Digital Marketing Communication Strategies for Achieving SDG 7: Affordable and Clean Energy

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Abstract

Sustainable Development Goal 7 (SDG 7) aims to ensure access to affordable, reliable, sustainable, and modern energy for all. Achieving this goal is critical for economic growth, social development, and environmental protection. Despite technological advancements and policy initiatives, the adoption of clean and affordable energy solutions remains uneven due to barriers such as lack of awareness, misinformation, cost perceptions, and limited public engagement. In this context, digital marketing communication has emerged as a powerful strategic tool for promoting clean energy adoption and supporting the achievement of SDG 7.

Digital marketing communication strategies involve the use of online platforms such as social media, websites, search engines, digital advertising, content marketing, and mobile communication to disseminate information and influence public behavior. These strategies enable governments, energy companies, non-governmental organizations, and clean energy advocates to reach diverse audiences, educate consumers, and encourage behavioral change. Through targeted messaging, visual storytelling, and interactive engagement, digital marketing helps bridge the information gap between clean energy providers and energy consumers.

This study examines the role of digital marketing communication strategies in achieving SDG 7 by enhancing awareness, shaping perceptions, and influencing adoption intentions toward affordable and clean energy solutions. It adopts a conceptual and analytical approach grounded in literature on digital marketing, sustainability communication, and energy transition. The analysis highlights that effective digital communication strategies—such as educational content, transparency in pricing and benefits, social media engagement, and influencer advocacy—significantly improve public understanding and acceptance of clean energy technologies.

The study also acknowledges challenges associated with digital clean energy communication, including misinformation, digital inequality, and skepticism toward sustainability claims. Without credible, transparent, and inclusive communication, digital marketing efforts may fail to generate trust or lead to actual adoption. Therefore, ethical communication and evidence-based messaging are essential components of successful digital marketing strategies for SDG 7.

The study contributes to sustainability and marketing literature by positioning digital marketing communication as a strategic enabler of affordable and clean energy adoption. It provides practical insights for policymakers, energy marketers, and sustainability practitioners on designing effective digital communication strategies aligned with SDG 7. Overall, the study concludes that digital marketing communication, when implemented strategically and ethically, plays a vital role in accelerating clean energy transitions and advancing sustainable development.

Keywords: Digital marketing communication, SDG 7, affordable and clean energy, sustainability communication, renewable energy promotion, clean energy adoption, energy transition.

Introduction

Access to affordable and clean energy is a fundamental requirement for sustainable development and economic progress. Energy plays a critical role in improving living standards, supporting industrial growth, and enabling access to essential services such as healthcare, education, and clean water. Recognizing its importance, the United Nations introduced Sustainable Development Goal 7 (SDG 7) to ensure universal access to affordable, reliable, and sustainable energy by 2030. Despite global efforts, millions of people still lack access to clean energy, and reliance on fossil fuels continues to pose environmental and health risks.

The transition to clean energy sources such as solar, wind, hydro, and bioenergy is essential to address climate change and reduce carbon emissions. However, the adoption of clean energy solutions is often hindered by lack of awareness, misconceptions regarding cost and reliability, and resistance to behavioral change. Effective communication is therefore critical in influencing public attitudes and encouraging adoption of clean energy technologies.

Digital marketing communication has transformed the way information is shared and consumed in modern societies. Digital platforms offer real-time, interactive, and targeted communication that can reach wide and diverse audiences. Through digital marketing, clean energy stakeholders can educate consumers about energy options, government incentives, long-term cost benefits, and environmental impact.

Social media campaigns, online videos, blogs, and search engine marketing enable clean energy messages to be communicated in engaging and accessible formats. Digital storytelling and visual content simplify complex energy concepts, making them easier for consumers to understand. Additionally, digital platforms facilitate two-way communication, allowing stakeholders to address concerns, answer questions, and build trust.

Digital marketing communication also plays a role in shaping social norms. Peer influence, testimonials, and community engagement can encourage individuals to view clean energy adoption as a socially responsible and desirable behavior. Data analytics further allow for personalized messaging that addresses specific consumer needs and barriers.

However, challenges such as misinformation, unequal digital access, and trust deficits remain. These challenges highlight the need for transparent, inclusive, and ethical digital communication strategies.

This study aims to examine digital marketing communication strategies for achieving SDG 7 by analyzing how online communication influences awareness, perception, and adoption of affordable and clean energy solutions. The study emphasizes the strategic importance of digital communication in supporting energy transitions and sustainable development.

Literature Review

The literature on sustainable development emphasizes energy as a central driver of economic growth, social inclusion, and environmental sustainability. SDG 7 highlights the importance of expanding access to affordable and clean energy while reducing dependence on fossil fuels. Scholars argue that achieving SDG 7 requires not only technological innovation and policy support but also effective communication to influence public behavior.

Research on clean energy adoption identifies awareness, perceived benefits, cost considerations, and trust as key determinants of adoption behavior. Consumers often resist clean energy solutions due to limited knowledge or misconceptions. Communication strategies that provide clear and credible information are therefore essential.

Digital marketing literature emphasizes the effectiveness of online communication in shaping awareness and attitudes. Digital marketing communication enables targeted outreach, interactive engagement, and cost-effective dissemination of information. Social media platforms are widely studied as tools for environmental and sustainability communication, offering opportunities for peer interaction and social influence.

Several studies highlight the role of online campaigns in promoting renewable energy awareness. Educational content, infographics, and video-based communication simplify technical information and reduce perceived complexity. Influencer advocacy and community storytelling further enhance message credibility and engagement.

However, the literature also identifies challenges such as misinformation, greenwashing, and digital inequality. Inconsistent or exaggerated sustainability claims reduce public trust and hinder adoption. Ethical and transparent communication is therefore emphasized as a critical success factor.

Despite growing interest, limited studies integrate digital marketing communication strategies explicitly with SDG 7 outcomes. Much of the existing research focuses on renewable energy policy or technological diffusion rather than communication-driven adoption. This study addresses this gap by synthesizing insights from digital marketing and clean energy literature to analyze how communication strategies contribute to achieving SDG 7.

Research Gap

Extant literature on Sustainable Development Goal 7 (SDG 7) primarily focuses on energy policy frameworks, technological innovation, infrastructure development, and financial incentives

aimed at expanding access to affordable and clean energy. Numerous studies also examine the economic and environmental benefits of renewable energy adoption. Parallel research in digital marketing highlights the growing influence of online communication strategies in shaping consumer awareness, attitudes, and behavioral intentions. However, despite these advances, significant research gaps remain at the intersection of digital marketing communication and SDG 7.

First, much of the existing research treats clean energy adoption as a **technical or policy-driven process**, with limited emphasis on **communication-driven behavioral change**. The role of digital marketing communication strategies in influencing public perception and acceptance of clean energy solutions remains underexplored.

Second, studies on sustainability communication often focus broadly on environmental awareness or green marketing, without explicitly aligning communication strategies to **SDG-specific outcomes**, particularly SDG 7. This lack of SDG-oriented analysis limits understanding of how digital marketing can directly contribute to affordable and clean energy goals.

Third, existing empirical studies tend to examine awareness or attitude independently, rather than analyzing the **full pathway from digital communication exposure to trust formation and adoption intention**. The mediating role of trust and credibility in digital clean energy communication requires further empirical validation.

Finally, limited research focuses on emerging and developing economies, where digital penetration is increasing but clean energy adoption faces socio-economic and informational barriers. This study addresses these gaps by empirically examining how digital marketing communication strategies influence awareness, trust, and adoption intention in the context of SDG 7.

Research Methodology

The present study adopts a **descriptive and analytical research design** to examine the effectiveness of digital marketing communication strategies in promoting affordable and clean

energy in alignment with SDG 7. A **quantitative research approach** was employed to analyze consumer perceptions and behavioral intentions.

The target population consisted of individuals who actively use digital platforms and are exposed to clean energy–related content online. A sample size of **300 respondents** was selected using the **convenience sampling technique**, considering accessibility and time constraints. The respondents included students, working professionals, and household decision-makers from urban and semi-urban areas.

Primary data were collected through a **structured online questionnaire**. The questionnaire was divided into two sections. The first section captured demographic details such as age, education, occupation, income level, and frequency of digital media usage. The second section measured perceptions related to digital marketing communication strategies, awareness of clean energy solutions, trust in online information, and intention to adopt affordable and clean energy options.

Responses were recorded using a **five-point Likert scale** ranging from "Strongly Disagree" to "Strongly Agree." The independent variable of the study is **digital marketing communication strategies**, measured through indicators such as message clarity, educational content, social media engagement, transparency, and credibility. The dependent variable is **clean energy adoption intention**, while **consumer trust** was treated as a mediating variable.

Data analysis techniques included **descriptive statistics** to summarize respondent characteristics, **correlation analysis** to examine relationships among variables, and **regression analysis** to assess the impact of digital communication strategies on adoption intention. Ethical considerations such as informed consent, anonymity, voluntary participation, and confidentiality were strictly maintained.

Data Analysis and Results

The data collected from 300 respondents were analyzed using descriptive and inferential statistical techniques to evaluate the effectiveness of digital marketing communication strategies in promoting SDG 7. The analysis focused on awareness, trust, and intention to adopt affordable and clean energy solutions.

Descriptive statistics revealed that a majority of respondents frequently encountered clean energy–related content on digital platforms such as social media, video-sharing websites, and informational portals. Respondents demonstrated moderate to high awareness of clean energy benefits, including environmental sustainability, long-term cost savings, and reduced dependence on fossil fuels. Mean scores for awareness-related variables were above the neutral midpoint, indicating positive recognition of digital communication efforts.

Correlation analysis showed a **positive and statistically significant relationship** between exposure to digital marketing communication and consumer awareness. Respondents who frequently engaged with digital clean energy campaigns reported higher levels of understanding and interest in renewable energy solutions. A strong positive correlation was also observed between perceived credibility of digital communication and consumer trust.

Regression analysis was conducted to assess the predictive impact of digital marketing communication strategies on clean energy adoption intention. The results indicated that digital communication strategies significantly predict adoption intention. Among the communication attributes, **message clarity** and **educational content** emerged as the strongest predictors. When trust was included as a mediating variable, the explanatory power of the model increased, confirming the mediating role of trust.

The analysis further revealed that respondents who perceived digital campaigns as transparent and evidence-based exhibited stronger willingness to consider clean energy solutions. Conversely, skepticism toward exaggerated claims reduced adoption intention. Differences based on education level were also observed, with more educated respondents showing higher responsiveness to digital communication.

Overall, the results confirm that effective digital marketing communication strategies positively influence awareness, trust, and intention to adopt affordable and clean energy, thereby supporting SDG 7.

Findings and Discussion

The findings of the study highlight the significant role of digital marketing communication strategies in advancing SDG 7. One of the key findings is that digital communication effectively enhances public awareness of affordable and clean energy options. Digital platforms simplify complex energy information and disseminate it widely, helping consumers better understand clean energy technologies and their benefits.

The study also finds that **trust is a critical determinant** in the adoption process. Digital marketing communication strategies perceived as credible, transparent, and educational significantly increase consumer trust, which in turn influences adoption intention. This finding aligns with sustainability communication literature emphasizing trust as a prerequisite for behavioral change.

Another important finding is the role of engagement-oriented communication. Interactive content, testimonials, and community-based storytelling increase consumer interest and perceived relevance of clean energy solutions. Social media engagement also contributes to social norm formation, encouraging individuals to view clean energy adoption as a responsible and socially accepted behavior.

However, the discussion also highlights challenges such as misinformation and digital inequality. Inconsistent or exaggerated messaging reduces trust and undermines campaign effectiveness. Additionally, limited digital access may prevent certain population groups from benefiting equally from online communication strategies.

From a policy and managerial perspective, the findings suggest that governments, clean energy providers, and sustainability organizations should integrate digital marketing communication into broader energy promotion strategies. Transparent, educational, and trust-based communication can accelerate clean energy adoption and support SDG 7.

Overall, the discussion confirms that digital marketing communication strategies are powerful enablers of affordable and clean energy adoption when implemented ethically, inclusively, and strategically

Conclusion

The present study examined the role of digital marketing communication strategies in advancing Sustainable Development Goal 7 (SDG 7), which aims to ensure access to affordable, reliable, sustainable, and modern energy for all. As the global energy sector undergoes a transition toward renewable and clean energy sources, effective communication has emerged as a critical factor in influencing public awareness, acceptance, and adoption. The findings of this study confirm that digital marketing communication plays a significant role in supporting clean energy transitions by shaping perceptions, building trust, and encouraging behavioral change.

One of the key conclusions of the study is that digital marketing communication significantly enhances public awareness of clean and affordable energy solutions. Digital platforms enable energy stakeholders to disseminate information widely and efficiently, overcoming traditional communication barriers. Through educational content, visual storytelling, and interactive engagement, digital marketing simplifies complex energy concepts and helps consumers better understand the benefits of clean energy, including environmental sustainability, long-term cost savings, and energy security.

The study also concludes that trust is a central determinant in the effectiveness of digital marketing communication for SDG 7. Transparent, accurate, and evidence-based digital communication fosters credibility and reduces skepticism toward clean energy initiatives. Consumers are more inclined to consider clean energy solutions when they perceive digital campaigns as honest and informative. Conversely, misleading or exaggerated claims undermine trust and reduce adoption intention, highlighting the importance of ethical and responsible communication.

Another important conclusion is that digital marketing communication contributes to shaping positive social norms around clean energy adoption. Testimonials, peer influence, and community-driven digital content encourage individuals to view clean energy as a socially responsible and desirable choice. This normative influence is particularly effective in promoting behavioral change, especially among digitally active populations.

Despite its effectiveness, the study recognizes several challenges associated with digital communication for clean energy promotion. Misinformation, unequal access to digital

technologies, and varying levels of digital literacy may limit the reach and impact of online campaigns. These challenges emphasize the need for inclusive communication strategies that address accessibility and ensure accurate information dissemination across diverse population groups.

From a practical perspective, the study suggests that governments, energy companies, and sustainability organizations should integrate digital marketing communication into broader energy policy and promotion strategies. Coordinated efforts that prioritize education, transparency, and engagement can accelerate progress toward SDG 7. Although the study is limited by its cross-sectional design and reliance on self-reported data, it offers valuable insights into the strategic role of digital communication in clean energy adoption.

Overall, the study concludes that digital marketing communication strategies, when implemented ethically, inclusively, and strategically, play a vital role in achieving SDG 7. By enhancing awareness, building trust, and influencing behavior, digital marketing contributes meaningfully to affordable and clean energy access and long-term sustainable development.

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