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RECEIVED 03 December 2024

ACCEPTED 20 January 2025

PUBLISHED 07 February 2025

CITATION

Kraft P and Kraft B (2025) Public attitudes and the socio-political divide surrounding onshore wind power in Norway.
Front. Sustain. Energy Policy 4:1538828.
doi: 10.3389/fsuep.2025.1538828

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Public attitudes and the socio-political divide surrounding onshore wind power in Norway

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Introduction: Norway's goal to significantly increase onshore wind power production requires building public trust and addressing societal concerns.

Objective: This study investigated Norwegian attitudes toward onshore wind power at national and local levels, examining the influence of socioeconomic factors, the "Anywhere-Somewhere" worldview, climate change denial, and materialism.

Methods: A representative survey of 1,029 Norwegian adults (aged 18 years and above) was conducted.

Results: Public opinion on national onshore wind power development was almost evenly divided, although negative attitudes tended to be more extreme. However, local opposition was significantly higher (60%), primarily because of concerns about environmental impacts (harm to wildlife, visual impacts, noise, and land use). Socioeconomic factors did not predict attitudes, but opposition strongly correlated with a "Somewhere" worldview; this relationship was not mediated by climate change denial or materialism.

Conclusion: Significant public opposition to onshore wind power exists in Norway, particularly within marginalized sociocultural groups.

Implications: Achieving Norway's renewable energy targets requires inclusive policies that address citizen concerns.

KEYWORDS

onshore wind power, attitudes, socioeconomic status, Anywhere-Somewhere, materialism, climate change denial

1 Introduction

Norway is striving to achieve a low-emission society by 2050 (Ministry of Climate and Environment, 2023). Reaching this goal will require extensive electrification across various sectors, including transportation, industry, and heating, and is projected to increase electricity consumption by 85% to ~80 TWh annually (Statnett, 2023). The government's plans emphasize significant developments in onshore and offshore wind energy, along with the expansion of solar energy parks (Norges offentlige utredninger, 2023). The strategy for developing onshore wind energy in Norway has received broad backing from sociopolitical elites, including the government, most political parties, leading environmental organizations, and key industry stakeholders (Heggdal, 2023; Norges offentlige utredninger, 2023).

National energy authorities project a total onshore wind power capacity of 25 TWh by 2030 ([The Norwegian Water Resources and Energy Directorate, 2020](#)). As of 2024, Norway had 1,392 onshore wind turbines across 65 wind farms. These are located in 48 of Norway's 357 municipalities, which are the smallest democratic and administrative units in the country ([Europower, 2024](#)). The number of onshore wind energy parks increased dramatically from <20 to over 60 between 2015 and 2019 ([NTB, 2024](#)), reflecting the transition from viewing onshore wind power as a theoretical climate solution to a tangible reality in many local communities. However, despite an increase in onshore wind power production from 2.8 TWh in 2017 to 14.8 TWh in 2022, production decreased to 14.0 TWh in 2023 ([Øvrebø, 2024](#)). With only one new wind park added that year and no further developments anticipated in 2024, Norway appears to be on track to missing its 2030 wind power capacity goal ([Energifakta Norge, 2024](#)).

This stagnation in development coincides with significant national and local public opposition to onshore wind-energy projects in Norway ([Heldahl et al., 2023](#); [Nationen, 2024](#); [Solvang, 2021](#)). For instance, two recent national surveys indicated that approximately half of the respondents opposed the further development of wind power in the country ([Nationen, 2024](#); [Tvinnereim and Faleide, 2023](#)). Notably, one study highlighted a substantial increase in opposition to onshore wind power, from <25% in 2014 to ~50% in 2023 ([Tvinnereim and Faleide, 2023](#)). This growing resistance raises concerns as it is crucial to incorporate the perspectives and concerns of all citizens to build trust and foster sustainable energy policies ([Segreto et al., 2020](#)). This situation presents a significant democratic challenge, as the core principle of modern democratic citizenship is the ability of individuals to exert control over their lives and the environments they inhabit.

To better understand public opinion, this study explored attitudes toward onshore wind energy in Norway through three main avenues: general perceptions of wind power development at the national level, attitudes toward nearby local installations, and specific beliefs regarding the advantages and disadvantages of wind energy. We particularly emphasize the perspectives of groups with lower socioeconomic and sociocultural resources, whose voices are often marginalized in the decision-making processes. This underrepresentation compounds with democratic challenges and undermines efforts to achieve genuinely equitable and inclusive governance.

2 Literature review: onshore wind power acceptance

[Wüstenhagen et al. \(2007\)](#) categorized technology acceptance into three distinct types: sociopolitical acceptance, which encompasses broad societal support; community acceptance, which targets local project decisions; and market acceptance, which relates to the adoption of innovations. Expanding on this framework, [Upham et al. \(2015, p. 103\)](#) defined social acceptance as a “favorable or positive response (including attitude, intention, behavior, and, where appropriate, use) related to proposed or existing technology or sociotechnical systems” within

specific social units such as countries, regions, communities, and organizations. Many European countries currently report a robust national public acceptance of onshore wind energy ([Andel, 2023](#)). Although there is significant support for new wind projects within local communities across various nations ([European Climate Foundation, 2021](#)), the implementation process often encounters rising criticism, controversy, and local resistance ([Batel and Devine-Wright, 2015](#); [Fraune and Knodt, 2018](#); [Lindvall, 2023](#); [Reusswig et al., 2016](#); [Segreto et al., 2020](#)).

[Avila \(2018\)](#) reports that since the late 1980s, literature on social attitudes toward wind power initially focused predominantly on the Not In My Backyard (NIMBY) phenomenon and on policy measures aimed at enhancing project acceptance in developed countries. This early emphasis sought to bridge the “social gap” that has historically constrained the growth of the wind energy sector. However, recent research has acknowledged that the opposition to wind power is more complex and multifaceted, extending beyond simplistic NIMBYism ([Aitken, 2010](#); [Bell et al., 2005](#); [van der Horst, 2007](#); [Wolsink, 2007](#)). Variables such as place attachment ([Devine-Wright, 2009](#)), political identity ([Roddis et al., 2018](#); [Vuichard et al., 2019](#)), and psychological and socioeconomic conditions ([Bertsch et al., 2016](#); [Huijts et al., 2012](#)) significantly shape individual reactions to wind turbines.

A prominent concern regarding wind turbines is their visibility. Despite ongoing efforts to minimize their impact, they can never be completely invisible ([Pasqualetti, 2011](#)). This inherent issue has contributed to public opposition, which has intensified with the increasing size and proliferation of turbines ([Agterbosch et al., 2009](#); [Aitken, 2010](#); [Pasqualetti et al., 2002](#)). [Pasqualetti \(2011\)](#) reviewed how these reactions are consistent across various locations, cultures, economies, and jurisdictions.

Local opposition often intensifies in areas where the environmental impacts of wind turbines are perceived to be particularly significant ([Leiren et al., 2020](#); [Ólafsdóttir and Sæþórsdóttir, 2019](#); [Segreto et al., 2020](#)). Residents frequently express specific concerns, viewing these installations as intrusions into their landscapes and daily lives, which complicates the implementation of wind energy projects. Consequently, many regions encounter considerable challenges in developing onshore wind energy due to local resistance rooted in apprehensions about environmental impacts, aesthetics, potential disruptions to community life, and rural tourism ([Klok et al., 2023](#); [Mordue et al., 2020](#); [Ólafsdóttir and Sæþórsdóttir, 2019](#); [Silva and Delicado, 2017](#)).

Opposition to wind turbines encompasses various concerns, including their impact on wildlife, particularly birds and bats (for overview see [Teff-Seker et al., 2022](#)). Local anxiety may include issues of visual aesthetics, radar interference, property values, tourism, and disruptions of tranquility ([Hoen et al., 2019](#); [Rand and Hoen, 2017](#); [Solvang, 2021](#)). Onshore wind energy initiatives frequently face resistance owing to perceived visual impacts and noise pollution ([Anshelm and Haikola, 2016](#); [Devine-Wright, 2007](#); [Rand and Hoen, 2017](#); [Ruddat, 2022](#); [Windemer, 2023](#)). Furthermore, opposition often arises from the perception that external entities impose wind projects on communities ([Linnerud et al., 2022](#); [Wolsink, 2007](#)).

Onshore wind power can adversely affect livelihoods by disrupting local ecosystems and landscapes. For instance, conflicts have arisen in Sweden between Sami communities and wind power development regarding its impact on reindeer herding and their traditional ways of life (Ek and Matti, 2015; Lawrence, 2014). A notable case in Norway involves 277 turbines in the Fosen region that disrupted the traditional reindeer herding practices of the Sami community. This conflict culminated in a landmark 2021 ruling by the Norwegian Supreme Court, which determined that the state had violated the indigenous rights of the Sami community because of the adverse effects of these wind farms on their grazing lands (Kårtveit, 2021; Stranden, 2022). Another wind farm, Øyfjellet, finds itself at the heart of a multifaceted conflict in which local economic benefits, technological challenges, the traditional livelihoods of the Sami people, and cultural and environmental concerns converge. Consequently, the park's future operations and legitimacy continue to be contentious issues attracting significant legal attention and public debate (NRK, 2024).

3 Analytical framework: sociocultural divides, climate change perceptions, and material concerns

The gap between the strategies formulated by socio-political elites and public opposition underscores the necessity of delving into the sociocultural dynamics that shape attitudes toward wind energy. Individuals with lower socioeconomic resources within the social hierarchy provide a vital analytical perspective for examining this issue.

Socioeconomic status (SES) is a complex construct typically assessed using various indicators such as income and education (Galobardes et al., 2007; Hoebel and Lampert, 2020; Kraus et al., 2009). These objective measures reflect access to economic and social resources, and indicate the degree of exposure to adverse environments. SES can also be gauged through an individual's subjective perception of their relative standing within the socioeconomic hierarchy (Adler et al., 2000). By integrating objective and subjective evaluations of SES, we can capture a comprehensive understanding of measurable metrics alongside personal experiences related to resource accessibility and exposure to life stressors compared with others within one's socioeconomic group (Haushofer and Fehr, 2014; Kraus et al., 2009; Pepper and Nettle, 2017).

Overall, the influence of sociodemographic predictors on environmental attitudes is relatively weak (Hadler et al., 2022). Nonetheless, research has shown a correlation between higher income levels and education, and an increased recognition of the reality of climate change (Lee et al., 2015; Lewis et al., 2019; McCright and Xiao, 2014; Xiao and McCright, 2012). Notably, educational attainment has emerged as the strongest predictor of the acceptance of climate change in multiple studies (Lee et al., 2015; Lewis et al., 2019). This phenomenon may be partially attributed to education fostering scientific literacy (Betancur et al., 2018), which significantly influences individuals' understanding of and attitudes toward scientific topics, including

energy technologies, according to the science literacy model (Light et al., 2022; Nisbet and Goidel, 2007). Moreover, numerous studies have demonstrated a positive association between scientific literacy and favorable attitudes toward various sustainable energy sources (Greenberg and Truelove, 2010; Stoutenborough et al., 2013).

However, the relationship between socioeconomic factors and acceptance of climate change may be more complex. Economic security and access to information also appear to be instrumental. Due to limited economic resources, individuals with lower SES often exhibit higher rates of delay discounting and shorter time horizons (Bickel et al., 2014; Frankenhuis et al., 2016; Oshri et al., 2019). Consequently, they may prioritize immediate material needs over the long-term negative consequences of climate change. This emphasis on short-term concerns can hinder the acceptance of innovative energy projects even when broader environmental benefits are acknowledged. Furthermore, higher educational attainment is positively correlated with the belief that climate change is occurring and human-induced (Hornsey et al., 2016). Several studies have indicated that pro-environmental beliefs and concerns correlate positively with greater acceptance of sustainable energy technologies (Kammermann and Dermont, 2018; Scovell et al., 2024).

Despite these insights, research exploring the intersection of socioeconomic variables with climate change perceptions and attitudes toward various sustainable energy sources remains limited. Rand and Hoen (2017) emphasize that exploring this interplay is crucial for a comprehensive understanding of the issues at hand.

To achieve a more holistic understanding of the social dynamics involved in energy transition, it is essential to incorporate a broader conception of individuals' subjective assessments of their social standing, perceived access to resources, power, and opportunities for empowerment. Although existing studies often yield inconsistent findings related to the factors influencing the acceptance of renewable energy systems (Heiskanen and Matschoss, 2017), aspects such as representation, transparency, and fairness of regulations are critical in addressing the societal and institutional challenges linked to energy transitions (Enevoldsen and Sovacool, 2016). Thus, there is an urgent need to expand traditional theoretical frameworks to cultivate a more nuanced understanding of how socio-political attitudes inform the acceptance of energy systems.

Here, we draw on Goodhart's (2017) framework of "Anywheres" and "Somewheres" to examine how distinct socio-political worldviews influence perspectives on identity and belonging, subsequently shaping attitudes toward social and environmental issues. Anywheres are typically younger, urban, and highly educated individuals who tend to embrace globalization and advocate for social change. They are characterized as "individualists and internationalists," prioritizing personal autonomy and self-fulfillment above community ties, stability, and tradition (p. 24). Representing a mobile demographic, Anywheres pursue higher education at residential universities and transition into professional roles, often without returning to their origins (p. 23).

Conversely, Somewheres are generally older, often originating from rural areas, and characterized by lower education levels and income. Frequently leaving school before completing the

A levels, they typically come from more stable middle- and lower-class backgrounds in small towns or suburban regions (p. 24). The Somewheres emphasize the significance of local communities and established traditions, embodying a sense of “social conservatism and communitarianism” (p. 5). Although they share some aspirations with Anywheres, they tend to advocate a more gradual and measured approach to change (p. 6). This group is deeply integrated into its communities, demonstrating strong local and national affiliation (p. 24).

Goodhart postulates that the Anywhere-Somewhere divide should be understood as a continuum rather than a strict binary, encompassing a diverse range of individual experiences and perspectives. This framework captures a fundamental aspect of modern democratic citizenship, enabling individuals to maintain a certain level of control over their lives. However, the dominance of Anywheres in societal and political narratives has led to the marginalization of Somewheres, who are often overlooked (Goodhart, 2017, p. 7). This sense of disenfranchisement resonates with groups labeled as “deplorables,” such as certain Trump supporters and Brexit advocates, who perceive themselves as being dismissed by mainstream political discourse (p. 3).

Moreover, many Somewheres face economic challenges stemming from the decline in well-paying jobs available to individuals without formal qualifications, resulting in cultural loss and the erosion of their distinct working-class identity. Their perspectives are increasingly sidelined, contributing to feelings of alienation and frustration within their communities (Goodhart, 2017, p. 8).

Empirical research indicates that the Anywhere-Somewhere continuum can effectively predict political attitudes and party affiliations in Norway, independent of conventional socioeconomic factors, as demonstrated by Giske (2023). This suggests that in addition to conventional socioeconomic indicators, the framework reflects deeply rooted worldviews that significantly shape public opinion. Thus, to fully understand how different groups respond to large-scale energy infrastructure projects, particularly in terms of attitudes toward onshore wind energy, it is essential to consider these value-based divisions and the perceptions of marginalization experienced by Somewhere. Failing to account for these perspectives while focusing solely on socioeconomic variables risks misinterpreting the dynamics of public sentiment.

The Anywhere-Somewhere framework by Goodhart (2017) closely parallels the distinction between cosmopolitan and place-attached individuals. Both categorize people by their connection to place and identity: Anywheres aligns with cosmopolitans, who value global mobility, diversity, and fluid identities, whereas Somewheres mirrors place-attached individuals, emphasizing local customs and community loyalty. This reflects the tension between globalism and localism that influences political ideologies and responses to global issues. Goodhart’s model ties these identities to specific socio-political contexts, whereas the cosmopolitan vs. place-attached discussion, as seen in Beck (2006) and Appiah (2019), focuses on the broader cultural and ethical dimensions of global citizenship. Although Goodhart hints at socioeconomic divides, the cosmopolitan framework can be applied across different strata, but centers on cultural attitudes. These frameworks help us understand the modern social dynamics and policymaking concerning globalization and sustainability.

We anticipate that Goodhart’s (2017) “Anywhere-Somewhere” framework will shed light on how these differing worldviews contribute to societal tensions surrounding energy transition. Individuals categorized as “Anywheres,” who tend to embrace globalization and innovation, are more likely to acknowledge the reality of climate change and support sustainable energy initiatives. In contrast, “Somewheres,” who prioritize local communities and traditional values may approach these energy initiatives with skepticism, viewing them as disruptive to established practices or even as threats to their way of life. By understanding these attitudes, we can better navigate the complexities of public opinion on energy transitions and develop strategies to address the diverse needs and concerns of both groups.

4 Research questions

The study addresses the following hypotheses:

H1: Despite national policies, Norwegian attitudes toward national onshore wind projects are divided, with a substantial proportion expressing negative views.

H2: Opposition to onshore wind projects is significantly higher when projects are located near respondents’ homes than at the national level.

H3: The perceived disadvantages of onshore wind energy (e.g., environmental impacts and visual intrusion) outweigh the perceived advantages (e.g., clean energy and job creation) in shaping public attitude.

H4: Individuals with a lower SES express more negative attitudes toward onshore wind energy.

H5: Individuals identifying more strongly with a “Somewhere” worldview will exhibit more negative attitudes toward onshore wind energy than those identifying with an “Anywhere” worldview.

H6: Material concerns and climate change denial are associated with more negative attitudes toward onshore wind energy.

H7: The relationships between SES/Anywhere-Somewhere orientation and attitudes toward onshore wind energy will be partially mediated by material concerns and denial of climate change.

5 Methods

5.1 Data and respondents

In April 2024, data were collected from participants in the Norwegian Kantar Gallup Panel, which adheres to ISO 25643:2009 standards for the recruitment and management of panel members. This panel comprises 40,000 individuals aged 15 years and older who consented to participate in digital surveys. For this study, our goal was to recruit ~1,000 respondents aged 18 and older. Upon completion of data collection, we obtained 1,029 fully completed surveys from an initial invitation to 3,678 individuals, resulting in a response rate of 28.0%.

Kantar utilized a post-recruitment weighting strategy informed by demographic data from Statistics Norway to account for unequal

TABLE 1 Demographic statistics ($N = 1,029$).

Age	M (SD)	Mdn Range
Variables		
Age (years)	52.8 16.7	54 18–88
	<i>n</i>	%
Gender		
Female	476	46.3
Male	553	53.8
Education		
Primary/lower	38	3.7
Vocational/High school/A-levels	220	21.4
Technical/community college	110	10.7
Undergraduate (BA/BSc/other)	373	36.2
Graduate (MA/MSc/MPhil/PhD)	288	28.0
Income		
>200,000 NOK	45	4.8
200,000–299,999 NOK	49	5.2
300,000–399,999 NOK	118	12.6
400,000–499,999 NOK	155	16.5
500,000–599,999 NOK	185	19.7
600,000–699,999 NOK	150	16.0
700,000–799,999 NOK	93	9.9
800,000–999,999 NOK	77	8.2
1,000,000 or more NOK	68	7.2

M, mean; Mdn, median; SD, Standard deviation.

selection probabilities and varying response rates across different demographic groups. This approach ensures that the final dataset represents the Norwegian population aged 18 and above. Data used in this study are publicly available at <https://osf.io/xxxxxx>. Details of the samples are presented in Table 1.

5.2 Variables

5.2.1 Independent variables

Gender was reported according to the classification in the Norwegian Population Registry, reflecting how the respondents were officially registered as either male or female. Patient age was recorded in years. Income was reported as personal income after taxes and was reported in nine categories, ranging from below NOK 200,000 to NOK 1,000,000 or more. Eighty-nine respondents opted not to disclose their income, resulting in their exclusion from all income-related analyses due to missing values.

Participants' educational backgrounds were assessed across five categories corresponding to the Norwegian educational system from primary education to the MA/PhD level.

Subjective SES was assessed using the MacArthur Scale of Subjective Social Status (Adler et al., 1994). Respondents positioned

themselves on a 10-step ladder representing their socioeconomic rank compared to others in society, with higher numbers indicating a higher status. Six respondents did not provide answers and were excluded from the analysis pertaining to subjective SES.

The Anywhere-Somewhere continuum was assessed using a scale inspired by Goodhart (2017) and empirically developed and validated by Giske (2023) in the Norwegian context. This instrument comprises seven statements: "Those in power do not listen to people like me," "The elite in Norway look down on people like me," "Norwegian traditions are threatened," "Societal changes are happening too quickly," "More decisions should be made in Norway rather than internationally," and "Norway should not become a member of the EU," along with "Labor immigration is negative for Norway." Respondents rated each statement on a 6-point Likert scale ranging from strongly disagree to strongly agree, with higher scores indicating a tendency toward the Somewhere end of the continuum. Some respondents had missing values for certain items, which were replaced by the mean values of those items. A varimax factor analysis identified a one-factor solution that explained 48.2% of the inter-item variance (eigenvalue = 3.4) and exhibited acceptable internal consistency (Cronbach's alpha = 0.8).

5.2.2 Dependent variables

Respondents' attitudes toward onshore wind energy were evaluated using three methods. First, we measured national-level attitudes by asking, "What is your attitude toward constructing wind turbines on land to generate electricity in Norway?" Responses were measured on a 6-point scale, ranging from "very negative" (1) to "very positive" (6). This variable is referred to as the national attitude. Fourteen respondents (1.4%) had missing values for this variable and they were excluded from analysis related to this variable.

Second, we assessed respondents' attitudes toward developing wind energy parks in their local areas by asking, "What is your attitude toward constructing wind turbines to generate electricity on land near where you live?" This question used the same 6-point scale, where "very negative" (1) represented strong opposition and "very positive" (6) indicated strong support. This variable is referred to as local attitude. Twenty-one respondents (2.0%) had missing values and were excluded from the related analyses.

Finally, we assessed the respondents' attitudes by examining their reactions to 12 statements that detail the perceived advantages and disadvantages of onshore wind energy. These statements were developed by our research team based on a comprehensive review of academic literature (Devine-Wright, 2005; Wüstenhagen et al., 2007), an analysis of two national Facebook groups focused on wind power (<https://www.facebook.com/groups/vindkraftutbygging> and <https://www.facebook.com/FornybarNorge>), and a review of articles from the five largest newspapers in Norway. The statements included: "Wind turbines on land... occupy too much space"; "...can help solve the problem of global warming"; "...are expensive to build and operate"; "...contribute to the green transition"; "...create noise problems for those living nearby"; "...can produce clean electricity"; "...are an unstable source of electricity"; "...can help keep electricity prices lower"; "...harm bird and wildlife"; "...could contribute to

many new jobs in Norway”; “. . . will ruin the nature experience for many”; and “. . . can destroy the Sami people’s ability to conduct reindeer herding.” These items were rated on a 6-point Likert scale ranging from “strongly disagree” (1) to “strongly agree” (6). Some respondents had missing values for individual items, which were replaced with the mean values of the items.

Two sumscore indices were calculated. A varimax factor analysis revealed that the seven items reflecting disadvantages formed a one-factor solution (eigenvalue = 4.2, 60.0% explained variance), which was combined into a Disadvantages scale ($M = 4.5$, $SD = 1.0$, Cronbach’s $\alpha = 0.9$). Similarly, a varimax factor analysis indicated that the five items reflecting advantages also constituted a one-factor solution (eigenvalue = 3.7, 73.3% explained variance), and which were combined into an Advantages scale ($M = 3.7$, $SD = 1.2$, Cronbach’s $\alpha = 0.9$).

5.2.3 Mediators

Climate change perceptions were assessed using seven items selected from the Climate Change Perceptions Scale, originally developed by van Valkengoed et al. (2021), and comprising 24 items across seven subscales. Due to economic and space constraints, we opted to include one item from each of the seven subscales, namely acknowledgment (“Climate change is not occurring”), attribution to natural processes (“Natural processes are a major cause of climate change”), attribution to human activities (“Human activities are a major cause of climate change”), perceived positive consequences (“Climate change will bring positive consequences to the world”), perceived negative consequences (“Climate change will bring negative consequences to the world”), immediacy (“It will be a long time before the consequences of climate change are felt”), and proximity (“Regions far away from me will be influenced by climate change”).

Respondents rated each item on a 6-point Likert scale from “strongly disagree” to “strongly agree,” with some items recoded so that higher scores indicate lower acceptance and concern about climate change. The missing values for individual items were replaced with their mean values. A varimax factor analysis revealed a one-factor solution that accounted for 54.8% of the inter-item variance (eigenvalue = 3.8) and demonstrated acceptable reliability (Cronbach’s $\alpha = 0.9$). This scale, termed Denial, encompasses beliefs that either dismiss climate change or perceive it as beneficial, attribute it more to natural causes than to human activities, and regard its impacts as geographically distant and future-oriented.

This study introduces a uniquely tailored scale to evaluate the dynamic relationship between materialism and climate change concerns. Here, materialism is conceptualized as the prioritization of economic and personal gains over environmental considerations, focusing on values such as high wages, reduced tolls, the promotion of car usage, and the extraction of oil and gas for profit, alongside the emphasis on job security. This definition of materialism diverges somewhat from Inglehart’s (1977) concept, which primarily focuses on the pursuit of material comfort and security over broader postmaterialist values such as environmental protection and individual self-expression. Here, materialism is more explicitly tied to specific economic choices and behaviors that could conflict with environmental sustainability. This scale, specifically crafted for this research, comprises six statements: “Wage increases in Norway are more important than preventing

global warming”; “Toll charges should be increased to reduce climate emissions”; “Parking spaces should be removed in cities to reduce car usage”; “Norwegian oil and gas production should continue as long as it is profitable”; “Gasoline and diesel prices should be increased for the sake of the climate”; and “Secure jobs are more important than climate measures.”

Respondents rated these statements on a 6-point Likert scale, with responses recorded to indicate a more materialistic orientation. The missing values for individual items were replaced with their mean values. A varimax factor analysis revealed a two-factor solution: where the first factor, with an eigenvalue of 3.6, explained 60.0% of the variance, and the second factor, with an eigenvalue of 1.0, contributed an additional 17.1%. However, the eigenvalues and scree plot suggest that a one-factor solution is more suitable. Consequently, a composite measure was created using all six items, which demonstrated adequate reliability (Cronbach’s $\alpha = 0.9$). This scale was designated as Materialism.

5.3 Statistical analysis

Descriptive statistics, correlations, and regression analyses were performed using the IBM SPSS Statistics version 29 (IBM Corp., Armonk, NY, USA). We utilized Ordinary Least Squares (OLS) regression analysis with a stepwise approach to systematically evaluate the impact of socioeconomic and sociocultural variables in predicting the dependent variables (the four attitude measures). To examine the roles played by Denial and Materialism in shaping attitudes toward onshore wind energy and how these factors interact with SES and Anywhere-Somewhere orientation to predict attitudes, we employed the PROCESS macro (Model 4) for SPSS, which enables mediation analysis with observed variables using the OLS method (Hayes, 2022). Parameter estimates and 95% bias-corrected confidence intervals for direct and indirect effects were derived using 5,000 bootstrapped samples. Prior to regression and mediation analyses, all variables were standardized into z-scores to facilitate coefficient interpretation and minimize potential multicollinearity.

6 Results

6.1 Attitudes toward onshore wind power

Table 2 illustrates that public sentiment regarding the development of onshore wind power at the national level was divided, with 50.2% of respondents expressing negative attitudes (very, quite, or somewhat negative) and 49.9% indicating positive attitudes (very, quite, or somewhat positive). Those with negative views tended to cluster more toward the extreme negative end of the spectrum, whereas supporters exhibited somewhat less intense positivity. The overall mean attitude leaned toward the negative side ($M = 3.3$).

Public opinion on the development of onshore wind power parks in respondents’ local areas was significantly more negative, with 60.2% expressing negative attitudes compared to 39.9% who reported positive attitudes (M attitude score = 2.9). Notably, there was a strong correlation of 0.87 ($p < 0.001$) between national and local attitudes.

TABLE 2 Attitudes toward onshore wind power (N = 1,029).

National attitude	M	SD
What is your attitude toward constructing wind turbines on land to generate electricity in Norway?	3.3	1.6
	%	n
Very negative (1)	20.4	207
Quite negative (2)	13.7	139
Somewhat negative (3)	16.1	163
Somewhat positive (4)	22.2	225
Quite positive (5)	19.1	194
Very positive (6)	8.6	87
Local attitude	M	SD
What is your attitude toward constructing wind energy parks land near where you live to generate electricity?	2.9	1.6
	%	n
Very negative (1)	30.5	307
Quite negative (2)	14.9	150
Somewhat negative (3)	14.8	149
Somewhat positive (4)	19.3	195
Quite positive (5)	14.7	148
Very positive (6)	5.9	59

M, mean; SD, standard deviation.

Table 3 shows that the respondents perceive disadvantages of wind energy facilities (M = 4.4, SD = 1.3) significantly more than their advantages (M = 3.7) (p < 0.001). Commonly cited disadvantages include potential harm to birds and wildlife, disruption of the natural experience, noise issues for nearby residents, and the land area required for installation. In contrast, the most frequently mentioned advantages are the belief that wind energy can produce clean electricity, contribute to the green transition, and help lower the electricity prices.

There were no gender differences in attitudes toward onshore wind power, either at the national or local level, or in the assessment of advantages vs. disadvantages.

Overall, the results indicate that public sentiment toward onshore wind power is divided, with a small majority of respondents expressing negative attitudes at the national level and more pronounced negativity regarding local developments. Concerns about disadvantages outweigh perceived advantages, and there are no sex differences in attitudes.

6.2 Examining socioeconomic and sociocultural divides in energy attitudes

Table 4 presents the correlations among the study variables. In line with previous research (Kraft and Kraft, 2023), correlations between education, income, and subjective SES were observed. Notably, significant negative correlations were found between a stronger Somewhere orientation and key socioeconomic factors:

TABLE 3 Perceived disadvantages and advantages regarding onshore wind power (N = 1,029).

Specific beliefs: 6-point scale ranging from completely disagree (1) to completely agree (6) Wind turbines on land...	M	SD
Disadvantages		
...harm bird and wildlife	4.7	1.1
...ruin the nature experience for many	4.5	1.4
...create noise problems for those living nearby	4.5	1.2
...occupy too much area	4.4	1.3
...are expensive to build and operate	4.4	1.0
...are an unstable source of electricity	4.1	1.3
...can destroy the Sami people's ability to conduct reindeer herding	4.0	1.5
Advantages		
...can produce clean electricity	4.3	1.3
...contribute to the green transition	3.6	1.5
...can help keep electricity prices lower	3.5	1.4
...can help solve the problem of global warming	3.5	1.5
...could contribute to many new jobs in Norway	3.3	1.3
Sum of disadvantages	4.4	1.0
Sum of advantages	3.7	1.2

M, mean; SD, standard deviation.

education (r = -0.29, p < 0.01), income (r = -0.24, p < 0.01), and subjective SES (r = -0.34, p < 0.01). Age was not correlated with the Anywhere-Somewhere orientation. These findings suggest that individuals with a stronger Somewhere orientation tend to have lower levels of education, income, and subjective SES.

As shown in Table 4, income, education, and subjective SES generally do not correlate with the variables measuring attitudes toward onshore wind power. However, two exceptions were noted: a weak positive relationship between education and the perceived advantages of wind energy (r = 0.08, p < 0.05) and a weak negative correlation between income and the perceived disadvantages of wind energy (r = -0.08, p < 0.05).

In contrast, a stronger Somewhere orientation was correlated with more negative attitudes toward onshore wind power at the national (r = -0.32, p < 0.01) and local (r = -0.31, p < 0.01) levels. Somewhere orientation was also associated with higher levels of perceived disadvantages (r = 0.31, p < 0.01) and lower levels of perceived advantages (r = -0.41, p < 0.01).

Table 5 presents the regression analysis results. Anywhere-Somewhere orientation was identified as the most significant predictor across all four attitude measures (national attitude, local attitude, perceived disadvantages, and perceived advantages), with beta coefficients ranging from -0.36 to -0.44. This indicates a strong negative correlation, suggesting that a Somewhere orientation is associated with more negative attitudes toward wind power. Additionally, subjective SES demonstrated a weak but significant negative association with attitudes in three of the four

TABLE 4 Pearson's correlation (r) between study variables ($N = 1,029$).

	2	3	4	5	6	7	8	9	10	11
1. Age	-0.07	-0.04	0.09**	-0.03	0.01	-0.07*	-0.01	-0.02	0.02	0.00
2. Education		0.39**	0.36**	-0.29**	-0.20**	-0.25**	0.05	0.02	-0.05	0.08*
3. Income			0.42**	-0.24**	-.04	-0.03	0.01	0.04	-0.08*	0.01
4. Subjective SES				-0.34**	-0.08**	-0.17**	0.02	0.01	-0.02	0.07*
5. Anywhere-Somewhere					0.48**	0.53**	-0.32**	-0.30**	0.36**	-0.41**
6. Denial						0.57**	-0.18**	-0.14**	0.05	-0.33**
7. Materialism							-0.23**	-0.21**	0.15**	-0.37**
8. National attitude								0.87**	-0.71**	0.78*
9. Local attitude									-0.70**	0.69**
10. Disadvantages										-0.62**
11. Advantages										

* $p < 0.05$ (two-tailed test); ** $p < 0.01$ (two-tailed test).

measures, indicating that lower subjective SES correlated with more negative views of wind energy. Traditional socioeconomic indicators such as education and income did not significantly predict attitudes, although there was a weak positive correlation between education and perceived advantages. Furthermore, the inclusion of the Anywhere-Somewhere variable significantly improved the overall model fit, with R^2 values increasing from negligible to between 0.10 and 0.17. This underscores the importance of this variable in predicting attitudes toward wind energy development.

6.3 The mediating roles of climate change denial and materialism

As shown in Table 4, education ($r = -0.20$, $p < 0.01$) and subjective SES ($r = -0.08$, $p < 0.01$) are negatively correlated with climate change denial, indicating that individuals with lower levels of education and subjective SES are less likely to recognize and express concern about climate change. No correlation was found between income and climate change denial.

Additionally, Table 4 shows that individuals with lower education levels ($r = -0.25$, $p < 0.01$) and subjective SES ($r = -0.17$, $p < 0.01$) are more inclined to hold materialistic views, whereas no correlation exists between income and materialism.

Anywhere-Somewhere orientation was positively correlated with climate change denial ($r = 0.48$, $p < 0.01$) and materialism ($r = 0.53$, $p < 0.01$), suggesting that individuals with a stronger Somewhere orientation tend to be less concerned about climate change and more materialistic. A strong positive correlation was observed between materialism and climate change denial ($r = 0.57$, $p < 0.01$).

Findings from the mediation model (Table 6 and Figure 1) indicate that the Anywhere-Somewhere orientation directly influences attitudes toward wind power. Specifically, the coefficients show that a stronger Somewhere orientation is correlated with more negative attitudes toward wind energy. This suggests that individuals who align more with a Somewhere

perspective are likely to express discontent with or opposition to wind-energy projects.

In examining the mediation effects, materialism was identified as having a limited but notable role in the relationship between the Anywhere-Somewhere orientation and attitudes, particularly concerning the perceived advantages of wind energy. The indirect effect of materialism in this context was measured at -0.08 , suggesting that higher levels of materialism may dampen positive perceptions of wind energy benefits, although the overall mediation effect was modest.

Conversely, climate change denial did not significantly mediate the relationships for either national or local attitudes. However, it exhibits a slightly negative influence, indicating that higher levels of climate denial are linked to more negative views of the perceived disadvantages and advantages of wind energy. This finding implies that although climate skepticism does not entirely mediate the relationship, it does have a minor effect on exacerbating negative attitudes.

Overall, the total indirect effects derived from materialism and climate change denial were generally small or insignificant, suggesting that these factors do not strongly mediate the direct influence of sociocultural orientation on attitudes toward wind power.

These results collectively highlight that attitudes toward onshore wind energy in Norway are predominantly shaped by sociocultural orientation rather than by traditional socioeconomic variables. This study underscores the importance of sociocultural factors and reveals that climate skepticism and materialism play only a minor role in influencing public attitudes.

7 Discussion

In Norway, public opinion on the national onshore wind power development shows a near-even split between support and opposition, although negative views tend to be more extreme. However, local resistance was substantially higher, with 60% of respondents opposing new projects. There is a strong correlation

TABLE 5 Hierarchical regressions (OLS) of associations between predictors and attitudes toward onshore wind power (beta-coefficients) ($N = 1,029$).

Predictors	Dependent variables			
	National attitude	Local attitude	Disadvantages	Advantages
Model 1				
Gender	-0.02	-0.04	0.07	0.03
Age	0.01	-0.01	0.02	0.02
Education	0.06	0.01	-0.04	0.09*
Income	-0.02	0.03	-0.05	-0.02
R^2	0.00	0.00	0.01	0.01
ΔR^2	0.00	0.00	0.01	0.01
ΔF	0.78	0.67	2.66	1.74
Model 2				
Gender	-0.02	-0.04	0.07	0.02
Age	0.00	-0.01	0.01	0.01
Education	0.06	0.01	-0.04	0.07
Income	-0.02	0.03	-0.05	-0.04
Subjective SES	0.01	0.00	0.02	0.06
R^2	0.00	0.00	0.01	0.01
ΔR^2	0.00	0.00	0.00	0.00
ΔF	0.10	0.00	0.17	2.42
Model 3				
Gender	-0.03	-0.05	0.08*	0.01
Age	-0.01	-0.02	0.02	0.00
Education	0.00	-0.05	0.01	0.00
Income	-0.05	0.00	-0.02	-0.08*
Subjective SES	-0.07*	-0.08*	0.10*	-0.05
Anywhere-Somewhere	-0.36**	-0.34**	0.34**	-0.44**
R^2	0.11	0.10	0.11	0.17
ΔR^2	0.11	0.10	0.10	0.16
ΔF	112.87**	101.40**	100.21**	181.33**

* $p < 0.05$, ** $p < 0.01$.

between attitudes toward national and local development. This opposition is rooted in concerns about the environmental effects of wind power, such as harm to birds and wildlife, visual impacts on landscapes, noise, and land use. Our findings show no significant relationship between socioeconomic factors and attitudes toward wind power. Instead, opposition strongly correlates with a 'Somewhere' orientation; however, this relationship is not mediated by climate change denial or materialism.

Our findings closely align with two recent national surveys of the Norwegian population, which show that approximately half of the respondents oppose further development of wind power in Norway (Nationen, 2024; Tvinnereim and Faleide, 2023). In contrast, national resistance in Norway stands in stark opposition to the ~80% support for wind power seen in countries such as Denmark, Croatia, Portugal, and Romania, suggesting that Norwegian attitudes are more akin to those found in France and

Greece (Andel, 2023). Notably, six out of ten Norwegians oppose local wind power development exceeds the levels of opposition observed in Romania, Denmark, and Slovenia while aligning more closely with the sentiments expressed in the Netherlands, Latvia, and Estonia (Andel, 2023; European Climate Foundation, 2021).

The disparity between national and local attitudes, commonly referred to as the "national-local gap" or "social gap," underscores that general support for wind energy does not necessarily translate into local approval (Batel and Devine-Wright, 2015; Bell et al., 2005; Wüstenhagen et al., 2007). Although early research linked local opposition to the NIMBY phenomenon, there is now a consensus that this concept oversimplifies the motivations and concerns that influence attitudes toward wind power (Devine-Wright, 2005; Rand and Hoen, 2017). Community resistance is increasingly tied to local social, economic, and environmental effects (Hadler et al., 2022). In our study, respondents frequently

TABLE 6 PROCESS macro mediation analysis.

Prediction	<i>b</i>	SE	<i>t</i>	<i>p</i>	95% CI
Anywhere-Somewhere → Materialism	0.53 ^{a,b,c,d}	0.03 ^{a,b,c,d}	19.79 ^{a,b,c,d}	0.000 ^{a,b,c,d}	0.48 to -0.58 ^{a,b,c,d}
Anywhere-Somewhere → Denial	0.48 ^{a,b,c,d}	0.03 ^{a,b,c,d}	17.29 ^{a,b,c,d}	0.000 ^{a,b,c,d}	0.42 to -0.53 ^{a,b,c,d}
Materialism → attitude	-0.08 ^a	0.04 ^a	-2.11 ^a	0.035 ^a	-0.16 to -0.01 ^a
	-0.09 ^b	0.04 ^b	-0.224 ^b	0.0255 ^b	-0.16 to -0.01 ^b
	0.03 ^c	0.04 ^c	0.89 ^c	0.374 ^c	-0.04 to -0.11 ^c
	-0.14 ^d	0.04 ^d	-3.93 ^d	0.000 ^d	-0.21 to -0.07 ^d
Denial → attitude	0.01 ^a	0.04 ^a	0.13 ^a	0.901 ^a	-0.07 to -0.08 ^a
	0.04 ^b	0.04 ^b	1.05 ^b	0.294 ^b	-0.03 to -0.11 ^b
	-0.13 ^c	0.04 ^c	-3.62 ^c	0.000 ^c	-0.21 to -0.06 ^c
	-0.12 ^d	0.04 ^d	-3.36 ^d	0.001 ^d	-0.19 to -0.05 ^d
Anywhere-Somewhere → attitude	-0.28 ^a	0.04 ^a	-7.86 ^a	0.000 ^a	-0.35 to -0.21 ^a
	-0.27 ^b	0.04 ^b	-7.54 ^b	0.000 ^b	-0.35 to -0.20 ^b
	0.36 ^c	0.04 ^c	9.94 ^c	0.000 ^c	0.29 to -0.43 ^c
	-0.28 ^d	0.04 ^d	-8.23 ^d	0.000 ^d	-0.35 to -0.21 ^d
	<i>Effect</i>	<i>BootSE</i>	<i>BootLLCI*</i>	<i>BootULCI*</i>	
Total indirect effect of Anywhere-Somewhere	-0.04 ^a	0.02 ^a	-0.09 ^a	0.00	
	-0.03 ^b	0.02 ^b	-0.07 ^b	0.02 ^b	
	-0.05 ^c	0.02 ^c	-0.09 ^c	0.00 ^c	
	-0.13 ^d	0.02 ^d	-0.18 ^d	-0.09 ^d	
Total direct effect of Anywhere-Somewhere	-0.28 ^a	0.04 ^a	-0.35 ^a	-0.21 ^a	
	-0.27 ^b 0.36 ^c	0.04 ^b 0.04 ^c	-0.35 ^b 0.29 ^c	-0.20 ^b 0.43 ^c	
	-0.28 ^d	0.03 ^d	-0.35 ^d	-0.21 ^d	
Indirect effect via Materialism	-0.04 ^a	0.04 ^a	-0.09 ^a	0.00 ^a	
	-0.05 ^b	0.02 ^b	0.35 ^b	0.000 ^b	
	0.02 ^c	0.02 ^c	-0.02 ^c	0.06 ^c	
	-0.08 ^d	0.02 ^d	-0.12 ^d	-0.03 ^d	
Indirect effect via Denial	0.00 ^a	0.02 ^a	-0.03 ^a	0.04 ^a	
	0.02 ^b	0.02 ^b	-0.02 ^b	0.06 ^b	
	-0.06 ^c	0.02 ^c	-0.10 ^c	-0.03 ^c	
	-0.06 ^d	0.02 ^d	-0.09 ^d	-0.02 ^d	

Climate change denial and materialism as mediators of the relationship between Anywhere-Somewhere orientation and four measures of attitudes toward onshore wind power. Standardized regression coefficients based on 5,000 bootstrap samples. Gender, age, education, income, and subjective SES were included as covariates in the model (*N* = 1029).

*Boots SE and CI (lower and upper levels).

^aEffects on national attitude.

^bEffects on local attitude.

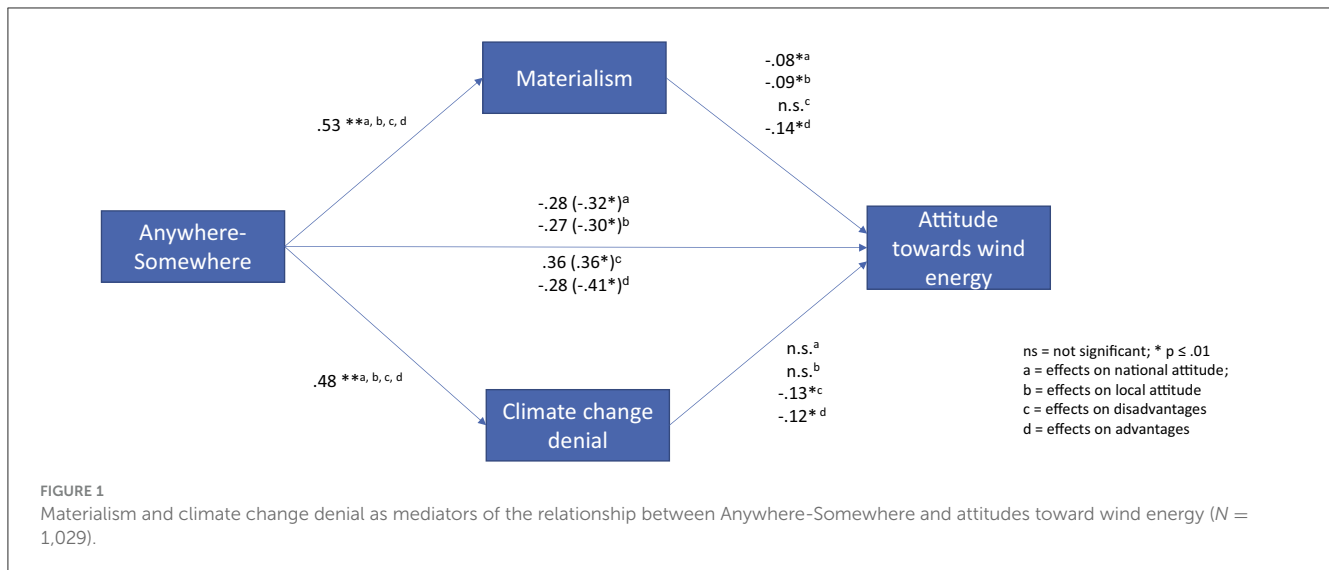
^cEffects on disadvantages.

^dEffects on advantages.

highlighted concerns such as the effects on birds and wildlife, the disruption of natural experiences, noise pollution for nearby residents, and the land required for installations. These issues emphasize the immediate and tangible effects of wind power projects on local communities, particularly regarding ecosystems and health. Conversely, the benefits mentioned, such as clean electricity generation and contributions to green transitions, are often positioned within national or international contexts, making them feel more abstract and distant. This suggests that individuals

prioritize local negative consequences over potential benefits that seem less relevant to their immediate surroundings (Anshelm and Haikola, 2016; Sütterlin and Siegrist, 2017).

These findings complement previous reports suggesting that local opposition in Norway arises from concerns related to the impacts on biodiversity, turbine height, and the land area occupied by wind farms (Solvang, 2021). Procedural and distributive equity issues are also significant, particularly as international ownership of wind projects increased to ~58% during the 2010s, leading to



skepticism about whether these projects genuinely benefit local communities (Linnerud et al., 2022).

As previously noted, several conflicts have emerged in Nordic countries between Sami communities and wind power development concerning the impact of reindeer herding on their traditional way of life (Kårtveit, 2021; Strandén, 2022; Ek and Matti, 2015; Lawrence, 2014). In our national-level study measuring public attitude, the concern that onshore wind farms may jeopardize the ability of the Sami people to engage in reindeer herding was not among the top concerns. However, with an average attitude rating of 4.0, this was a matter of concern.

As hypothesized, our results demonstrated a relationship between a stronger Somewhere orientation and lower socioeconomic indicators such as education, income, and subjective SES. This relationship supports the narratives of cultural and economic disenfranchisement outlined by Goodhart (2017), and affirmed in the Norwegian context by Giske (2023). We observed a relationship between a stronger Somewhere orientation and lower socioeconomic indicators such as education, income, and subjective SES. This association aligns with narratives of cultural disconnection, in which individuals with lower SES are more likely to exhibit materialistic views and deny climate change, suggesting that those with a stronger Somewhere identity tend to be less concerned about climate issues because of their focus on immediate and tangible impacts.

Although socioeconomic variables such as income, education, and subjective SES showed minimal correlations with attitudes toward onshore wind energy, our findings indicate that the Anywhere-Somewhere continuum serves as a strong predictor of these attitudes. Although some correlations were observed among this continuum, materialism, and climate change denial, our mediation hypotheses were largely unsupported, implying a direct influence of the Anywhere-Somewhere divide on attitudes toward wind power. This finding supports Goodhart's distinction between socioeconomic factors and sociocultural identity, emphasizing the critical role of sociocultural values beyond mere economic considerations.

Individuals with an Anywhere orientation prioritize openness and global perspectives, viewing wind power as part of a broader commitment to environmental sustainability. They are more likely to support wind energy projects, likely seeing them as steps toward reducing their carbon footprint and aligning them with international climate goals. In contrast, those with a Somewhere orientation, who value stability and local traditions more strongly, might resist wind power if it is perceived as disrupting their community's landscape or economy. This resistance can stem from a sense of cultural disenfranchisement, in which local voices are ignored in favor of broader, often elite-driven, agendas.

This divide can create tensions between elites advocating for onshore wind energy development and Somewheres, who may feel marginalized by initiatives that overlook their community's immediate needs. Marginalizing Somewhere perspectives in energy debates may foster resistance, as they may perceive elite-driven renewable energy advocacy as an imposition rather than a collaborative effort. Emphasizing solutions that favor Anywheres could exacerbate existing socio-political divides, prompting defensive reactions from communities with stronger Somewhere identities and hindering the acceptance of inclusive, community-led energy initiatives.

This cross-sectional survey has several limitations. First, its reliance on self-reported data could introduce biases, such as social desirability or recall bias, potentially skewing the results. Second, as a cross-sectional design, it captures attitudes at a single point in time, limiting the ability to infer causality or track changes in attitudes over time, which is crucial for understanding the dynamic nature of public opinion on energy projects. Additionally, despite being representative, the study's sample might not fully capture the diversity of opinions, particularly from specific or marginalized groups within Norway, thus potentially overlooking nuanced local variations in attitudes. The use of a provisional questionnaire might also have affected the reliability and validity of the measures because of potential ambiguities or cultural misinterpretations of the survey items. Finally, the mediation analyses showed limited support for the hypothesized pathways, suggesting that other unmeasured

variables or more complex interactions might be at play, which were not accounted for in this study.

The respondents' attitudes toward onshore wind energy were assessed using a six-point Likert scale. Although this approach is less common than five- or seven-point scales, which typically include a neutral midpoint, six-point scales are employed in certain research contexts to encourage participants to express either positive or negative sentiments, thereby minimizing central tendency bias. This technique is particularly effective in studies that require a clear distinction of attitude intensity. Although it deviates from standard practices in some research disciplines, it has demonstrated strong psychometric validity (Leung, 2011).

8 Conclusion, policy implications, and future research

This study highlighted the attitudes and beliefs underlying public opposition to the development of onshore wind power in Norway. Public opinion on national onshore wind power development shows a near-even split between support and opposition, with 60% of respondents opposing new projects in their local communities. Overall, respondents perceived specific disadvantages as outweighing the advantages of such projects. Individuals with a stronger Somewhere orientation, often linked to lower socioeconomic resources, exhibit greater opposition to wind power development than those with an Anywhere orientation. This resistance was not mediated by denial of climate change or materialistic attitudes.

The policy implications drawn from this research suggest that a nuanced approach is necessary for renewable energy projects such as wind power to gain broader acceptance. Engagement must integrate sociocultural considerations to ensure that policies respect and incorporate local values and identities. Ignoring or marginalizing the Somewhere perspective could lead to increased resistance, as it might be viewed as an elite or external imposition. Effective policies would likely involve community-led initiatives or at least co-designed solutions, where the benefits of wind power are clearly linked to local benefits, whether economic, cultural, or environmental. This approach could possibly mitigate resistance by ensuring that renewable energy projects are viewed as part of community development rather than as external impositions, potentially leading to a more harmonious balance between global environmental goals and local community needs.

Future research should delve into the Anywhere-Somewhere continuum as a framework for understanding the various sociocultural divides on issues in which socioeconomic differences have been observed in attitudes. For example, lower SES has been related to having more negative views about mass immigration (Dražanová et al., 2024) and transgender issues (Morgan et al., 2020), whereas they are more positive toward meat consumption (Klink et al., 2022).

It can be anticipated that "Somewheres" would exhibit less support for immigration due to concerns about cultural change and job security, whereas "Anywheres" would likely advocate for immigration, viewing it as a means to promote diversity and stimulate economic growth. Similarly, in the

debate over meat consumption vs. veganism, Somewheres are likely to defend traditional dietary practices against the global vegan movement championed by Anywheres for sustainability purposes. Regarding transgender issues, one might expect that Somewheres would maintain more traditional views in opposition to Anywheres' progressive stance, which tends to support transgender rights as part of a broader commitment to social equality and inclusivity. This interplay of attitudes across various sociocultural issues underscores the potential value of examining the Anywhere-Somewhere continuum in future research.

This framework effectively illustrates the tension between localism and globalism across energy transitions. Exploring these dynamics may involve longitudinal studies that track changes in attitudes toward onshore wind power and provide valuable insights into how public opinion shifts in response to policy changes, technological advancements, and local impacts. It is also crucial to examine the roles of community engagement and participatory processes in shaping acceptance. Understanding how an inclusive framework that respects the concerns and insights of all community members, both Somewheres and Anywheres, can alleviate tensions between elites and the general population, thus enhancing the legitimacy of energy systems.

The findings of the current study raise concerns regarding Norway's wind energy targets, indicating that qualitative research focusing on the narratives and lived experiences of individuals with Somewhere identities could illuminate the sociocultural factors contributing to opposition. Furthermore, comparative studies with other countries facing similar socio-political divides could offer a broader perspective on how the Anywhere-Somewhere continuum shapes energy policy acceptance.

Data availability statement

The datasets presented in this study can be found in online repositories. The names of the repository/repositories and accession number(s) can be found at: <https://osf.io/u8xab/>.

Ethics statement

Ethical approval was not required for the studies involving humans because the participants are adults taking part in a panel which participate in national surveys and have accepted participation and consent upon being recruited to the panel. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

Author contributions

PK: Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Writing – original draft, Writing – review & editing. BK: Conceptualization, Data curation, Formal analysis,

Investigation, Methodology, Writing – original draft, Writing – review & editing.

Funding

The author(s) declare financial support was received for the research, authorship, and/or publication of this article. This study was funded by UiO: Energy and Environment, University of Oslo.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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