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The Rhetoric of Energy Transition Coverage: Analyzing Lexical Patterns and Rhetorical Strategies as Framing Tools in News Discourse of English-Language Mainstream Media

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Abstract

The 2021–2024 global energy crisis intensified the energy transition, with mainstream media coverage playing a pivotal role in shaping public perceptions. Guided by Burke's and Lippmann's theories, and supported by corpus-based critical and rhetorical discourse analyses, this interdisciplinary study aimed to analyze the role of lexical patterns and rhetorical strategies in framing the transition within a corpus of 1341 news articles retrieved from the websites of five English-language mainstream media outlets. Corpus-based analysis identified generic frames, including economic consequences, responsibility, conflict, technological, emotion, and moral duty frames. Rhetorical discourse analysis revealed specific frames, including economic opportunities, technological progress and challenges, energy security and independence, global leadership, energy partnerships, partisan divide, global disparities, corporate greenwashing, necessity, hope, and uncertainty frames, that indicated an ambivalence in the framing of the transition, thereby contributing to the polarization and manipulation of public opinion. The findings indicated a discrepancy: while British, American, and Brazilian media focused more on political divides, Indian and Chinese media emphasized energy partnerships and patriotism. Appeals to experts were less frequent, whereas appeals to emotions were often employed to shape public perceptions. The findings illustrate how lexical patterns and rhetorical strategies function as powerful framing tools within journalism, applied linguistics, and media rhetoric.

Keywords: energy transition; renewable energy; rhetorical appeals; language manipulation; agenda-setting; corpus-based critical discourse analysis; rhetorical discourse analysis; news framing; English-language mainstream media

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1. Introduction

Natural resources are a key policy priority for major economies to ensure stable economic growth (Litvinenko et al., 2023; L. Zhou, 2023). Nevertheless, there are several significant challenges that the world faces in meeting current and future energy demands.

On the one hand, mining activities accelerate global warming and lead to the climate change crisis by releasing substantial greenhouse gases through fossil fuel combustion, machinery, and energy-intensive refining (Lu & Wang, 2023). Although the mining sector is beneficial for the economic growth of many countries (Babyr, 2024), it can also negatively impact economies by causing the 'resource curse', when countries with an abundance of natural resources can experience the negative effects of natural resource wealth, such as corruption, high commodity dependence, an increased risk of conflict, and weak economic

diversification (Cheng et al., 2021). Therefore, competing for resource wealth can exacerbate geopolitical tensions among countries, which can lead to energy disruptions as well as global political and economic instability (Cheikh & Younes, 2023).

On the other hand, fossil fuels, such as coal, natural gas, and oil, are exhaustible resources and, therefore, cannot be replenished at a rate comparable to their consumption. The rapid depletion of mineral resources and difficulties in finding new oil and gas fields lead to numerous challenges related to natural resource exploration and conservation (Ganzulenko & Petkova, 2023; Ponomarenko et al., 2024; Ponomareva et al., 2021). In addition, the introduction of new digital technologies in the oil and gas industry (Belsky et al., 2024) creates significant ideological, technical, and technological complications, including the need for new workforce skills and improved data management and the need to restructure organizational workflows (Emiliozzi et al., 2025; Martirosyan et al., 2025; Verbitsky et al., 2024).

Efforts to combat mineral resource scarcity and the environmental impacts of mining activities have contributed to accelerating the shift toward renewable energy sources (RES) (Shklyarskiy et al., 2023). These sources are defined as "any form of energy from solar, geophysical or biological sources that is replenished by natural processes at a rate that equals or exceeds its rate of use" (IPCC, 2011). However, the primary drivers of this transition remain government policies and regulatory frameworks that play a central role in accelerating the transition. National governments implement a range of measures such as subsidies for renewable energy projects, tax incentives for clean technology adoption, and environmental regulations on mining activities to finance the shift away from fossil fuels. In turn, the global 2021–2024 energy crisis, characterized by fuel shortages, record gas prices, rising poverty, and financial strain on the energy industries, intensified energy transition and decarbonization efforts (Ozili & Ozen, 2023), widening the gap between energy-resilient nations (leaders) and those that are heavily reliant on fossil fuel imports (laggards) (Quitzow et al., 2021). As a result, all these factors have fueled the polarization of public opinion, which hinders the consensus building that is necessary for the adoption of new technologies.

Modern mass media: both traditional and new, serve as a primary source of information for the global audience and play a crucial role in guiding public opinion on energy and climate issues. The way environmental issues are presented and interpreted in mass media shapes public perception of them. During the 2021–2024 energy crisis, the energy transition became a central topic in the global media narratives. An increase in the amount of news coverage and greater scientific consensus on human-caused climate change, paired with a catastrophic framing, highlighted the importance of "revisiting how exposure to climate change news shapes citizens' attitudes" (Merry, 2024, n.p.). According to Dagiliūtė (2024), the media can influence the audience's intentions to use particular energy sources, with positive perceptions increasing support, while negative perceptions decrease it. Thus, media framing is considered a key component of climate change and energy policies that highlights certain aspects of the energy transition, shapes public understanding of risks and benefits, and influences readers' engagement with climate action (Diamond et al., 2024).

In the 'post-truth era': characterized by the blurred distinction between truth and falsehood as well as the prevalence of emotional appeals over objective facts, modern mass media have undergone significant transformations. These changes include the emotionalization of news discourse and the rapid spread of online misinformation (Michailidou & Trenz, 2021; Zappettini et al., 2021). In turn, the process of digitalization has transformed the public sphere into a 'virtual space' (Bylieva et al., 2022; Shestakova & Morgunov, 2023), making information more available to the audience while at the same time increasing public reliance on digital and social media (Bi, 2023). 'Deep mediatization' (Hepp, 2022) signifies

how the public sphere is influenced and transformed by digital media and their underlying infrastructure. Thus, online media do not only broadcast news on the energy transition but also contribute to constructing a reality "where publics make sense of technological change" (F. Li & Ullah, 2025, n.p.).

The majority of recent media studies have examined the energy transition through the lens of social media platforms, which act not merely as passive reflectors of public opinion but rather as active environments that shape public perceptions of renewable technologies (F. Li & Ullah, 2025). For instance, a comparative analysis of Chinese media shows a clear divergence in how new technologies are framed across different Chinese media platforms. Social media discussions are predominantly user-centric and focus on the performance and safety of new technologies, whereas mainstream media narratives are policy-driven and emphasize subsidies, industry collaboration, and consumer markets (Bai et al., 2026). Other works confirm that mainstream media coverage focuses on politicization and partisan polarization (Mayer & Parks, 2024; Merry, 2024; Mourão et al., 2024), highlighting that it is dominated by elite and expert voices (Hirt, 2024). While some works have examined the discursive strategies and underlying ideologies employed by traditional news outlets (K. Chen & Sun, 2025; Z. Li & Zhao, 2025; L. Liang et al., 2025), the role of specific rhetorical strategies and linguistic means in framing the transition and shaping public opinion remains understudied (Teneva, 2025; Y. Wang et al., 2025). Therefore, this study aims to address this critical research gap by analyzing how lexical choices and rhetorical strategies contribute to guiding public opinion and shaping the transition narratives in English-language mainstream media.

Drawing upon Burke's (1969) and Lippmann's (1929/2021) theories, this study investigates the role of rhetorical strategies and lexical choices in the online news coverage of five English-language mainstream media outlets from key countries leading the energy transition during the 2021–2024 global energy crisis. To gain a deeper understanding from rhetorical, linguistic, and journalistic perspectives, this study utilized corpus-based critical discourse analysis (CB-CDA) and rhetorical discourse analysis (RDA) to analyze the use of linguistic means and rhetorical strategies as framing tools in mainstream media news coverage. The findings of this study are applicable only to the news coverage of the energy transition in the specific media outlets examined, which may limit the generalizability of the results to other media contexts.

2. Theoretical Context

The literature review addresses the following issues: (1) the driving factors and challenges of the energy transition; (2) the influence of media and rhetoric on public opinion; and (3) recent studies on the news coverage of the energy transition.

2.1. The Main Factors and Challenges of the Energy Transition

A substantial body of recent research has proved that the transition is driven by a number of factors, including carbon reduction, economic incentives, government policies, and technological advancements. The need to reduce greenhouse gas emissions to achieve the goals of the 2015 Paris Agreement and limit global warming is a central factor contributing to the acceleration of the transition (Awosusi et al., 2025). Mineral resources, technological innovation, and green finance also play a significant role in promoting the shift to clean energy (Azam et al., 2025; C. Liang et al., 2024). The energy transition is considered to be beneficial for economic development because it fosters innovation, creates new jobs, and reduces reliance on fossil fuel markets (G. Liu et al., 2024). Digitalization and technical innovation are revolutionizing sustainable resource exploitation, which makes them critical for transitioning to a greener economy (Pang et al., 2024). Nevertheless, fossil fuel subsidies

are still one of the main barriers to implementing clean energy projects, as they increase the demand for fossil fuels (Qadir et al., 2021). Moreover, economic policy uncertainty also negatively influences the green energy transition by increasing capital costs, which delays investments in renewables and incentivizes reverting to cheaper, traditional energy sources (Yu & Guo, 2023). Thus, the transition requires addressing the financial and technological support that is still provided to fossil fuel industries.

Nevertheless: the energy transition is driven primarily by government policies—such as subsidies and regulations—which are crucial for accelerating the adoption of renewable energy (Song et al., 2024). Government support is necessary to stimulate green technology innovation, which is the most effective way to improve environmental efficiency (Aldawsari, 2025). Thus, while government policy is a major driver, it is still a combination of regulatory, financial, and technological factors that drives the transition. Yet, government intervention can face hurdles, including inconsistent policy implementation (e.g., subsidizing fossil fuels), regulatory delays, and conflicts between national policies and international obligations (Gbomagba, 2025).

Another significant factor forcing countries to intensify their government assistance for renewables is geopolitical conflict (Q. Wang et al., 2024). Geopolitical risks paradoxically stimulate the energy transition by forcing high-income countries to prioritize energy independence, thereby reducing reliance on traditional fossil fuels. Therefore, geopolitics will continue to play a pivotal role in the energy transition due to ongoing political instability and resource competition. As a result, the transition is becoming an essential strategy for mitigating geopolitical tensions (Cheikh & Younes, 2023).

In general: the energy transition is viewed as "a highly socialized process driven by a multitude of factors" which has profound socio-economic and ecological effects (Yang et al., 2024, n.p.). In this regard, public opinion is viewed as a key factor in the shaping of energy policies and adoption of new technologies by communities. It directly shapes community-level energy development and individual-level consumption decisions concerning the energy transition (Gazmararian et al., 2025). Public opinion is shaped by both media narratives and political discourse (Sahana, 2025), while rhetoric plays a critical role in framing these narratives (Thomas et al., 2022) by employing strategies like metaphors, rhetorical appeals, and selective language to define, compare, and focus attention on specific aspects of an issue. Thus, the interplay of rhetoric, media, and political discourse significantly impacts public perception of energy-related issues in news coverage, which is of primary interest in this study.

2.2. The Influence of Media and Rhetoric on Public Opinion

Lippmann's theory of public opinion explored the relationship between media, public opinion, and democracy. According to Lippmann (1929/2021), the audience forms public opinion based on the 'pictures in their heads' which represent their personal views and experiences. In turn, these subjective representations of reality create a 'pseudo-environment' (Arnold-Forster, 2023). Mass media construct social reality in such a way as to add and remove facts or information. As long as the audience believes it, they operate within it.

Herman and Chomsky (2008) suggested that media serve elite interests through agenda setting to 'manufacture consent' in mass public opinion. The agenda setting and media framing theories explain how media portrayal shapes how issues are discussed and perceived. The agenda setting theory stipulates that mass media shape public opinion by highlighting certain issues and giving them prominence while downplaying others (Valenzuela & McCombs, 2019). 'Second-level agenda setting' focuses on the use of specific words, images, and the context (Buyanza-Mwidima, 2024).

Framing refers to the "process by which people develop a particular conceptualization of an issue which shapes their thinking about it" (Chong & Druckman, 2007, p. 104). It involves a communication source presenting information in a way that emphasizes certain aspects while downplaying others to shape audiences' perception and interpretation of issues (Entman, 1993). If a news frame is positive, the audience may be more likely to support the issue, whereas negativity bias can be more powerful (Shen, 2004), which highlights the significant role of news framing in shaping public opinion (Akpoghiran, 2023). Thus, framing can be used as a tool for studying media content, which requires a clear typology of frames. De Vreese (2005) categorized them into two types: issue-specific frames, which pertain only to particular topics or events, and generic frames, which are structural patterns that transcend thematic boundaries and can be applied to various issues and in different cultural contexts.

While classical rhetoric focuses on persuasion and relies on Aristotle's rhetorical triangle ('ethos', 'pathos' and 'logos') (Aristotle cited in Rapp, 2023), modern rhetoric encompasses a broader understanding of communication, including argumentation and the study of how communication influences audiences as well as social and power structures (Tindale, 2004). Thus, modern rhetoric moves beyond mere persuasion, opening up possibilities for textual and communicative practice. Burke (1969) broadened the scope of rhetoric beyond persuasion by emphasizing the key role of language in creating connections and allowing individuals to recognize their shared values. His work heavily influenced modern rhetorical criticism by shifting the focus of analysis from mere persuasion to the symbolic, structural ways that language shapes social reality.

A core concept in Burke's theory is identification. In his viewpoint, "we are both joined and separate, at once a distinct substance and consubstantial with another" (Burke, 1969, p. 21). To overcome this division, the speaker 'identifies' with the audience by talking their language (Andres, 1992) and sharing the same values and interests so that he becomes 'consubstantial' with them. Therefore, identification serves as a fundamental principle of communication where a speaker persuades an audience by aligning their opinions with shared values (Teneva, 2023). The dramatistic pentad is closely linked to identification. It is a method for analyzing rhetorical action as drama, which consists of five elements: act, scene, agent, agency, and purpose. By examining which element dominates in a text, we can uncover the motivations of the speaker. Thus, this method allows critics to move beyond surface-level persuasion and reveal how language constructs social reality through narrative framing.

Yet, identification is not always a calculated strategy. As Quigley (1998) noted, identification involves a subconscious dimension where a speaker may use language and other symbols—such as specific idioms, tones, or metaphors—without full awareness. Because language is inherently social, these symbols allow him to sound naturally like 'one of them'. In the context of the global energy transition—a period of significant societal stress—this concept becomes particularly relevant. Zamparutti (2023) pointed out that during periods of societal stress such as the global energy transition, the mass usage of specific terminology constructs 'consubstantiality', where shared language acts as a vital tool for maintaining societal connectivity and collective identity in the face of trauma.

In mass media, identification becomes a powerful tool for influencing public opinion, as it forces the readers to identify themselves with narratives, or even the media creator, thus influencing their understanding of the world. This theoretical foundation underpins contemporary methods of rhetorical analysis, such as rhetorical discourse analysis (RDA). RDA examines not only the rhetorical strategies employed in a text but also how these strategies participate in the construction of social meanings and ideologies. From the perspective of critical discourse analysis (CDA) theory, rhetoric can be used to coordinate

social action by influencing social cognition and mental models (Catalano & Waugh, 2020; Van Dijk, 2015). It examines how the language in media texts is used by powerful groups to control public discourse, thereby shaping public opinion and social practices. Finlayson (2025) proposes that rhetorical tropes, such as metaphor and metonymy, should be understood and analyzed as parts of larger argumentative propositions; this would connect them to political action and allow them to be viewed as powerful tools for media framing. Thus, media discourse constructs reality by aligning individual identity with institutional narratives. It is deeply intertwined with rhetoric because they both play a key role in the formation of public opinion (Birks, 2015).

2.3. Recent Studies of News Coverage of the Energy Transition

Recent studies indicate the media's pivotal role in shaping public discourse on energy issues (Wagner, 2018), influencing public perception, and potentially impacting political agendas. The majority of works pinpoint the politicization of media discourse, examining the link between media, identification with political parties (partisanship), and energy transition and highlighting the main actors in the coverage—mostly elites and experts (C. Chen & Liu, 2025; Merry, 2024; Mourão et al., 2024). In particular, C. Chen and Liu (2025) indicate that Chinese news discourse tends to emphasize technological advancements and international cooperation to create a sense of national pride and inevitable progress, framing the transition as a driver of innovation and global responsibility, whereas US news discourse often frames the transition through a political lens, highlighting political polarization and the challenges of fragmented decision-making. Notably, Mourão et al. (2024) reveal that some energy sources are more politicized than others. Polarization regarding coal and renewables reflects strong partisan differences in US news coverage, whereas, since hydropower was adopted by both left- and right-leaning governments, the impact of partisanship on support for energy sources is more limited in the Brazilian news coverage. Although partisanship does not determine overall exposure to climate change news, it influences outlet preferences, with Democrats preferring traditional media for reports on climate change (Merry, 2024). Thus, traditional media often serve as a catalyst for polarization by framing the energy transition as a partisan struggle rather than a technical necessity.

Recent research has also found that the agenda has shifted from purely environmental and scientific issues to issues of economic gain, national security, and technological sovereignty (Rochyadi-Reetz et al., 2019). For instance, the study by G. Liu et al. (2024) demonstrates a positive relationship between the transition and economic growth. The research of Mercado-Saez et al. (2022) highlights that in the Spanish press, energy remains primarily an economic topic rather than a central environmental one, notwithstanding the climate crisis.

The majority of prior studies outline an ambivalence regarding the energy transition that arises from numerous challenges related to the adoption of renewable energy, including technological limitations, grid flexibility, and financial hurdles (Y. Chen & Rowlands, 2022). For instance, the study of Lyytimäki et al. (2018) revealed that although biogas production was represented as a preferable energy technology, its adoption was not promoted, which highlights the duality of energy transition coverage. The study by Zukas (2017) demonstrated that media coverage of wind energy is shaped by the strategic communication of different stakeholders rather than scientists or environmental experts. Zukas (2017) considers the framing of wind energy as a competition between environmental, political, and industrial frame sponsors, highlighting the economic frames of pro-wind groups (pushed by industry and governments) as well as the environmental concerns of anti-wind groups and demonstrating how public perception is influenced through these

competing narratives. Similarly, a recent analysis of UK news coverage indicates that left-leaning newspapers blame fossil fuels for the climate crisis and call for action, whereas right-leaning newspapers focus more on the economic impacts of the transition, often framing policies as threats to jobs (Tao & Ryan, 2025).

Overall, prior studies show that media coverage often reflects the challenges of the transition, marginalizing them in favor of fossil fuel supply and energy security. For instance, Arens and Bez (2026) point out that despite international pressure, the topic of the transition remains marginal in Indian media compared to discussions about coal supply and industrial growth. Their study highlights that media often frame renewables as risky or secondary while legitimizing fossil fuels as the only reliable foundation for energy security. Thus, media narratives often reflect 'renewable delayism', emphasizing the negative impacts of renewable energy: distrust in power infrastructure, which spreads fear about the reliability of renewable technologies; nuclear distraction, which shifts the focus from renewable energy toward nuclear power; and misleading climate action, which creates anxiety about the consequences of addressing climate change (J. C. Liu & Lee, 2025).

The socio-economic situation, the eco-political agenda, and even international relations also influence media framing aimed at either promoting or discouraging the use of renewable energy, which indicates that public ambivalence toward renewable energy sources is viewed both as an opportunity and as a challenge (Diamond et al., 2024; Yazici & Gültekin, 2023). Media framing is heavily influenced by right-wing populist rhetoric and socio-political agendas, which often leads to contradictory messages that fuel public uncertainty. This populist rhetoric, as identified by Fontes and Marques (2022), in mainstream news organizations, including *Folha de S. Paulo*, *O Estado de S. Paulo*, and *O Globo*, may result in the blurring of the division between objective news reporting and subjective, opinion-based commentary, which makes it harder for audiences to distinguish between facts and opinions.

Corpus-assisted analysis has been widely used to examine how media narratives evolve, compete, and construct national images in news coverage. For instance, the study by Y. Wang and Ruan (2025) demonstrates how *China Daily* uses framing to bolster China's environmental reputation, which helps deepen the understanding of China's environmental protection actions and enhances its national image. These findings align with the results of a corpus-based critical discourse analysis of China's image in news discourse on carbon peak and carbon neutrality (Z. Li & Zhao, 2025). Similarly, the study by L. Liang et al. (2025) examines a dual narrative in *The Guardian* and *The Daily Telegraph* where China is portrayed as a responsible global climate actor and a problematic 'other'.

To broaden this scope, the study by J. Li (2025) compares the news coverage on 'carbon neutrality' in Chinese, US, and Indian media from 2015 to 2023 (J. Li, 2025). The study reveals distinct linguistic patterns: Chinese media emphasized 'green development' and used affirmative sentences to show determination; US media focused on 'technological innovation', using complex sentences to express doubt; and Indian media focused on 'sustainable development', employing conditional sentences to reflect difficulties. These differences reflect their national interests, which are of great significance for understanding the pluralistic voices in global climate governance. Nevertheless, the role of rhetorical appeals in framing the transition remains understudied, which is the main focus of the present research.

3. Research Aims, Questions, and Methodology

3.1. Research Aims

The research aim was threefold: first, to analyze media attention within a corpus of news articles on the energy transition during the main phase of the global energy crisis

(2021–2024); second, to detect the use of and analyze the role of specific lexical choices and rhetorical strategies within a target corpus; and, third, to examine how these elements contribute to framing the transition and shaping public opinion. To achieve this aim, the following objectives were set:

1. To assess media attention in the selected papers by compiling a target corpus and measuring the frequency of relevant articles using the Nexis Newsdesk database;
2. To analyze lexical choices, discourse patterns, and key themes in the target corpus using AntConc software to uncover generic and issue-specific news frames;
3. To identify specific rhetorical strategies employed as framing tools in news coverage of the transition and analyze their potential impact on the shaping of public perception.

3.2. Research Questions

This study examines lexical patterns and rhetorical strategies from the perspectives of the agenda setting theory, CB-CDA, and RDA by analyzing the frequency of news articles, linguistic means, and discourse patterns as well as rhetorical appeals and devices. Therefore, the research questions include:

1. To what extent did English-language mainstream media contribute to the frequency, intensity, and salience of the discourse on the energy transition, thereby setting the public agenda during the 2021–2024 energy crisis?
2. What are the key lexical patterns related to the energy transition in the analyzed media, and how do these patterns reflect the news frames in the coverage?
3. What rhetorical strategies are employed in these newspapers, and how do they contribute to framing the transition and influencing public perception of the issue?

3.3. Materials and Methods

Because this interdisciplinary study aimed to consider both lexical patterns and rhetorical strategies from the viewpoints of journalism, applied linguistics, and rhetoric, it utilized a mixed-methods approach, which leverages the strengths of both qualitative and quantitative research methods while mitigating their individual limitations (Ahmed et al., 2024).

The growth and availability of computing power (Kryltcov et al., 2021) have enabled the use of computer software to 'recognize regularities and links between different elements in the text' (Murzo, 2025, p. 67) and analyze large collections of media texts (corpora), while helping to avoid unconscious bias in data interpretation (Flaster, 2023). Corpus linguistic analysis aims to identify, measure the frequency of, and highlight the meanings of the specific elements within a large corpus of texts using computer software (Z. Li & Zhao, 2025), while critical discourse analysis (CDA) considers how discourse shapes and is shaped by social contexts and examines how power is enacted in language (Wodak, 2004). Corpus-based critical discourse analysis (CB-CDA), which combines these two methods, is widely used in the analysis of media discourse and has proved to be an effective way to analyze news texts by providing quantitative evidence in linguistic studies and identifying language features in fragmented texts that are hidden to the naked eye (Z. Li & Zhao, 2025). By combining quantitative methods (word frequencies, collocation, keyword analysis) with qualitative interpretation, it reveals patterns that might escape manual analysis. By contrast, RDA focuses on the analysis of the persuasive strategies used to increase the efficiency of communication and influence the audience's beliefs and opinions by appealing to both emotional and logical arguments (Andrus, 2012). The combination of these approaches provides a deeper understanding of the research problem by examining how language is used in context (linguistics) and how these patterns create meaning and persuade the news audience (rhetoric), linking them to a broader context of media representations (journalism).

This study involved several key steps. First, it leveraged CB-CDA to identify recurring topics in the news discourse about the transition by compiling a target corpus. This target corpus, called the energy transition news corpus, included news articles about the energy transition collected by *Nexis Newsdesk* (New York, NY, USA) from the websites of the analyzed mainstream media outlets by applying multiple keywords in the search tool. These keywords were selected due to their relevance to the research topic ('energy transition', 'renewable', 'sustainable', 'geothermal', 'hydroelectric', 'photovoltaic', 'solar power', 'wind turbine', 'smart grid', 'clean energy', 'green energy', 'green investments', 'hydrogen', 'biofuel', 'electrification', 'decarbonization', etc.). To sift out the irrelevant articles and opinion pieces from the corpus, all texts were manually reviewed to ensure that each included at least two mentions of the selected keywords and had substantive coverage of the energy transition.

To make inferences about the news coverage in different parts of the world, *China Daily*, *Folha International*, *The Guardian*, *The New York Times*, and *The Times of India* were chosen because they represent countries that are considered to be key global leaders in the energy transition (Vigoya et al., 2020). In fact, the selected sample of countries represents a unique cross-section of the discourses of the 'Global North' (the UK and the USA) and 'Global South' (Brazil, China, India), which allows for a comprehensive analysis of the transition through a geopolitical lens and provides a more representative picture of the global debates on the energy transition. Mainstream media outlets historically serve as dominant platforms for agenda setting, framing, and political influence (Entman, 1993), whereas digital media outlets blend editorial content with participatory elements. Therefore, mainstream online media outlets were selected due to their large circulations and credibility in providing news to global audiences (Salaudeen & Onyechi, 2020) as well as their significant role in setting the public agenda (Herman & Chomsky, 2008), which corresponds to the research aim of this paper. Because English is a means of global communication ('lingua franca') (Radchenko et al., 2024), modern English-language media discourse is viewed as a 'mediator for almost all spheres of social life on the planet' (Guslyakova et al., 2020). Additionally, the credibility of the results is also supported by the fact that these papers are among the largest and most-read English-language daily newspapers in the selected countries that have a strong influence on international digital audiences, including both native and non-native English speakers. Although the selected papers show different political leanings, they are circulated in the countries' capital cities, which positions them close to the political elites of these countries so that media narratives may mirror elite discourses, thereby shaping public perception of the energy transition. To examine the framing of the transition during the main years of the global energy crisis (2021–2024) (Ember, 2025), this study selected news articles published between 1 August 2021 and 31 December 2024. This period was characterized by significant market volatility, high energy prices, and heightened geopolitical tensions (Ozili & Ozen, 2023). Furthermore, these years were marked by Europe's adaptation to the global energy crisis (C. Zhou et al., 2024) as well as by intensified public and policy debates on energy security and decarbonization. Extending the analysis through the end of 2024 allows for the observation of how these narratives evolved as markets began to stabilize and structural policy shifts took full effect (IRENA, 2024; C. Zhou et al., 2024). Thus, the final sample includes 1341 news articles retrieved from five prominent English-language media outlets.

Next, to analyze the language patterns in the target corpus, this study utilized corpus-based analysis. According to Entman (1993, p. 52), news frames manifest themselves in certain text attributes, such as "the presence or absence of certain keywords, stock phrases, (and) stereotyped images". Thus, frames can be identified by means of statistical analysis (Burscher et al., 2016). *AntConc* 4.3.1 (Tokyo, Japan), which is a freeware corpus analysis

toolkit for concordancing and text analysis, can help researchers identify language patterns in media discourse (K. Chen & Sun, 2025). First, with the help of this tool, the dimensions of the collected data were reduced in order to include only the most crucial language for identifying key themes while removing the remaining 'noise'. Data preprocessing included the removal of headlines, lowercasing, word lemmatization, and the exclusion of standard stop words using the *Natural Language Toolkit 3.9.2* (Pennsylvania, PA, USA). Next, after the selected material was cleaned of 'noise' and proofread, the *AntConc* 4.3.1 tool was used to produce the list of the top 20 high-frequency words, which served as a primary indicator of the key themes at the lexical level.

To analyze the key themes and reveal how the transition was framed, this study examined collocations (recurring, context-dependent word pairings) of the word 'energy' and concordances of the key phrase 'energy transition' (KWIC—keyword in context). The analysis revealed specific vocabulary and its contextual usage that contributed to shaping public perception of the transition by highlighting how words typically co-occurred. Collocations can be analyzed by examining raw frequency or statistical likelihood (strength of association). Log-likelihood metrics were employed to identify strong, meaningful, and statistically significant collocations of the core concept 'energy'.

Next, this study generated concordances of the phrase 'energy transition', which is the most relevant to the research topic. A concordance is a list of all hits of a particular search word or phrase that is used to analyze the intention and attitude of the media (Z. Li & Zhao, 2025). By analyzing the frequency and appearance of certain word combinations, collocations, and concordances, it became possible to identify generic news frames as well as the recurring discursive patterns that contained specific rhetorical appeals.

Ultimately, the last step was to classify and analyze the rhetorical strategies (rhetorical appeals and devices) that contributed to framing the transition and shaping public opinion. For this purpose, this study utilized Burke's (1969) rhetorical theory on the power of language, which allowed the researchers to analyze the rhetorical situation (the author, the audience, and the context) as well as the motives behind the narrative action, which is key to understanding its influence. RDA was applied due to its focus on persuasion, linguistic analysis, and contextual comprehension and its capacity to detect the use of rhetorical appeals in the selected discourse segments (Samboang et al., 2024). These segments (examples) were chosen based on their alignment with the research question, as they contained language choices employed to exert influence and assert discursive power. Thus, RDA allowed for the identification of issue-specific frames and facilitated the making of inferences about the significant role of rhetorical strategies in framing the transition and shaping public opinion.

4. Results and Discussion

4.1. Corpus-Based Critical Discourse Analysis

With the help of the *Nexis Newsdesk* database, this study compiled a corpus titled 'The Energy Transition News Corpus', which contains 1341 articles from the selected news outlets. The frequency of the news articles is presented in Table 1 and visualized in Figure 1.

Table 1 and Figure 1 show the heightened media attention to the issue of the energy transition during the 2021–2024 global energy crisis. Notably, *China Daily* had the largest number of articles about the transition (356), which highlights its role in promoting China as a global leader in green energy. By contrast, *Folha International*, which is the English-language digital version of the largest Brazilian daily newspaper, *Folha de S. Paulo*, had the lowest number of articles (92), which may be due to the fact that this international edition provides news to a smaller, focused target audience consisting primarily of English-speaking foreigners, international investors, diplomats, journalists, and Brazilians living

abroad, thus providing a 'simplified' and 'condensed' ('filtered') version of the energy discussions within the broader Portuguese news discourse. Nevertheless, all the selected media outlets increased the number of their publications about the transition, which serves as an indicator of its salience during the 2021–2024 crisis, thereby highlighting the role of media in setting the public agenda (Carroll, 2024; Y. Chen & Rowlands, 2022; Valenzuela & McCombs, 2019).

Table 1. Frequency of news articles about the energy transition between 1 August 2021 and 31 December 2024 in the analyzed mainstream media outlets (N = 1341).

Date	*China Daily*	*Folha International*	*The Guardian*	*The New York Times*	*The Times of India*
August 2021	2	1	8	1	3
September 2021	6	1	5	2	5
October 2021	7	1	10	4	9
November 2021	9	0	8	15	4
December 2021	3	1	3	1	5
January 2022	6	0	7	1	4
February 2022	5	0	9	4	5
March 2022	9	1	4	4	3
April 2022	13	0	6	1	4
May 2022	3	2	9	4	6
June 2022	8	1	14	2	7
July 2022	6	1	11	6	3
August 2022	13	1	17	7	3
September 2022	16	3	24	3	12
October 2022	5	1	6	5	1
November 2022	11	1	11	6	8
December 2022	10	1	5	4	5
January 2023	5	2	1	3	4
February 2023	9	3	3	2	14
March 2023	4	6	2	2	10
April 2023	6	2	1	3	5
May 2023	9	6	2	3	5
June 2023	9	2	3	2	5
July 2023	6	1	1	1	10
August 2023	6	4	10	4	4
September 2023	14	2	9	5	8
October 2023	5	4	6	3	9
November 2023	14	4	7	11	15
December 2023	18	1	7	9	8
January 2024	12	3	9	7	4
February 2024	5	5	8	7	14
March 2024	10	2	11	9	8
April 2024	10	3	7	11	11
May 2024	12	6	7	13	8
June 2024	5	6	7	8	10
July 2024	4	3	8	10	9
August 2024	16	2	6	14	7
September 2024	8	1	9	14	28
October 2024	8	5	11	26	15
November 2024	15	3	12	16	10
December 2024	14	0	3	13	11
Total	356	92	307	267	319

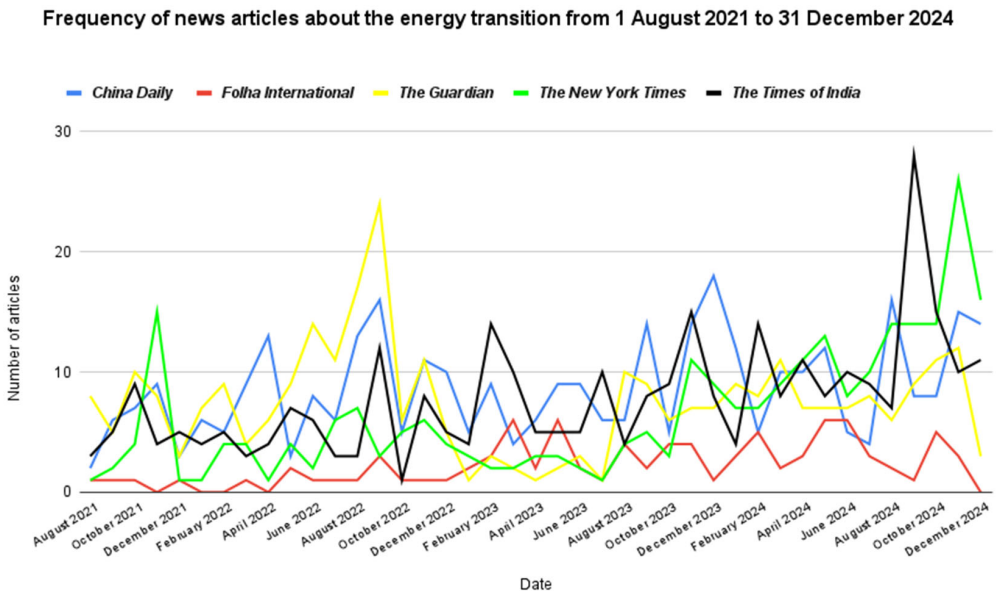


Figure 1. Statistics of news articles about the energy transition from 1 August 2021 to 31 December 2024 in the analyzed mainstream media outlets (N = 1341).

It was also found that the number of articles peaked several times during the 2021–2024 crisis. These peaks may be attributed to the following energy-related events: the rise of energy prices in August 2021, the Russia–Ukraine conflict in February 2022 and the fall in prices at the end of October 2022 (Bolton, 2024), the 2022–2024 adaptation to the crisis, and the increased utilization of renewable energy (Balcerzak et al., 2024). Thus, the increased coverage of the energy transition was related to political, economic, climate and energy-related events between August 2021 and December 2024, transforming the energy transition narrative from a purely 'environmental choice' to a matter of national energy security and economic and political stability.

Next, this study generated lists of high-frequency words within the target corpus. These words are repeatedly presented to the audiences, creating a certain image in their minds and thereby affecting their attitudes toward the current issue (Z. Li & Zhao, 2025).

Table 2 shows that the word 'energy' appeared to be prominent in all media outlets except *Folha International*. This is expected because this word functions as a core concept that links the economic, (geo)political, technological, and environmental aspects of the energy transition discourse. Notably, the most prominent word in *Folha International* appeared to be the name of the country (Brazil), which shows that while other media outlets focused on the issue of energy, this newspaper focused more on national identity or a local agenda.

Table 2 also displays high-frequency lexical words, including nouns, adjectives, and verbs. The nouns can be classified into the following semantic categories: (1) nouns referring to objects, emphasizing the sources of emissions and the necessity of tackling climate change (e.g., 'carbon', 'emissions', 'environment', 'coal', 'oil', 'gas', 'climate', and 'change'); (2) nouns describing the possible pathways for new technologies to achieve climate goals by means of developing specific technologies (e.g., 'energy', 'transition', 'development', 'hydrogen', 'capacity', 'electricity', 'wind', and 'technology'); (3) nouns related to government and political discourse focusing on political figures and authorities that implement energy regulations (e.g., 'government', 'president'); (4) nouns referring to geopolitical actors, emphasizing the countries' commitments to reducing carbon emissions (e.g., 'China', 'Brazil', 'UK', 'United States', and 'India'); and (5) nouns related to the percentage of green investments (e.g., 'percent'). Additionally, high-frequency adjectives (e.g., 'green', 'solar', 'renewable', 'new', 'clean', 'global', and 'environmental') highlight

the positive characteristics of new technologies, thereby promoting positive attitudes toward them in the discourse. High-frequency verbs include 'said', 'could', and 'would'. 'Said' is a common reporting verb used to present information directly from authorities or spokespeople, which shows that the information is objectively reported and, thus, makes the reporting more convincing (Z. Li & Zhao, 2025). 'Could' and 'would' are modal verbs used to express possibility or ability, and they indicate the willingness of the corresponding countries to achieve climate goals and the potential outcomes of climate actions. Overall, the analysis of the top 20 high-frequency words showed that the discourse contained descriptions of problems (1), technologies (2), authoritative sources (3), geopolitical actors (4), and quantitative indicators (5), thereby highlighting the media's agenda setting role (Buyanza-Mwidima, 2024; Valenzuela & McCombs, 2019).

Table 2. Top 20 high-frequency lexical words in the target corpus (generated by *AntConc* 4.3.1).

China Daily	*Folha International*	*The Guardian*	*The New York Times*	*The Times of India*
1. energy (3692)	1. Brazil (124)	1. energy (2843)	1. energy (2948)	1. energy (3059)
2. China (2967)	2. energy (121)	2. said (2438)	2. said (2728)	2. India (1219)
3. said (2690)	3. climate (110)	3. gas (1626)	3. gas (1636)	3. said (1047)
4. power (1584)	4. Brazilian (63)	4. climate (1429)	4. climate (1618)	4. renewable (980)
5. carbon (1040)	5. government (61)	5. fossil (945)	5. power (1329)	5. power (843)
6. development (954)	6. new (54)	6. would (885)	6. new (1064)	6. transition (715)
7. percent (905)	7. oil (54)	7. new (843)	7. would (1054)	7. solar (698)
8. green (887)	8. environmental (53)	8. government (764)	8. oil (1029)	8. green (682)
9. new (758)	9. president (53)	9. emissions (762)	9. solar (864)	9. capacity (528)
10. solar (753)	10. country (51)	10. oil (756)	10. percent (792)	10. climate (493)
11. country (748)	11. said (50)	11. power (743)	11. electricity (777)	11. clean (457)
12. transition (728)	12. company (43)	12. fuel (616)	12. states (768)	12. state (397)
13. climate (707)	13. environment (43)	13. carbon (606)	13. wind (754)	13. global (391)
14. renewable (677)	14. indigenous (43)	14. UK (597)	14. coal (737)	14. new (350)
15. capacity (613)	15. renewable (43)	15. world (574)	15. United (734)	15. coal (325)
16. gas (590)	16. resources (43)	16. renewable (555)	16. fossil (726)	16. hydrogen (322)
17. world (548)	17. global (42)	17. coal (554)	17. world (701)	17. sector (298)
18. hydrogen (524)	18. change (41)	18. electricity (534)	18. could (686)	18. world (291)
19. Chinese (489)	19. transition (37)	19. global (507)	19. emissions (679)	19. electricity (290)
20. wind (485)	20. need (35)	20. countries (484)	20. change (658)	20. wind (283)

Because the word 'energy' serves as a core concept in the energy transition coverage, this study generated a list of its collocations to provide deeper insights into how energy-related issues were framed in media narratives. Given that *Folha International* contained the smallest number of collocations, this study analyzed the top 10 collocations that were identified using *AntConc* 4.3.1 (see Table 3) to ensure a focused and meaningful comparison despite the smaller sample size.

The analysis of the top 10 collocations of the word 'energy' revealed various lexical patterns, including the following combinations: (1) adjective (renewable, clean, new, green, solar, sustainable) + 'energy', describing the types of energy sources and indicating their positive characteristics; (2) 'energy' + noun (bills, transition, access, efficiency, capacity, security, consumption, administration, agency, department, etc.), describing infrastructure development, emphasizing the necessity of financial investments, and highlighting the role of energy authorities in accelerating the transition; and (3) verb (invests) + 'energy', highlighting the economic dimension of the discourse. Overall, the analysis of the keywords and collocations revealed that the word 'energy' collocated with terms related to the following key themes: (1) (geo)political (government and national security), (2) economic (investment and consumer impact), (3) environmental (climate crisis and moral duty), and (4) technological (innovations and infrastructure).

Table 3. Top 10 collocations of the word 'energy' in the target corpus (generated by *AntConc* 4.3.1).

China Daily	*Folha International*	*The Guardian*	*The New York Times*	*The Times of India*
1. renewable	1. clean	1. renewable	1. clean	1. renewable
2. transition	2. transition	2. clean	2. renewable	2. transition
3. clean	3. mines	3. bills	3. transition	3. clean
4. new	4. solar	4. efficiency	4. sources	4. security
5. security	5. invests	5. transition	5. department	5. sources
6. storage	6. renewable	6. security	6. agency	6. energy
7. green	7. capacity	7. agency	7. efficiency	7. access
8. sources	8. solar	8. international	8. crisis	8. efficiency
9. consumption	9. sources	9. crisis	9. solar	9. capacity
10. administration	10. ministry	10. sources	10. security	10. sustainable

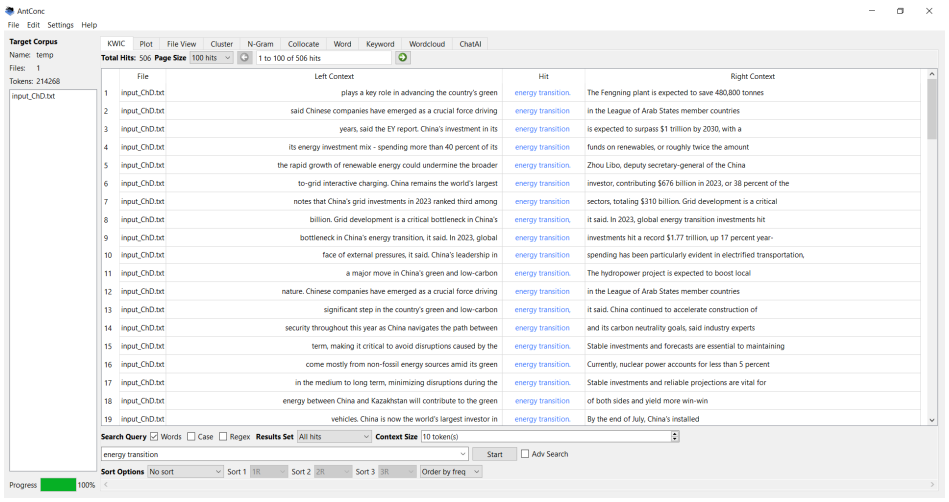
Next, this study selected the collocation 'energy transition' as the most relevant to the research objective and generated its concordances using *AntConc* 4.3.1. Figure 2a–e presents screenshots from *AntConc* 4.3.1 displaying the context in which 'energy transition' occurred in the target corpus. These screens were chosen based on their relevance to the research topic, as they illustrate the presence of specific rhetorical strategies within the media narratives.

Figure 2a–e demonstrate that the energy transition was framed positively by using such descriptive adjectives as 'just', 'fair', 'clean', 'green', 'orderly', 'swift', 'rapid', 'reliable', 'secure', and 'ambitious'. These terms emphasize the positive characteristics of new energy sources as well as the necessity of shifting to renewable energy in a fair, well-organized, and equitable way, thereby indicating the presence of emotional and moral frames in the news coverage. Furthermore, the analysis of the concordances revealed that the transition was often framed in a contradictory way, as both an 'economic opportunity' ('the energy transition is the most significant economic opportunity') and a 'technological challenge' ('grid development is a critical bottleneck in China's energy transition'), highlighting the duality of news coverage, which is in line with the results of previous studies (Y. Chen & Rowlands, 2022; Diamond et al., 2024; Lyytimäki et al., 2018; Tao & Ryan, 2025; Yazici & Gültekin, 2023). It was also found that the discourse often linked the coverage to populist rhetoric by contrasting the livelihoods of the 'working class' against those of 'metropolitan elites' ('working class whose livelihoods are threatened by the clean energy transition against the metropolitan elites') (Fontes & Marques, 2022).

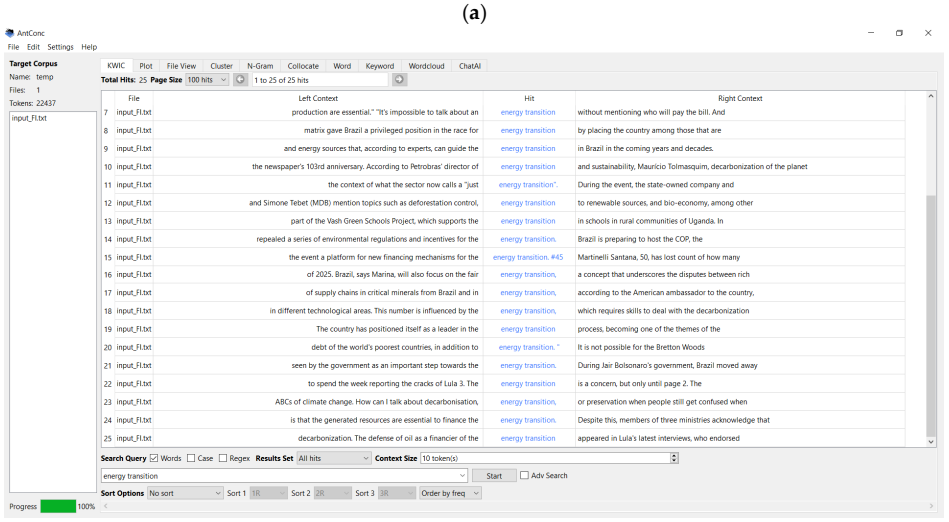
Following the approach of De Vreese (2005), CB-CDA revealed the following key six generic frames in the news coverage of the energy transition, defined by the frequency and appearance of certain words, collocations, and concordances:

1. The *economic consequences* frame, which focused on the economic opportunities and challenges of managing the transition costs and costs of living (e.g., 'percent' 'development', 'development', 'invests (in) energy' 'energy bills', 'energy consumption', 'livelihoods');
2. The *technological* frame, which focused on viewing the transition as a technical process (e.g., 'green technology', storage', 'capacity');
3. The *responsibility* frame, which highlights the role of countries, government actors, and energy companies in determining the success or failure of new technologies (e.g., 'government', 'president', 'company', 'said', 'energy agency', 'China', 'United States');
4. The *conflict* frame, which highlighted the socio-economic disparities and (geo)political tensions as well as the strategic competition between nations for dominance in green technologies (e.g., 'working class' vs. 'metropolitan elites', 'old' vs. 'new', 'oil' and 'gas' vs. 'green' and 'renewable', 'energy equity' vs. 'disparity');

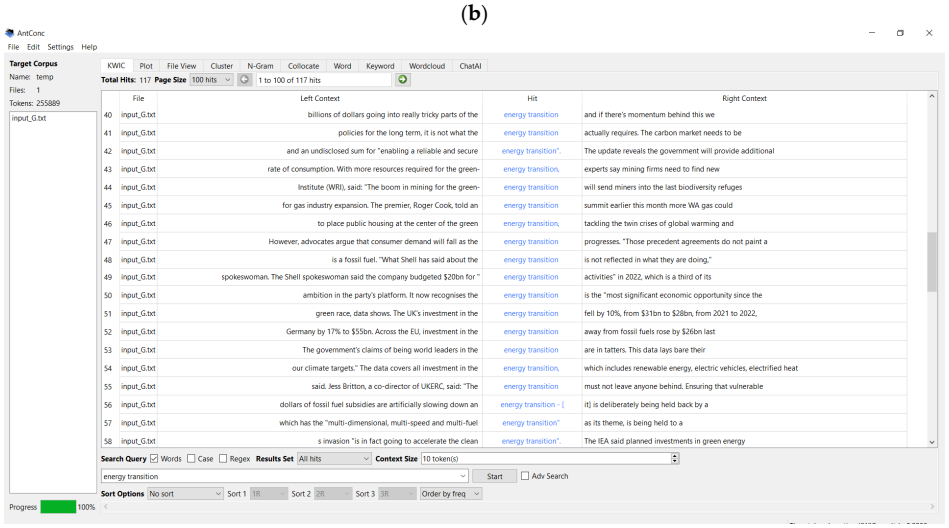
5. The *emotional* frame, which focused on evoking emotional responses regarding the transition (e.g., 'green', 'clean', 'reliable', 'would', 'could');
6. The *moral duty* frame, which emphasized both the urgent necessity of the transition and energy justice (e.g., 'need', 'just', 'fair').



(**a**)

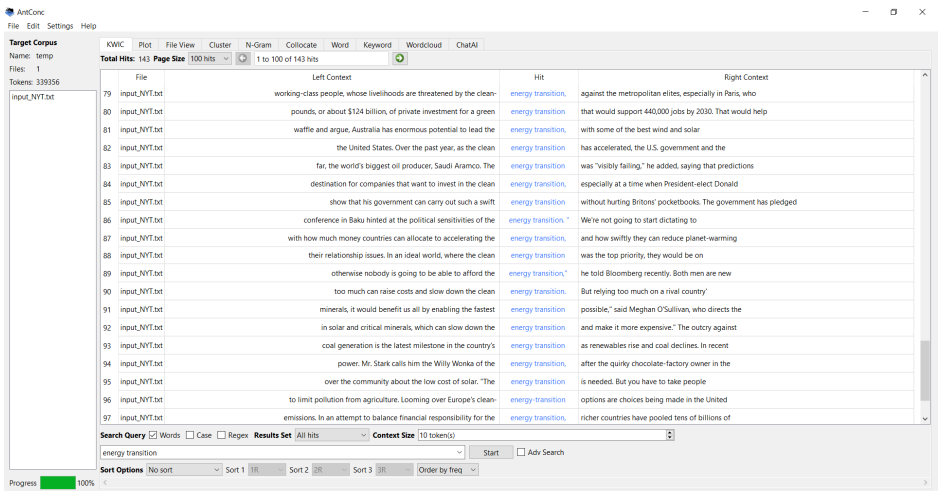


(**b**)

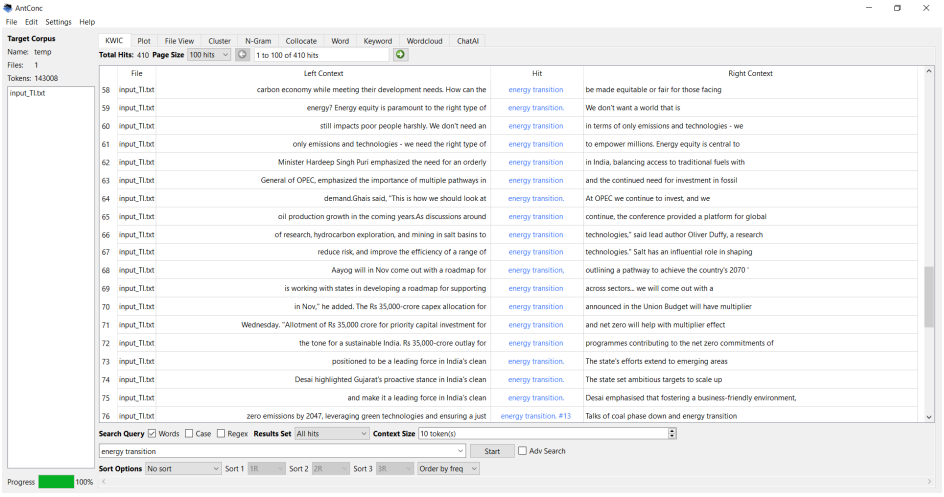


(**c**)

Figure 2. *Cont.*



(**d**)



(**e**)

Figure 2. (**a**–**e**). Concordance lines for the phrase 'energy transition' generated by *AntConc* 4.3.1 across the analyzed mainstream media outlets: (**a**) *China Daily*; (**b**) *Folha International*; (**c**) *The Guardian*; (**d**) *The New York Times*; (**e**) *The Times of India*.

The findings of CB-CDA also revealed the most common discourse patterns across all five analyzed mainstream media outlets:

1. Statements containing references to political power, including political figures, institutions, and regulators ('Minister Hardeep Singh Puri emphasized the need of an orderly energy transition');
2. Statements containing references to executives of energy companies and international agencies ('According to Petrobras' director of energy and sustainability…'; 'What Shell has said about the energy transition …'; 'the IEA said …');
3. Statements containing references to energy and scientific experts ('Jess Britton, a co-director of UKERC said …'; 'according to experts');
4. Statements mentioning the specific amount of green investments (about $124 billion of a private investment for a green energy transition that would support 440,000 jobs by 2030);
5. Statements containing emotional language ('the state set ambitious targets …'; 'the energy transition is a concern …'; 'really tricky parts of energy transition');
6. Statements containing mentions of countries' superiority and leadership in the transition ('gave Brazil a privileged position in the race for the energy transition'; 'China remains the world's largest energy transition investor, contributing $676 billion in 2023').

Based on these findings in Figure 2, this study proposed the following typology of rhetorical appeals in the news coverage of the energy transition:

1. Appeals to authority and energy companies;
2. Appeals to energy and scientific experts;
3. Appeals to green investments;
4. Appeals to energy partnerships and patriotism;
5. Appeals to emotions.

4.2. Rhetorical Discourse Analysis

4.2.1. Appeals to Political Authorities and Energy Companies

Appeals to authority or 'ethos' influence the audience's perception of the speaker's authority, credibility, and trustworthiness (Samboang et al., 2024). Lippmann (Lippmann, 1929/2021, p. 27) emphasized the role of experts in opinion formation and argued that "the power of the expert depends upon separating himself from those who make decisions". For Lippmann, citizens should identify their views with those parties that represent their interests, which corresponds to Burke's (1969) theory of identification. In turn, Froehlich (2019) distinguished between 'honest authorities', whose knowledge is based on verifiable evidence, and 'pseudo-cognitive authorities', who appear to have credibility and expertise but, on critical examination, fail in these qualities and strive to impose a partisan agenda irrespective of truth, evidence, logic, or facts.

RDA revealed the media's reliance on appeals to both 'honest' (energy and scientific experts) and 'pseudo-cognitive' (politicians, executives of energy companies and agencies) authorities. Yet, the main actors in the coverage appeared to be mostly elites and experts, as identified previously by Hirt (2024). Frequent appeals to political actors involved citing political figures, government officials, and regulatory agencies. Political pledges were focused mainly on accelerating the transition by tackling the climate crisis and high energy costs, adopting new energy laws, increasing the number of green investments, and driving job creation. These narratives highlight the *economic opportunities* framing of the transition as a catalyst for economic growth, for instance:

1. *Ed Miliband said:" <. . .> a clean energy future is the best way to make Britain energy independent, cut bills, create good jobs and tackle the climate crisis"* (Harvey, 2024b).
2. *In the United States, President Biden signed a trio of laws during his first two years in office that allocated unprecedented funds for clean energy: A $1 trillion bipartisan infrastructure law provided money to enhance the power grid, buy electric buses for schools and build a national network of electric vehicle chargers* (Gelles et al., 2023).
3. *Former US Secretary of State, Hillary Clinton, on Tuesday, said that alternative clean energy is India's future "Today India is well-positioned to adopt clean energy to achieve economic growth, " Clinton said. The opportunity for India to be a leader in clean energy is 'dramatically available' as it can bring down costs and decentralize clean power using creative thinking and scientific know-how of institutions.* (TNN, 2023a).

Examples No. 1–3 illustrate the media's emphasis on appeals to prominent political leaders rather than on scientific evidence. These appeals highlight the economic benefits of the transition, such as lowering energy bills, creating good jobs, and achieving economic growth (G. Liu et al., 2024; Tao & Ryan, 2025). Framing the transition as an *economic opportunity* highlights its potential benefits for individual voters as well as for the entire country (see No. 3). The personalization of political actions—the shift in focus from parties to individual leaders (Zamir, 2024)—boosts voter appeal, increases reader engagement, and mobilizes social action regarding energy issues. By centering the narratives on prominent political figures such as Ed Miliband, Joe Biden, and Hillary Clinton, the discourse functions as a strategic tool for political advertising (Dorofeev, 2023), amplifying their visibility in

the coverage to boost audience ratings and gain support for their energy policies (Fontes & Marques, 2022; Gazmararian et al., 2025).

As is evident from the examples, the discourse often employed positive vocabulary ('opportunity', 'the best way', 'good jobs') to construct an *emotional* (*hope*) framing of the transition as a pathway to a better life. This strategy is used to evoke a sense of optimism and legitimize political decisions in favor of the transition. Example No. 3 illustrates the *technological progress* frame, where the energy transition is viewed as a catalyst for innovation through an emphasis on the 'scientific know-how' of institutions and 'creative thinking'. By using the reporting verb 'said' to attribute the success of energy policies to specific political leaders, the discourse highlights the *responsibility* frame and reinforces the prevalence of elite-driven narratives across all five media outlets.

Nevertheless, the personalization of politics can also undermine the role of political institutions, weaken public trust in democratic processes, and even reinforce ideological conflicts. Examples No. 4–6 illustrate the *conflict* (*partisan divide)* framing:

4. *Opposition parties were scathing about the strategy. Two former energy secretaries from Labour and the Liberal Democrats branded it "ludicrous" and "hopeless" for failing to expand onshore wind power or tackle energy efficiency* (Davis & Mason, 2022).
5. *The vote was 2-to-1, with the commission's Democrats approving and the sole Republican objecting, a partisan split that echoed the divide between the two parties over renewable energy. <. . .> Democrats want to speed up the pace of adding solar and wind to the grid while Republicans in return want faster and easier permitting for fossil fuel projects and pipelines* (Friedman, 2024).
6. *During Jair Bolsonaro's government, Brazil moved away from achieving the goals agreed in Paris. President Lula has reiterated in speeches that the country will comply with them* (Gabriel, 2023).

Examples No. 4–6 demonstrate that news articles from *The Guardian*, *The New York Times*, and *Folha International* contained appeals that focused on partisan divides in the energy transition coverage (C. Chen & Liu, 2025; Fontes & Marques, 2022; Mayer & Parks, 2024; Merry, 2024; Mourão et al., 2024). This finding recalls Lippmann's (cited in Arnold-Forster, 2023) idea that media manufacture consent to align with elite interests, thereby guiding public opinion in their favor under the guise of democratic debates. Such appeals often contained negative vocabulary ('scathing', 'ludicrous', 'hopeless', 'partisan split', 'the divide') that framed the transition as a conflict, thereby inducing feelings of skepticism toward it. In contrast to the *partisan divide* framing in the Western media, examples No. 7 and 8 show that the coverage from Asian media outlets (*The Times of India* and *China Daily*) framed the transition as a matter of energy security and independence (G. Liu et al., 2024):

7. *Tarun Kapoor, Advisor, Prime Minister's Office, stating, "To ensure energy security, affordability and environmental protection, the country has to utilize renewables, green hydrogen and biofuels for sustainable and clean energy future."* (Madaan, 2023).
8. *Building an inclusive, green and low-carbon economy is crucial to promoting China's quality development <. . .> in order to ensure energy security, Vice-Premier Han Zheng said* (Hou, 2022).

As is clear from the examples, both approaches centered on elite voices (Hirt, 2024), thereby proving that the discourse was constructed as a strategic tool for legitimizing government actions.

RDA also found that some appeals to politicians were ambivalent in that they shifted the focus from renewables to fossil fuels (see No. 9, 10) or promoted nuclear energy (see No. 11), which aligns with the results of previous research (Arens & Bez, 2026; J. C. Liu & Lee, 2025):

9. *'Whole economies and societies are dependent on fossil fuels.' Susana Muhamad, Colombia's environmental minister, said this week. <. . .> 'Asking Nigeria, or indeed, asking Africa, to phase out fossil fuels is like asking us to stop breathing without life support,' said Ishaq Salako, Nigeria's environmental minister. 'It is not acceptable and it is not possible.'* (Plumer & Bearak, 2023).
10. *Minister Alexandre Silveira said. "As long as the world demands oil and gas, someone will have to supply it. Let it be us, the cheapest and closest option, to create jobs and bring economic and social development."* (Pamplona, 2024b).
11. *China currently ranks first in the world in the scale of its operational and under-construction nuclear power, with the share of this non-fossil source in the country's energy mix set to keep climbing, according to the National Energy Administration* (Xin, 2024e).

As is clear from example No. 9, the transition was portrayed as 'not acceptable' and 'not possible' in debates about developing countries such as Colombia and Nigeria. This narrative reflects a *global disparities* frame, highlighting the divide between Western (The Global North) energy agendas that focus on accelerated decarbonization and the socio-economic survival of the Global South, which is still dependent on traditional energy sources. The use of metaphorical language ('stop breathing without life support') serves as a powerful emotional framing tool to position the transition as a 'threat' and guide public opinion in favor of fossil fuels. The use of superlatives alongside modal verbs of necessity ('have to') in example No. 10 serves as a rhetorical strategy suggesting a lack of alternatives. It is used to incline the audience to accept the arguments in favor of fossil fuels 'a priori' as 'the cheapest and closest option' (Arens & Bez, 2026; J. C. Liu & Lee, 2025), thereby marginalizing renewable alternatives and justifying political choices in favor of fossil fuels. Notably, modals were often used for *moral duty (necessity)* framing, subtly influencing public opinion by transforming media narratives into ethical imperatives (Moafian et al., 2018). Example No. 11 shifts the focus toward the energy mix, emphasizing the expansion of nuclear power in China and thereby constructing a narrative of global leadership ('China currently ranks first in the world').

Appeals to international energy agencies were also common in the discourse, as energy regulators and financial incentives play a significant role in accelerating the shift. Examples No. 12–14 illustrate the *economic opportunities* and *global disparities* frames:

12. *The International Monetary Fund said in December that the 'economic benefits of accelerating the transition to a low-carbon economy vastly outweigh its cost'* (Carrington, 2024).
13. *Renewables are not only good for the environment and climate but also create much more jobs than traditional fossil fuel industries, [WEF President Borge] Brende noted* (Xinhua, 2023).
14. *The IEA urged international financial institutions to do more to back renewable energy in emerging and developing economies which continue to lag behind developed countries* (Ambrose, 2024b).

By appealing to international organizations such as the IMF and IEA, media outlets leverage their expertise to legitimize national energy policies. Such appeals frame the transition as both a necessity and a pathway to economic opportunities. Yet, appeals to representatives of energy agencies and companies were also ambivalent, focusing on challenges of the transition such as the lack of a workforce (see No. 15) and the continued reliance on fossil fuels (see No. 16, 17):

15. *In 2025, Brazil will have a deficit of 532,000 professionals in different technological areas. This number is influenced by the energy transition, which requires skills to deal with the decarbonization of the industry and electrified mobility. "The deficit was already expected," says Djansen Alexandre Dias, manager of the industry division at Gi Group Holding* (Folha International, 2024b).

16. *"Natural gas is the future, and it will be the most important component of India's energy bouquet to realise our vision of net-zero by 2070," said Shrikant Madhav Vaidya, Chairman, Indian Oil Corporation Ltd. (IOCL)* (PTI, 2021).
17. *Petrobras president Magda Chambriard strongly defended the opening of new exploratory oil frontiers in the country, despite international calls for an energy transition* (Pamplona, 2024a).

As evidenced by example No. 15, the discourse framed the transition as a *technological challenge* by highlighting the lack of a workforce. It fostered public skepticism toward the transition while manufacturing consent in favor of fossil fuels, thereby legitimizing corporate actions. Example No. 16 illustrates the framing of oil and natural gas as 'bridge fuels'. The use of superlatives and intensifying adverbs ('the most important component', 'strongly defended') also contributed to the emotional influence on the audience, reinforcing the necessity of the continued extraction of fossil fuels. Thus, such narratives construct the *responsibility* and *technological challenges* frames, which focus on shifting the responsibility from energy companies to long-term technological development.

4.2.2. Appeals to Experts

Appeals to experts included references to reports and scientific articles citing academic researchers and scientific experts. Expert advice in energy transition discussions was often presented in a way that aligned with the government's existing policy priorities (Isoaho & Karhunmaa, 2019). As a result, appeals to scientific and energy experts were less frequent in the coverage than appeals to politicians, which indicates the focus of media outlets on economic and political aspects of the transition (Zukas, 2017). Examples No. 18–21 illustrate skepticism toward new technologies, corporate greenwashing, and fossil fuel reliance:

18. *A handful of wealthy polluting countries led by the US are spending billions of dollars of public money on unproven climate solutions technologies that risk further delaying the transition away from fossil fuels, new analysis suggests* (Simpson, 2024).
19. *"What Shell has said about the energy transition is not reflected in what they are doing," said Zorka Milin, senior adviser at Global Witness. "This is greenwashing. Gas, whatever it may be, is not renewable, it's part of the problem"* (Milman, 2023).
20. *Oil demand in China is expected to continue rising in 2024 amid economic recovery, while natural gas has been emerging as a pivotal energy source to support domestic energy transition, according to an industry report released by the China National Petroleum Corp Economics and Technology Research Institute in Beijing on Wednesday* (Xin, 2024c).
21. *According to the CNPC Research Institute of Safety and Environmental Technology, the number of CCUS projects in the pipeline in China has risen significantly in the past few years, as they are considered a crucial aspect of the decarbonization efforts in the oil and gas sector in China and worldwide.* (Xin, 2024a).

Example No. 18 illustrates the framing of the transition as an *economic challenge*, while scientific expertise is sidelined. The phrase 'a handful of wealthy polluting countries led by the US' in example No. 18 can be seen as a rhetorical device (a synecdoche) if it is referring to the elites, governments, or corporations that finance these dubious technologies. By naming specific 'culprits' of renewable delayism (J. C. Liu & Lee, 2025), this narrative reinforces a *responsibility* frame. Example No. 19 demonstrates the paradox of decarbonization, where the 'green' rhetoric of big energy companies contrasts with the reality of investment portfolios dominated by fossil fuels. The funding of new technologies such as carbon capture, utilization, and storage (CCUS), as discussed in example No. 21, is presented as a way to distract investors from renewable energy and justify mining activities. Overall, these findings indicate that the narratives shifted their focus from scientific expertise to political and economic issues (Zukas, 2017).

4.2.3. Appeals to Green Investments

Statistics is a form of logical evidence ('logos') that can be used to support an argument and make it more compelling and credible. Lippmann (1929/2021) argued that although the facts are neutral to all our views of right and wrong, they are too undifferentiated for the human powers of understanding. Facts become relevant once they are interpreted and given a meaning. Thus, whenever we make an appeal based solely on logic and evidence, the interpretation and acceptance of that logic can be subjective and influenced by individual perspectives, biases, and prior beliefs ('pictures in our heads'), as well as external factors. People tend to favor information that aligns with their pre-existing beliefs and emotional experiences while ignoring contradictory information (Teneva, 2023), which is known as the phenomenon of confirmation bias. Thus, appeals to statistics can be used for rhetorical reasons not only to persuade but also to manipulate the audience (McConway, 2016; Torres, 2025).

This study suggested that appeals to statistics could be manipulative through the selection of facts and the use of rhetorical techniques for framing. By highlighting economic benefits, such as the number of newly created green jobs or investments, or challenges, such as job losses in traditional energy sectors or the unreliability of renewable energy technologies, mainstream media outlets can guide public opinion in their favor, turning statistics from a tool of information into a tool of persuasion, for instance:

22. *More than $1.7 trillion worldwide is expected to be invested in technologies such as wind, solar power, electric vehicles and batteries globally this year, according to the I.E.A., compared with just over $1 trillion in fossil fuels. That is by far the most ever spent on clean energy in a year. <. . .> Today, solar and wind power are the least expensive new sources of electricity in many markets, generating 12 percent of global electricity and rising. This year, for the first time, global investors are expected to pour more money into solar power—some $380 billion—than into drilling for oil* (Gelles et al., 2023).
23. *The National Green Hydrogen Mission (NGHM), launched with an outlay of $2.4 billion, aims to produce 5 million metric tonnes (MMT) of green hydrogen annually by 2030, attracting over $100 billion in investments and creating more than six lakh jobs. With an investment of approximately $25 million, India is setting the stage for development of hydrogen hubs that will transform its energy landscape* (Kamal, 2024).
24. *Thousands of new green companies were founded in 2023 and overall, the sector was responsible for the production of £74bn in goods and services and 765,000 jobs* (Carrington, 2024).
25. *The Albanese government is being pushed to provide an extra $100bn over 10 years to boost jobs and reduce emissions including through investments in clean industries and manufacturing of renewable energy components* (Karp, 2023).
26. *In 2024, investment in China's energy sector is forecast to reach $850 billion, accounting for nearly 30 percent of the global total, and standing at 1.5 to 2 times the level of the United States and the European Union* (Xin, 2024d).

Examples No. 22–26 demonstrate that appeals to a large number of green investments and companies reinforced the *economic opportunities* frame (G. Liu et al., 2024; Mercado-Saez et al., 2022). By putting an emphasis on large numbers (e.g., 'trillion', 'billion', 'thousands') and demonstrating the tangible benefits of the transition, such as the low cost of renewables, production of goods, and job creation (see No. 22–25), the emotionality of the appeals increases, thereby portraying green investments as 'key' in combating climate change. In example No. 26, the comparison of China's production capacity with that of the United States and the European Union highlights the *global leadership* frame, transforming the transition into a matter of global competition for green technologies. Such comparisons serve a dual purpose: they strengthen the national image in the global arena while creating

anxiety among competitors. Thus, large numbers can serve as efficient emotional arguments that contribute to influencing public opinion.

Although renewable energy sources were represented as preferable and 'clean' sources, the narratives did not always promote them (Lyytimäki et al., 2018). In fact, they emphasized partisan divides (No. 27), economic challenges (No. 28), and global disparities (No. 29), thus, inducing feelings of skepticism toward new energy sources (Yazici & Gültekin, 2023), for instance:

27. *About two-thirds of the new investment in clean energy is in Republican-controlled states, where policymakers have historically resisted renewables* (Gelles et al., 2023).
28. *Nuclear energy was ranked last of 14 possible responses. This is due to nuclear energy's very high cost, and the lack of maturity and deployment in next generation technologies. <. . .> The appetite for coal power increased in line with record high prices for gas in Europe and Asia* (Karp, 2024).
29. *Of the US$2 trillion being invested worldwide in clean energy in 2024, 85% is concentrated in developed countries. Only 15% is in the rest of the world, which has 65% of the global population* (Pupo & Salomão, 2024).

As is clear from example No. 27, *The New York Times* often framed the transition as a 'partisan divide' (conflict) by emphasizing green investments into Republican-led regions that 'historically resisted renewables'. Example No. 28 contains a metaphor ('the appetite for coal') to highlight economic challenges, framing the transition as a struggle between the high cost of nuclear energy and the low cost of fossil fuels. Moreover, the narratives often employed 'us vs. them' rhetoric, showcasing both the leaders and laggards of the energy transition, which reinforces the *global disparities* framing (No. 29). These examples illustrate how statistics can be used to support *conflict* frames, shifting the focus to global inequalities and political polarization.

Appeals to statistics also employed the rhetorical strategy of generalization to summarize information and establish rapport with the audience (Ierace, 2019), which aligns with the Burkeian idea of identification. The linguistic markers of appeals to statistics include quantifiers ('many', 'much') as well as nouns ('Americans') and adjectives that indicate large, indefinite numbers ('hundreds', 'thousands', 'millions', etc.). Statistical generalizations are often used to increase the emotionality of the arguments and sway public opinion either in favor of or against the transition (Teneva, 2025):

30. *Many African countries sharply criticized the idea that all countries should reduce their fossil fuel use at the same pace* (Plumer & Bearak, 2023).
31. *While Americans broadly support renewable energy, polls show, they are less enthusiastic about having it in their backyard* (Tankersley et al., 2023).
32. *Many African countries regard the development of solar and other clean energies as crucial for addressing power shortages and promoting energy transition.* (Xin, 2024b).
33. *Billion-dollar spending on socio-environmental projects and excess personnel, which limit the reduction of the electricity bill, are among the reasons for the disparity* (Salomão, 2024).

Examples No. 30–33 demonstrate appeals to statistical generalizations that emphasize both the benefits and challenges of the transition. The use of emotionally charged language ('sharply criticize', 'broadly support', 'less enthusiastic, 'disparity') constructs a *conflict* frame, emphasizing the disparities in global energy competition, which contributes to shaping public perception.

4.2.4. Appeals to Energy Partnerships and Patriotism

This study also identified appeals to energy patriotism, which emphasized energy independence, domestic production, and reduced reliance on foreign energy sources. Patriotic journalistic coverage often appeals to public emotions and cognition (Ginosar

& Cohen, 2019). Such appeals rely both on 'pathos' by evoking a sense of national pride and love for one's country and on 'ethos' by invoking a sense of duty and obligation as a member of a nation (Teneva, 2025). Thus, by emphasizing the benefits of the transition for the country's well-being and energy independence, these appeals aimed to evoke feelings of national pride and responsibility, thereby contributing to shaping public opinion (Y. Wang & Ruan, 2025):

34. *No nation is better placed than Australia to achieve this transition here at home—and power it in the world,' he [Anthony Albanese] said* (Karp, 2024).
35. *The President of the Central Bank, Roberto Campos Neto]: "Brazil is a serious candidate to attract a lot of investment in products that are produced by sustainable energy. Few countries have the conditions that Brazil has."* (Folha International, 2024a).

Examples No. 34 and 35 show appeals to patriotism that involve citing political leaders and business executives who emphasize the uniqueness of their countries. This narrative reinforces the *energy security and independence* frame. The transition is presented as a way to maintain stability by relying on 'sustainable energy' and achieve energy independence. By stating that a nation has better conditions than others, the discourse fosters a sense that there is a competitive advantage of Australia and Brazil over other countries in the global green economy, which highlights a *global leadership* framing.

According to Żuk et al. (2024), confining energy policies to individual nation states can create barriers to international cooperation and impede the transition, because climate change requires joint international efforts. However, this study revealed appeals to energy partnerships that focused on national pride, unity, and shared identity to foster cooperation:

36. *Berthelot said: "France is a key partner in initiating India's energy transition"* (TNN, 2023b).
37. *The US and Australia have stressed the importance of breaking the near-complete reliance on China for zero emissions technology supplies while signing a new agreement that promises to accelerate the development of climate solutions. <. . .> Bowen agreed. "It's good for our own economies and it's good for our national security to have supply chains among ourselves, but also amongst friends and allies," he said.* (Morton, 2022).
38. *And in China, which is currently both the world's top polluter and the global leader for renewable power, the government continues to invest in every stage of clean energy production, from solar cells to batteries, wind turbines and more. Like the United States, China provides subsidies to buyers of electric vehicle* (Gelles et al., 2023).

Examples No. 36–38 reflect how nations identify themselves as key players in global climate diplomacy by framing the transition as a *partnership*. Examples No. 36 and 37 illustrate that the success of the transition is dependent on the collaboration of 'key partners' and 'allies'. Example No. 38 demonstrates the use of the analogy ('Like the United States . . .'), which links the *economic consequences* frame with the *energy partnerships* frame. Thus, China's ability to dominate or lead these international partnerships effectively merges national pride with global competitiveness.

4.2.5. Appeals to Emotions

Lippmann (1929/2021) emphasized the role of stereotypes ('pictures in our heads') in shaping public opinion and stimulating the audience to political action (Van Rythoven, 2021). Stereotypes are heavily loaded with emotions. Appeals to emotion or 'pathos' are employed to sway an audience toward a speaker's arguments (Aristotle cited in Coelho & Huppes-Cluysenaer, 2018). Thus, 'mass-mediated' emotions, when they are tied to stereotypes, significantly influence how individuals perceive and react to public affairs, which can lead to challenges for democracy, including misinformation and public opinion manipulation (Teneva, 2023).

To identify with an audience and evoke empathy, speakers often employ emotional language (Rocklage et al., 2018; Samboang et al., 2024). According to Burke (1969), identification is enhanced through the mechanism of stylistic redundancy by creating a 'rhythm of agreement'. When an audience anticipates the conclusion of a formal structure, they become psychologically more inclined to accept its content. Superlatives are often used as persuasive tools within this framework (Ebaid, 2018):

39. *Africa has some of the world's greatest potential for solar and wind generation* (Harvey, 2024a).
40. *China is the world's biggest emitter by far, responsible for more than a quarter of global carbon dioxide emissions* (Harvey & Hawkins, 2024).
41. *France is Europe's biggest supporter of "carbon bomb" extraction projects that hold enough fossil fuels to pump out more than a gigaton of CO2 each* (Niranjan, 2023).
42. *Wind and solar power are breaking records, and renewables are now expected to overtake coal by 2025 as the world's largest source of electricity* (Gelles et al., 2023).

As is evident from examples No. 39–42, superlatives (' the greatest', ' the biggest', 'the largest') coupled with descriptive nouns ('potential', 'emitter', 'supporter of carbon bomb') construct polarized images of the countries and renewables, which reinforces the *conflict* frame. By labeling countries as 'the biggest emitters' (see No. 40) or 'supporters of carbon bombs' (see No. 41), the discourse activates the *moral duty* frame by presenting one side as a moral authority and the other as an existential threat. The use of phrases like 'the greatest potential' (see No. 39) and 'breaking records' (see No. 42) reinforces the *emotional (hope)* frame, evoking hope and optimism about the transition. Thus, if a text reaches its climax with a superlative, the audience is psychologically prepared to accept this conclusion as final and an indisputable fact.

Appeals to emotions often employed figurative language, including hyperboles, idioms, and metaphors, for example:

43. *"As a long-term investor in Korea, we are concerned about how the government plans to reconcile the industry's desperate need for clean electricity to stay relevant in the long run," Yoo-Kyung Park, APG's Asia Pacific head of responsible investment and governance, said in a statement* (AP, 2022).
44. *Jonathan Noronha-Gant, a senior fossil fuels campaigner at the NGO Global Witness, said: "Shell's CEO £8m pay packet is a bitter pill to swallow for the millions of workers living with the high costs of energy"* (Ambrose, 2024a).
45. *"We're the reddest state in the country, and we're an oil and gas state," said J.W. Peters, president of Solar Power of Oklahoma. "So it took a lot of time to convince people that this wasn't snake oil." <. . .> "There's a lot of appetite to invest in the United States thanks to that law," said Giovanni Bertolino, an executive at Enel, adding that the plant his company is building in Tulsa would not exist without the Inflation Reduction Act* (Gelles et al., 2023).
46. *According to Flávio Roscoe, president of Fiemg, hydroelectric plants were "wrongly demonized as harmful to the environment."* (Folha International, 2024c).
47. *"No more will we allow big polluters to pull the wool over our eyes while the world burns," she [Zorka Milin, senior adviser at Global Witness] said* (Milman, 2023).

According to Desai et al. (2021), hyperbole is viewed as a trope that involves deliberate and overt exaggeration and is most commonly used in negative evaluations of situations, as opposed to positive. The use of hyperboles like 'the industry's desperate need for clean energy' in example No. 43 reinforces the *economic consequences* frame: it creates a sense of urgent necessity and gives clean energy the status of a critical resource, the absence of which borders on disaster. The phrase 'bitter pill to swallow' in example No. 44 is an idiom for an unpleasant fact that is difficult to accept but unavoidable, which reinforces the

emotional frame by highlighting the contrast between the CEO's enormous compensation and the financial hardship of ordinary consumers.

Metaphors shape our understanding of abstract ideas and guide our behavior (Carter, 2021). For instance, in example No. 45, the metaphor 'snake oil' reinforces the 'uncertainty' frame by evoking skepticism among those who do not trust new technologies. The metaphor 'appetite to invest' frames green investments as a driving force behind the transition. The metaphor 'demonize' in example No. 46 is employed to discredit the arguments against the hydroelectric plants by making them appear emotional rather than rational to the listener. The metaphor 'pull the wool over someone's eyes' (see No. 47) reinforces the *corporate greenwashing* frame, which delegitimizes corporate claims by positioning them as obstacles to achieving the climate goals.

RDA also revealed the use of parallelism and inclusive pronouns in the articles about the transition:

48. *We must have a fair and fast transition to net zero emissions, but we must also adapt* (Karp, 2024).

The use of parallelism ('We must . . ., we must . . .') in example No. 48 creates a 'rhythm of agreement' (Carpenter, 1972) which helps the audience accept both statements as parts of a logically complete plan that assigns shared responsibility to the collective 'we' (the responsibility frame). The use of modals of obligation such as 'must' reinforces the *moral duty* frame, thereby creating a sense of urgency and moral weight. The inclusive pronouns such as 'we' make the messages 'reader-oriented' (Derakhshani et al., 2021; Koltsova et al., 2024) and signify the urgency of the energy transition, thus mobilizing the audience to immediate action and bridging the gap between individual ethics and national policy.

Overall, RDA identified several issue-specific frames that were inductively derived and indicated an ambivalence in framing the transition both positively and negatively, including:

1. The *economic consequences* frame was contextualized as the *economic opportunities* frame (e.g., 'economic growth', 'economic opportunity', 'development', 'create new jobs', 'prosperity'), focusing on viewing the transition as a driver of growth, and as the *economic challenges* frame (e.g., 'high inflation', 'high energy costs', 'transition costs', 'financial burden', 'market uncertainties', 'unaffordable'), focusing on the burden on national and global economies.
2. The *technological* frame was contextualized as the *technological progress* frame (e.g., 'double (triple) capacity', 'accelerate', 'breakthroughs', 'low-carbon solutions', 'smart grids', 'green technologies'), highlighting infrastructure modernization, and as the *technological challenges* frame ('bottlenecks', 'engineering challenge', 'power grid complexities', 'technical barriers'), highlighting resource scarcity, the complexities of system integration, and the limitations of the current infrastructure.
3. The *responsibility* frame manifested both the optimism of the *global leadership* frame (e.g., 'outpace', 'global leader', 'the world's largest (biggest) producer (investor)', 'rank first (top) in the world', 'energy dominance'), presenting countries as leaders of the transition, and the skepticism of *corporate greenwashing* frame (e.g., 'misleading investors', 'allege greenwashing', 'increase exploration', 'contradict pledges'), highlighting the tension between the promises of oil and gas companies and their real actions.
4. The *conflict* frame was contextualized as the *energy partnerships* frame ('key partner', 'cooperation', 'shared future', 'foster collaboration', 'mutual benefit'), highlighting international cooperation; the *energy security and independence* frame (e.g., 'energy self-sufficiency (self-reliance)', 'independence', 'stable supplies'), focusing on maintaining stability (energy security); the *global disparities* frame (e.g., 'disparity', 'inequity',

'lag behind'), highlighting the unequal distribution of the transition's burdens; and the *partisan divide* frame (e.g., 'partisan split', 'divide'), emphasizing the ideological conflicts about energy issues.

5. The *moral duty* frame was grounded in the dual reality of the *necessity* frame (e.g., 'must', 'need', 'should', 'necessary', 'urgent'), presenting the transition as a means of survival, and the *global disparities* frame, creating a moral obligation for addressing global inequalities.
6. The *emotional* frame was contextualized through the lens of both *hope* frames (e.g., 'clean energy future', 'expect', 'hope', 'believe', 'anticipate', 'potential', 'opportunity'), presenting the transition as a pathway to a better quality of life, and *uncertainty* frames ('uncertainty', 'skepticism', 'concern', 'fear'), highlighting public anxiety regarding new technologies.

5. Conclusions

This study aimed to identify and analyze lexical patterns and rhetorical strategies as framing tools in the news coverage of English-language mainstream media outlets from five major countries leading the global energy transition (Brazil, China, India, the UK, and the USA) during the peak years of the energy crisis (1 August 2021–31 December 2024).

The results of this study confirmed the increased media attention to the energy transition during the main phase of the global energy crisis (from 1 August 2021 to 31 December 2024) across all five media outlets, which contributed to the salience of the issue and highlighted the role of the analyzed media in setting the public agenda (Carroll, 2024; Y. Chen & Rowlands, 2022; Valenzuela & McCombs, 2019). Through intense reporting, the analyzed media outlets not only broadcast the news on the energy transition but also constructed a reality in which the transition became the only way out of the global energy crisis. The disparity in news coverage, with *China Daily* leading the sample and *Folha International* having the lowest number of publications, indicated that while some nations used the media to promote their image as leaders in the transition, others tailored their communication to specific international audiences.

CB-CDA revealed four key themes in the news coverage, including (geo)political, economic, environmental, and technological themes. The findings also showed that high-frequency words and collocations of the word 'energy'—such as 'new', 'clean', 'sustainable', 'need', 'would', and 'could'—often combined technical terminology with *emotional* and *moral duty* framing, which contributed to justifying a political agenda and constructing a narrative that shaped public perceptions (Van Dijk, 2015). Collocations such as 'minister', 'agency', 'price', and 'bills' created an economic and political context, shifting the focus from the purely environmental and technological aspects of the energy transition debates to the economic and political dimensions (G. Liu et al., 2024; Mayer & Parks, 2024; Mercado-Saez et al., 2022; Mourão et al., 2024).

CB-CDA identified six key generic frames in the news coverage, which were further contextualized during RDA. These frames often shifted the focus toward economic consequences, conflict, and responsibility, thereby constructing narratives that reflect (geo)political and commercial interests in the discourse. Furthermore, the analysis of concordances identified the statements that contained the most common rhetorical appeals in the news coverage of the transition, including appeals to authority and energy companies, energy and scientific experts, green investments, energy partnerships and patriotism, and emotions.

RDA found that appeals to political actors were often employed, attributing the responsibility to specific political leaders, energy regulators, or parties. It became evident that the British, American, and Brazilian mainstream media outlets focused more on partisan

divides, framing energy policies as a conflict between parties, whereas the Chinese and Indian media outlets emphasized energy partnerships and patriotism, framing the transition as a way to energy security and highlighting their dominance in green technologies as well as international cooperation (C. Chen & Liu, 2025). The lesser reliance on scientific experts and facts across all five media outlets proved that they were not the key determinants of how the transition was framed, indicating the dominance of elite voices and the role of economic factors (Herman & Chomsky, 2008; Hirt, 2024; Zukas, 2017). By contrast, the heavy reliance on appeals to green investments across all five media outlets highlighted an *economic consequences* framing, presenting the transition primarily as a financial opportunity for economic growth rather than as a scientific or ecological necessity.

Moreover, RDA also revealed the use of emotionally charged language, rhetorical devices, and strategies, including emotional epithets, hyperboles, idioms, metaphors, parallelism, inclusive pronouns, and generalizations, which served not only as rhetorical tools but also as powerful emotional framing tools for shaping political reality (Burke, 1969) and guiding public opinion either in favor of or against the energy transition. Modality highlighted the *moral duty* framing, which positioned the shift not merely as a necessity but also as a moral obligation to legitimize political actions. It was also found that some appeals shifted the media focus from renewable energy sources to nuclear energy and fossil fuels (J. C. Liu & Lee, 2025). Fossil fuels were often portrayed in a contradictory way, both as a 'bridge fuel' and as a 'problem', whereas nuclear energy was seen as a part of the energy mix, which contributed to polarizing public opinion on energy issues. Overall, CB-CDA identified issue-specific frames that were defined by the appearance of certain collocations, rhetorical appeals, and devices (the *economic opportunities*, *technological progress* and *challenges*, *global leadership* and *corporate greenwashing*, *energy security and independence*, *partisan divide*, *necessity*, *global disparities*, *hope* and *uncertainty* frames), which also contributed to the duality of news coverage and underscore the politicized and market-driven nature of the energy transition discourse.

The findings of this study align with Van Dijk's (2015) approach that explains how language choices reflect cognitive structures, which helps in understanding manipulation through language. The results also prove the relevance of Lippmann's (1929/2021) ideas, demonstrating how mediated communication shapes the 'pictures in our heads' and, thus, influences democratic processes. Furthermore, the findings correlate with the theoretical framework of Burke (1969). The use of inclusive pronouns (e.g., 'we', 'us', 'our') fosters a sense of unity between the speaker and the audience, thereby framing the transition as a collective goal. Burke's dramatistic pentad also provides a valuable lens for analysis. For instance, framing the transition as a moral imperative rather than a technical challenge alters how the issue is perceived. Finally, Burke's notion that language is a mode of action confirms that rhetorical appeals are employed not merely to describe reality but also to actively shape it, thereby linking language and discursive patterns to the construction of political reality.

To conclude, this study offers useful insights for journalists and media professionals seeking to analyze and create more informed and objective content. Studying rhetorical strategies and lexical patterns is crucial for both developing media literacy skills and analyzing their influence on public perceptions, on the one hand, and for detecting confirmation bias and tackling media manipulation on the other hand.

6. Limitations of the Study

Nonetheless, the analysis of this study is constrained by English-language bias and a focus on advanced economies, which may limit the generalizability of its findings. This research examined mainstream news outlets in five countries, but only their English-

language versions. This is a particular limitation for the Brazilian news sample, given its smaller size, as well as for the Chinese and Indian news samples, and another limitation is due to the differences between them and other English-language outlets (the UK and US) in terms of resources, audience, and editorial treatments. By focusing only on English, this study missed the discourse in Portuguese, Chinese, and Hindi, which is likely much richer than what is translated for international editions.

Yet, this study found similarities across all five media outlets in their rhetorical framing of the energy transition, with a common emphasis on the dominant appeals to political authorities, experts, green investments, emotions, and energy patriotism and partnerships. Although these five media outlets represent different political leanings, their framing of the energy transition remained remarkably consistent during the 2021–2024 energy crisis. Further comparative research might also be conducted to examine whether the rhetorical uniformity identified in this study is unique to the energy transition reporting or is characteristic of all English-language reporting in Western-style news publications.

Furthermore, the sample was skewed toward advanced economies. While China, India, and Brazil were included to provide contrasting perspectives of major emerging economies and diverse political and cultural contexts, many other countries should be prioritized in future studies of the news coverage of the energy transition. Additionally, this study focused only on news reporting rather than opinion pieces, which could have provided some additional nuances and enriched a future analysis.

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