AI, Energy, and Environmental Responsibility: A Discourse Analysis of Corporate Sustainability Narratives

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**Abstract**

The rapid growth of artificial intelligence (AI) technology has raised concerns about its environmental impact. AI systems require large amounts of computing power which leads to high energy consumption, including electricity and water, and produces a significant amount of carbon emissions. As AI continues to advance, it is crucial to examine how companies in the AI industry communicate their environmental responsibilities, especially considering the substantial ecological toll that AI technology can impose. My study focuses on investigating how leading AI companies and their executives talk about environmental responsibility in public communications. Specifically, it explores whether these companies demonstrate genuine commitments to sustainability or engage in greenwashing—using misleading claims to appear environmentally friendly while avoiding meaningful actions. By reviewing corporate communication materials such as sustainability reports, public interviews, social media posts, and official website content, this research aims to understand how AI companies present their environmental efforts and whether their rhetoric matches their actions. For this research, I have selected four major AI companies. The companies are Google, Microsoft, OpenAI, and xAI. These companies are recognized as leaders in the AI field, and their public communication will serve as the primary focus of this analysis. To explore the communication strategies used by these companies, social media platforms such as Facebook, YouTube, LinkedIn, and X will be examined, as these platforms are key spaces where companies and their leaders interact with the public. In addition, the study will analyze sustainability reports, press releases, and blogs available on the companies’ official websites to gain deeper insights into their environmental claims. The study aims to answer several key research questions. My specific research questions are 1) How do leading AI companies frame their environmental responsibilities in their corporate communication materials? 2) What themes and narratives are dominant in their messaging concerning energy efficiency and sustainability? 3) Do the environmental claims made by these companies reflect genuine responsibility, or are they examples of greenwashing? 4) How do corporate leaders use public communication channels to discuss their companies’ environmental initiatives? To answer these questions, I will use qualitative discourse analysis, focusing on identifying the key themes and narratives used by the companies in relation to energy efficiency, carbon neutrality, and environmental sustainability. My study will pay particular attention to how the companies promote green initiatives, such as developing energy-efficient AI models, investing in renewable energy, and participating in carbon offset programs. I will apply theories of Corporate Social Responsibility and Greenwashing as theoretical background for my study to assess whether the companies' public rhetoric aligns with their actual environmental actions.

Through this study I aim to provide a critical examination of how AI companies and their leaders frame their environmental responsibilities in public discourse. The findings will reveal the extent to which these companies are transparent about their environmental impact and the strategies they use to shape public perceptions. This research is important because it contributes to the growing body of literature on environmental communication and corporate social responsibility, especially in the context of the tech industry. By examining how AI companies balance technological innovation with ecological accountability, the study provides valuable insights into the communication strategies used by major tech firms. The findings of this study also have practical implications too. Firstly, they can help policymakers develop stronger regulations for evaluating and verifying corporate environmental claims, reducing the prevalence of greenwashing. As AI technology continues to expand, there is an urgent need for clearer guidelines and transparency in reporting environmental impact. Secondly, the research emphasizes the importance of leadership communication in shaping public narratives about sustainability. Corporate leaders play a key role in influencing how companies are perceived in terms of their environmental responsibility. By examining the discourse of AI companies, this study hopes to contribute to a more honest conversation about the environmental impact of technology and the role of corporate responsibility in addressing the global environmental crisis.

**Keywords:**

Artificial Intelligence, Greenwashing, Environmental Sustainability, Environmental Responsibility, Tech Companies

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