posts of 280 characters, called “tweets.” When viewing topics, keywords, and hashtags, tweets can be ordered based on their number of likes and shares, their recency, or whether they contain images. These filters can be used to provide a general consensus on the perspectives of Twitter users. The same presentation applies when viewing Twitter’s news page, which consistently presents short blurbs of longer articles and tweets with the most engagement about current events.

Nuclear energy--among other forms of renewable energy--produce the lowest levels of carbon dioxide emissions. A “relatively small amount” of uranium can fuel a 1000 Megawatts electric plant--enough to power a city with a population of 500,000. This is in sharp contrast to solar and wind energy, which can only produce enough power for residential or office needs. Economically, nuclear energy can bolster growth from the moment a plant opens. This boost has the potential to increase as more manufacturing plants adopt nuclear energy over fossil fuels.

RESEARCH QUESTIONS

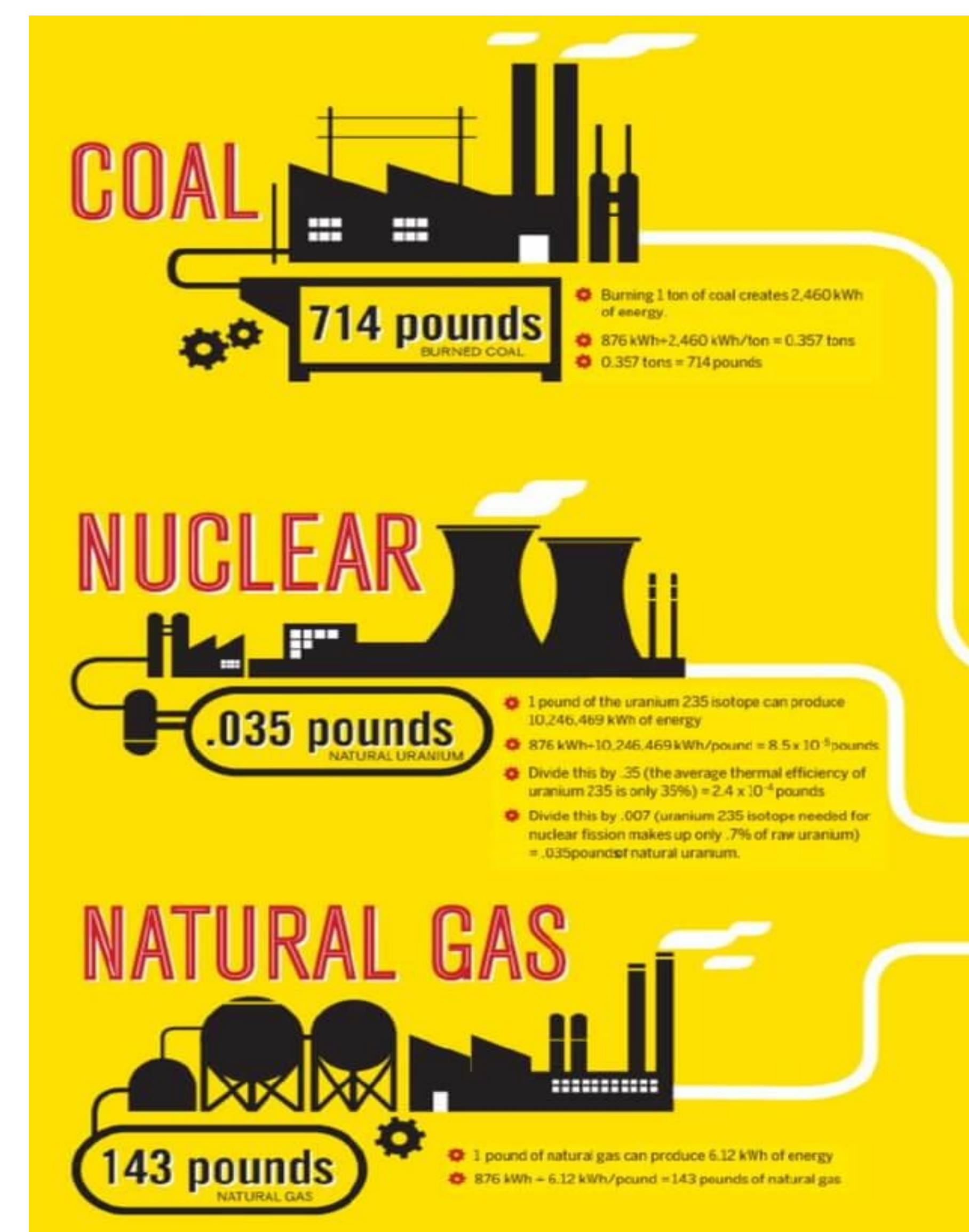
Given the relevance of nuclear energy in today’s environmental concerns, how politicized both issues are, and how Twitter’s design lends itself to political coverage, this study seeks to answer the following research questions:

- 1 How is nuclear energy verbally and graphically represented on Twitter, including stance, target audience, user intent, and quality of information?
- 2 Which topics are brought into discussion, including nuclear disasters, radiation, health effects, economic considerations, and climate change?
- 3 How do users engage with nuclear energy content on Twitter?

METHODS

Researchers entered keywords “nuclear energy” and “nuclear power” in the Twitter search. Researchers collected 699 tweets and sampled every relevant tweet for a total of 400 tweets.

A codebook for tweet content was developed, tested, and used for this study using code categories based on the types of content Twitter users include in their tweets. Interrater reliability was established by training two coders from the research team.

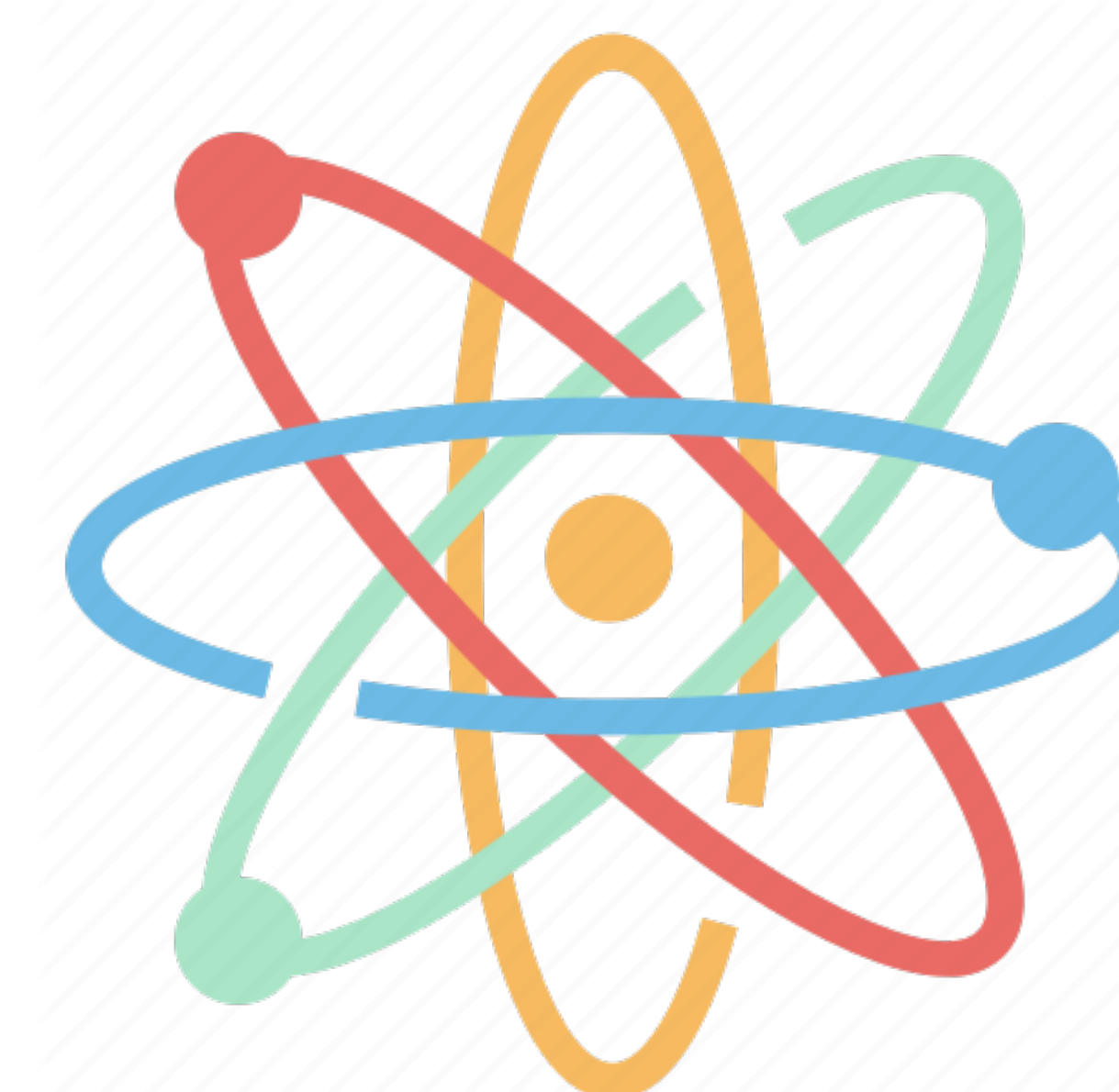


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RESULTS

Of the 400 tweets, the majority of tweets positively portrayed nuclear energy as a necessary and beneficial move for the future of humanity. A majority used some type of visual aid. Approximately half of the tweets featured news articles. Most tweets did not have a clear political stance, despite clarity in their delivery of positive or negative effects of nuclear energy. About half of the accounts sharing information about nuclear energy were verified. The majority of tweets used hashtags to make their views more accessible to other twitter users.



CONCLUSION

Twitter users hold a wide spectrum of perspectives on the use, benefits, and effects of nuclear energy as a widespread energy source. This study revealed that nuclear energy is often weaponized for causes such as environmentalism or public safety. Researchers reinforced their observation that nuclear energy and nuclear energy are one of many topics discussed on Twitter daily. We identified three key takeaways:

- 1 Twitter is favored for political and topical debate due to its short-form design. It is easy to find and deliver perspectives, no matter how inflammatory or incorrect. Despite this, it is equally easy to find news articles that offer more balanced perspectives.
- 2 Tweets typically discussed nuclear energy in a positive light and were mostly apolitical. A majority of them included links to sources for their views on whether or not to support nuclear energy. Nuclear energy was mostly promoted as beneficial for halting or reversing climate change or bringing the cost of electricity down.
- 3 Users appeared to engage more with positive tweets about nuclear energy. There were few tweets talking about nuclear disasters implying that people’s opinions are moving towards the benefits rather than the risks of nuclear energy.

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