LATVIAN JOURNAL OF PHYSICS
AND TECHNICAL SCIENCES
2026, N 3

DOI: 10.2478/lpts-2026-0020

MYTHS AND PARTICIPATION GAPS OF RENEWABLE ENERGY PROJECT RESISTANCE IN LATVIA

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This study examines why renewable energy projects in Latvia face local resistance despite generally high public support for decarbonisation. A mixed-methods approach was applied, combining regulatory and planning system analysis, comparative review of selected EU countries, a national survey (n > 1000), and qualitative stakeholder and focus group insights. The results show clear differences in technology acceptance: solar energy demonstrates high approval across all cases, while energy storage and cogeneration show medium-to-high acceptance. In contrast, wind energy exhibits the lowest and most polarized acceptance levels. Survey and qualitative findings indicate that resistance is not driven by rejection of climate goals, but by three main factors: low trust in institutions, weak procedural justice in planning processes, and widespread misinformation. Empirical evidence reveals that public consultations are often ineffective, characterised by one-directional communication, a lack of facilitation, and a lack of feedback loops. Pilot interventions reveal that structured engagement formats can reduce conflict intensity (from high to medium), improve information clarity (from low to medium–high), and slightly increase trust levels. The study concludes that renewable energy conflicts in Latvia are primarily governance-related rather than technological. Improving procedural fairness, transparency, and communication through "myths versus facts" tools and local benefit assessment can significantly enhance public acceptance and support a more socially sustainable energy transition.

Keywords: *Procedural justice, public trust, renewable energy, social acceptance, Latvia.*

1. INTRODUCTION

The energy transition has become a strong central policy priority in the European Union (EU), driven by ambitious climate targets and the urgent need to reduce greenhouse gas emissions [1]–[3]. Achieving these objectives requires a rapid and large-scale deployment of renewable energy technologies, including wind, solar, and energy storage systems [4]. While strategic goals and regulatory frameworks are primarily defined at international and supranational levels, their implementation ultimately depends on national governance systems and, critically, on local planning and approval processes [5], [6]. In this context, spatial planning functions as a key institutional "gateway" that can either facilitate or constrain the implementation of energy transition projects [7]–[9].

Despite broad societal support for decarbonisation, the expansion of renewable energy infrastructure has increasingly been accompanied by local-level conflicts [10]–[13]. This apparent paradox: high general acceptance but strong localized resistance has been widely observed across Europe and beyond. Renewable energy projects, particularly wind farms, often generate opposition due to their visible and place-based impacts, including landscape transformation, perceived environmental risks, and concerns about fairness in decision-making. These tensions reveal that energy transitions are not solely technological or economic processes, but deeply social and political transformations embedded in local contexts [14]–[17]. Studies highlight the importance of procedural justice and distributive justice in shaping public acceptance of energy infrastructure. Procedural justice refers to the perceived fairness, transparency, and inclusiveness of decision-making processes, while distributive justice concerns the allocation of benefits and burdens among affected stakeholders. Empirical studies demonstrate that even when projects deliver broader societal benefits, local resistance can emerge if communities perceive decision-making processes as unfair or exclusionary. In such cases, opposition is often less about the technology itself and more about the way decisions are made and communicated [18]–[22].

Also, the role of trust in institutions has been identified as a critical mediating factor in public acceptance. Trust influences whether individuals consider information credible, whether they are willing to engage in dialogue, and whether they accept trade-offs associated with infrastructure development. Low levels of institutional trust can amplify skepticism and increase susceptibility to misinformation, thereby intensifying conflicts. This dynamic is particularly relevant in contexts where historical governance practices have been perceived as top-down or insufficiently participatory.

Another important dimension shaping public attitudes is the spread of misinformation and simplified narratives about renewable energy technologies [23]–[25]. In situations characterised by uncertainty and limited technical knowledge, misinformation can provide easily understandable, yet often inaccurate explanations for perceived risks. These narratives are frequently disseminated through informal networks and alternative media channels, where they can gain traction and contribute to the polarization of public debates. As a result, misinformation does not operate independently but interacts with existing distrust and procedural shortcomings, reinforcing resistance to renewable energy projects [26].

In Latvia, these challenges are particularly pronounced. Although national-level surveys indicate relatively strong support for renewable energy development, local planning processes, in particular those related to wind energy, are often characterised by conflict, emotional escalation, and low levels of constructive dialogue. Public consultations tend to be formalistic and one-directional, limiting opportunities for meaningful participation and co-production of knowledge. At the same time, misinformation narratives and conspiracy claims have become increasingly visible in public discourse, further complicating communication between stakeholders and undermining trust in institutions [27], [28].

These dynamics suggest that the main barriers to renewable energy deployment in Latvia are not primarily technological or economic, but institutional and social in nature. In particular, deficiencies in procedural design, communication practices, and trust-building mechanisms appear to play a central role in shaping public resistance. However, there remains a lack of integrated empirical research that simultaneously examines these factors and identifies practical solutions tailored to the Latvian context.

Bearing in mind all the above-mentioned, this study aims to identify, evaluate, and co-develop evidence-based approaches for improving public engagement in renewable energy planning in Latvia, with a particular focus on wind energy as the most conflict-sensitive technology. The study is guided by the hypothesis that public resistance is significantly influenced by deficiencies in procedural justice, like low transparency, weak dialogue structures, and limited feedback mechanisms, and that it can be reduced through the implementation of structured, evidence-based engagement practices combined with clear communication and local benefit framing.

To address this aim, the research is structured around four key questions: (1) How is public opinion currently integrated into energy infrastructure planning and approval processes in Latvia, and what procedural weaknesses can be identified? (2) What roles do misinformation, institutional trust, and socio-cultural factors play in shaping public attitudes toward renewable energy technologies? (3) Which public engagement practices from other European contexts can be adapted to improve procedural justice and reduce conflict in Latvia? and (4) To what extent can structured engagement formats and communication tools improve public acceptance and deliberation quality in practice?

By combining regulatory analysis, comparative insights, survey data, and qualitative stakeholder perspectives, this study contributes to the growing literature on the social dimensions of energy transitions. It advances an integrated understanding of how procedural justice, trust, and misinformation interact to shape renewable energy conflicts and provides actionable recommendations for improving governance and public engagement in Latvia and similar contexts.

The topicality of this research lies in the increasing urgency of accelerating renewable energy deployment in line with climate policy targets while addressing growing local resistance to infrastructure projects. As the energy transition intensifies across the EU, understanding the social and institutional barriers to implementation has become a critical research and policy priority. The study is particularly relevant as it addresses the gap between high-level policy support for decarbonisation and local-level opposition, which continues to delay or block renewable energy projects. By focusing on procedural justice, trust, and misinformation, the research contrib-

utes to emerging interdisciplinary debates on the governance of energy transitions. Its topicality is further strengthened by the increasing role of public participation and legitimacy in shaping infrastructure outcomes in democratic societies. The case of Latvia provides a valuable empirical context, reflecting broader challenges observed in other European countries.

At the same time, the study has several limitations that should be acknowledged: the empirical findings are context-specific and may not be fully generalizable beyond Latvia due to differences in institutional frameworks and socio-cultural conditions; while the survey sample (n > 1000) provides robust quantitative insights, it may not capture all local-level variations in attitudes across municipalities; qualitative components such as focus groups and stakeholder discussions are inherently interpretive and may be influenced by participant selection and researcher bias; the pilot interventions assess short-term changes in consultation dynamics but do not allow for evaluation of long-term impacts on trust and project acceptance.

2. METHODOLOGY

This study is based on a mixed-methods research design, and it examines how public opinion is currently considered in the planning of energy infrastructure in Latvia and how this process could be improved through evidence-based engagement practices.

The empirical core of the study consists of a large-scale public survey designed to measure attitudes toward different electricity development pathways and the factors that shape acceptance or resistance. The respondent profile is based on a nationally distributed survey sample (n > 1000), ensuring a robust empirical foundation for the analysis.

Table 1. Respondent Profile of the National Survey

Characteristic	Category	Share (%)
Gender	Male	49
	Female	51
Age group	18–29	18
	30–44	26
	45–59	28
	60+	28
Education level	Secondary or lower	35
	Vocational	30
	Higher education	35
Place of residence	Riga	32
	Other cities	38
	Rural areas	30
Employment status	Employed	55
	Self-employed	10
	Unemployed	8
	Student	10
	Retired	17

Table 2. Income Distribution of Respondents

Income level	Monthly income (net)	Share (%)
Low	< EUR 900	25
Medium	EUR 900–1800	50
High	> EUR 1800	25

As seen in Tables 1 and 2, the sample demonstrates a balanced gender distribution, with a nearly equal representation of male and female respondents. Age groups are well represented across all categories, allowing for the capture of generational differences in attitudes toward renewable energy. In terms of education, the sample includes respondents with secondary, vocational, and higher education backgrounds, supporting a comprehensive assessment of knowledge-related factors. Geographical distribution covers both urban and rural areas, including respondents from the capital, other cities, and less densely populated regions. This spatial diversity is particularly relevant given the localized nature of renewable energy conflicts. Employment status varies across the sample, reflecting a mix of economically active and inactive population groups. The socio-demographic structure of the sample provides a reliable basis for analysing public perceptions, trust levels, and acceptance patterns in the context of energy transition in Latvia.

As shown in Fig. 1, the methodological framework of the study combines regulatory analysis, comparative case study research, quantitative attitude measurement, and qualitative stakeholder-based inquiry, allowing the research to capture both structural governance issues and community-level perceptions.

Fig. 1. The methodological framework of the study.

To contextualise Latvia's challenges within the broader European experience, the study includes a comparative review of best practices across selected EU countries where wind and other renewable technologies have been deployed at scale. The focus is on participation models, compensation or benefit-sharing mechanisms, and strategies for addressing public concerns through transparent risk communication. The comparative element is not intended to copy foreign models directly, but to extract transferable principles and identify which engagement tools can realistically be adapted to Latvia's institutional and cultural context. The empirical core of the study consists of a large-scale public survey ($n > 1000$) designed to measure attitudes toward different electricity development pathways and the factors that shape acceptance or resistance.

The survey captures support levels for specific technologies (wind, solar, storage, hydrogen, and cogeneration), while also assessing trust in institutions, perceived risks, and energy poverty-related vulnerability. This quantitative component enables the study to identify patterns of polarization, differentiate between technology-specific attitudes, and develop behavioural and social acceptance profiles, such as residents who are open to innovation but economically constrained, or groups that reject infrastructure development regardless of technical evidence.

3. RESULTS

The findings of the study confirm that Latvia's energy transition is not blocked by a complete lack of public support for renewable energy, but rather by a strong gap between general acceptance of decarbonisation goals and local-level resistance triggered by distrust, misinformation, and weak procedural justice in planning practice, which can also result in significant economic challenges in the future [29].

The regulatory and planning system mapping has demonstrated that Latvia has formal public participation mechanisms embedded in spatial planning and environmental impact assessment procedures [30]. However, in practice, these mechanisms are frequently implemented in a minimalistic way that does not support meaningful dialogue or trust-building.

Public consultations are often organised as one-directional presentations where communities are expected to "listen" rather than co-produce understanding, and where the recording of public opinion is not followed by transparent explanations of how comments will influence project decisions. A recurring pattern observed across cases is that public consultation meetings often become emotionally escalated and chaotic. Instead of structured deliberation, meetings are frequently dominated by protest dynamics, loud interruptions, and competing narratives. This reduces the quality of information exchange and increases the probability that residents leave the consultation with stronger negative emotions and lower trust than before. The most common procedural weaknesses identified during document review and stakeholder discussions are summarised in Table 3.

Table 3. Key Procedural Weaknesses Identified in Public Consultations

Observed weakness	Description in practice	Effect on public trust	Resulting risk
One-way presentation format	PPT-style monologues dominate	Low	"Fake participation" perception
Lack of facilitation	No structured speaking order	Very low	Escalation and shouting
No feedback loop	Comments collected without response	Low	"Decision already made" belief
Poor risk explanation	Technical issues are not translated	Low	Fear-based reasoning grows
No local benefit framing	Costs visible, benefits unclear	Low	Opposition increases
Unequal voice representation	Vocal minority dominates	Low	Silent majority disengages

The comparative review of the EU best practices showed that countries with more stable renewable energy deployment typically combine procedural improvements with distributive mechanisms that make local benefits visible and predictable. These include compensation schemes, co-ownership models, and structured engagement formats that reduce the dominance of extreme voices [31].

In contrast, Latvia's practice remains fragmented across municipalities, with inconsistent consultation quality and uneven developer capacity to explain technical impacts in an accessible manner. Survey synthesis and early empirical insights confirmed that public attitudes toward electricity development in Latvia are technology-specific rather than uniformly "pro" or "anti" energy transition. Solar energy, storage solutions, and grid modernization were generally viewed positively, while wind energy produced the highest polarization and the strongest rejection responses. This indicates that opposition is shaped by perceived local burdens and symbolic meaning (landscape, identity, control) rather than by rejection of climate objectives as such. Selected renewable and/or low-carbon energy technology acceptance patterns across the Latvian municipalities are shown in Table 4.

Table 4. Renewable and/or Low-Carbon Energy Technology Acceptance Patterns in the Latvian Municipalities

Technology/solution	Overall acceptance trend	Typical reasons for support	Typical reasons for resistance
Solar power plants	High	"Clean", familiar, low perceived risk	Land use concerns in some areas
Storage (batteries, hydrogen)	High	Seen as modern, stabilizes system	Uncertainty about costs and safety
Smart grid	High	Improves reliability, future-proof	Limited understanding, but low conflict
Wind power plants	Lowest / most polarized	Energy independence, climate benefits	Noise, landscape, health fears, distrust
Hydropower	Medium	National tradition, stable supply	Biodiversity and river impacts
Cogeneration (gas/biomass)	Medium	Local heat and power benefits	Emissions, sustainability concerns
Modular nuclear	Polarized	Energy security argument	Safety fears, lack of knowledge

The patterns presented in Table 4 clearly highlight that public attitudes toward energy technologies in Latvia are not uniform but instead follow a differentiated and technology-specific logic. Acceptance tends to be highest for solutions perceived as familiar, low-risk, and directly beneficial to households, such as solar power and smart grid technologies. In contrast, technologies associated with visible landscape transformation, higher uncertainty, or perceived external control, most notably wind energy, exhibit significantly stronger polarization and resistance.

These findings suggest that public evaluation of energy technologies is shaped less by abstract support for climate goals and more by context-specific perceptions of risk, fairness, and local impact. In particular, the contrast between high acceptance of solar energy and contested attitudes toward wind power indicates that visibility, scale, and symbolic meaning play a crucial role in shaping societal responses. Moreover, the relatively stable acceptance of storage and cogeneration technologies reflects their association with system reliability and local energy security, which are perceived as tangible benefits.

To communicate the central patterns of these findings, the study conceptualises technology acceptance as a ranked spectrum, where solutions perceived as "high/ medium acceptance" cluster at the left, while those with "most polarized/ divided attitudes", like wind and modular nuclear at the right. The latter, even being strongly backed at the national level, remains the most sensitive to conflict. This pattern is not only descriptive but also practically relevant, because it signals where consultation reform and misinformation countering are most urgently needed.

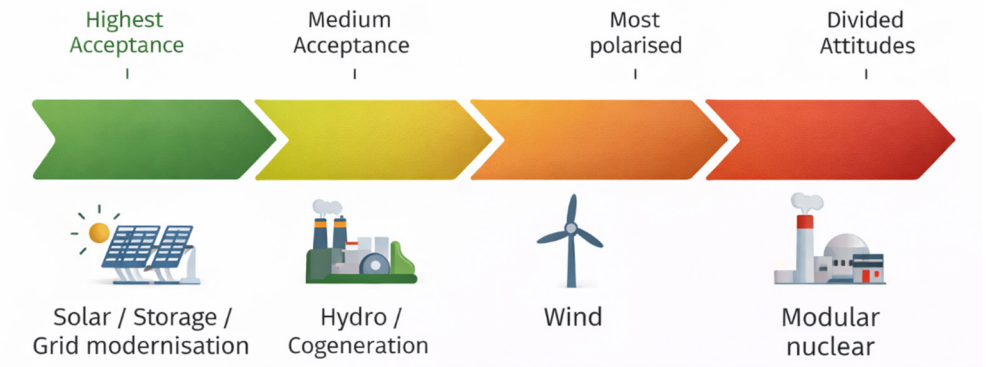

Fig. 2. Conceptual ranking of technology acceptance spectrum in Latvia.

At the same time, Latvia's technology acceptance, along with selected EU countries, can be seen in Table 5. It highlights how societal attitudes differ depending on historical energy policies, resource availability, and perceived risks associated with each technology. While renewable sources such as solar and wind energy generally enjoy broad support across Europe, opinions on technologies like hydrogen and modular nuclear power remain more divided. The comparison also illustrates the role of national energy traditions, for example, stronger nuclear support in France and higher reliance on cogeneration systems in Northern and Eastern Europe.

Table 5. Public Acceptance of Energy Technologies in Selected EU Countries

Country	Solar energy	Wind energy	Energy storage/ accumulation	Hydrogen energy	Cogeneration (CHP)	Modular nuclear
Germany	High	High	Medium-High	Medium	High	Low
France	High	Medium	Medium	Medium	Medium	High
Poland	High	High	Medium	Medium	High	Medium-High
Sweden	High	Very High	High	Medium-High	High	High
Spain	Very High	High	Medium	Medium	Medium	Low-Medium
Latvia	High	Low-Medium	Medium-High	Medium	High	Medium

Table 5 demonstrates that while general support for renewable energy technologies is widespread across Europe, important cross-country differences persist in the acceptance of specific solutions. These variations reflect the influence of national energy histories, policy frameworks, and levels of public familiarity with particular technologies. For example, countries with established nuclear sectors or long-standing renewable deployment tend to exhibit higher acceptance of these technologies compared to contexts where they are relatively new or contested. In comparison, Latvia follows the broader European pattern of strong support for solar energy, but shows comparatively lower acceptance of wind energy, indicating higher sensitivity to local impacts and governance factors.

Also, the study results offer a deeper explanation of why wind energy is the strongest conflict trigger. Focus group discussions and case analyses show that residents often associate wind projects with irreversible landscape transformation, loss of control over local territory, and hidden health risks [32], [33]. These fears intensify when technical explanations are absent or overly complex. In this context, misinformation narratives serve as simplified "explanations" that are emotionally persuasive and easy to repeat, especially in activist networks and alternative media spaces.

To support municipalities and project developers in managing misinformation-driven resistance, the study proposes several concrete tools for myth correction and evidence-based communication. Table 6 provides an overview of these tools and explains how they can be applied in real consultation settings.

Table 6 systematises a set of complementary tools designed to address misinformation and improve the quality of public deliberation in renewable energy planning. Rather than functioning as isolated communication instruments, these tools operate most effectively when applied as an integrated engagement framework that combines information clarity, process transparency, and trust-building mechanisms. A key insight emerging from the table is that misinformation is not merely a deficit of knowledge, but a socially embedded phenomenon that thrives in conditions of uncertainty, low institutional trust, and weak procedural structures. Consequently, effective myth-correction requires not only factual rebuttal but also carefully designed formats that enhance credibility, accessibility, and perceived fairness.

Table 6. Summary of Main Myth-Correction Tools

Tool	Purpose	Function	Best utilisation	Effect
Myths against Facts module	Directly addresses common false claims	Short structured segment in consultation (10–15 min) with clear "claim/ evidence /conclusion" pattern	Public meetings where public repeated misinformation is often present	Reduces confusion and emotional escalation
FAQ evidence sheet (1–2 pages)	Provides simple reference material	Printed or digital hand-outs with key questions (noise, health, biodiversity, prices)	Before and after consultations	Improves clarity and prevents rumour spread
Visual risk comparison charts	Make risks understandable	Use simple visuals (decibels, distances, shadow flicker limits, health evidence)	When technical topics are hard to explain verbally	Improve comprehension and reduce fear-based thinking
Independent expert Q&A session	Increases credibility and trust	Invites neutral specialists (public health, acoustics, ecology) for moderated Q&A	Low-trust communities and high conflict cases	Strengthens legitimacy and reduces distrust
Transparent data sources ("evidence map")	Show where information comes from	Provide references to official reports, EIA findings, and monitoring data	When accusations of manipulation appear	Build transparency and accountability
Community monitoring and feedback loop	Turn concerns into measurable indicators	Offer post-project monitoring (noise, biodiversity) with public reporting	When residents fear long-term hidden impacts	Convert fear into controllable evaluation
Facilitated dialogue rules	Prevent misinformation dominance	Structured speaking turns, moderation, time limits, and respectful debate rules	Meetings dominated by vocal minority	Reduce disruption and improve deliberation
Local added value balance tool	Reduces "outsider profit" narratives	Present local benefit indicators (taxes, jobs, compensation, infrastructure)	When fairness and benefit-sharing are contested	Increases conditional acceptance and negotiation
Stakeholder mapping /targeted messaging	Adapts communication to audience needs	Different messages for residents, NGOs, farmers, youth, municipalities	Polarized communities with mixed concerns	Improves relevance and reduces misinterpretation
Pre-consultation information sessions	Reduce shock and surprise	Informal early meetings before formal procedures start	When opposition forms early and rapidly	Prevent escalation and increase preparedness

The tools can be analytically grouped into three functional categories:

- information-oriented tools aim to simplify complex technical content and counter emotionally persuasive but inaccurate narratives. Their effectiveness lies in translating abstract or technical risks into understandable formats,

thereby reducing cognitive overload and limiting the spread of fear-based reasoning. However, their impact depends strongly on timing and delivery context; when introduced too late in already escalated conflicts, their corrective capacity may be significantly reduced.

- Trust-building and credibility-enhancing tools, including independent expert sessions and transparent data mapping, directly address skepticism toward institutions and project developers. By introducing neutral or third-party expertise and clearly referencing data sources, these tools help reduce perceptions of manipulation and increase the legitimacy of information presented during consultations. Importantly, their success depends on the perceived independence of experts and the openness of institutions to scrutiny, highlighting the relational dimension of trust in communication processes.
- Process-oriented and participatory tools, such as facilitated dialogue rules, community monitoring mechanisms, and stakeholder mapping, focus on improving the structure and inclusiveness of engagement itself. These tools are particularly important in preventing the dominance of vocal minorities, ensuring balanced participation, and transforming consultations from one-directional information sessions into deliberative spaces. The inclusion of local added value assessment further strengthens this category by linking abstract policy goals to tangible community-level benefits, thereby addressing concerns related to distributive fairness.

Taken together, Table 6 demonstrates that effective misinformation management is inseparable from broader procedural reform. The most successful approaches are those that combine clear communication with structured dialogue and visible responsiveness to public concerns. This integrated perspective reinforces the study's central argument that improving procedural justice and trust is a prerequisite for reducing misinformation-driven resistance and achieving more socially sustainable renewable energy development outcomes.

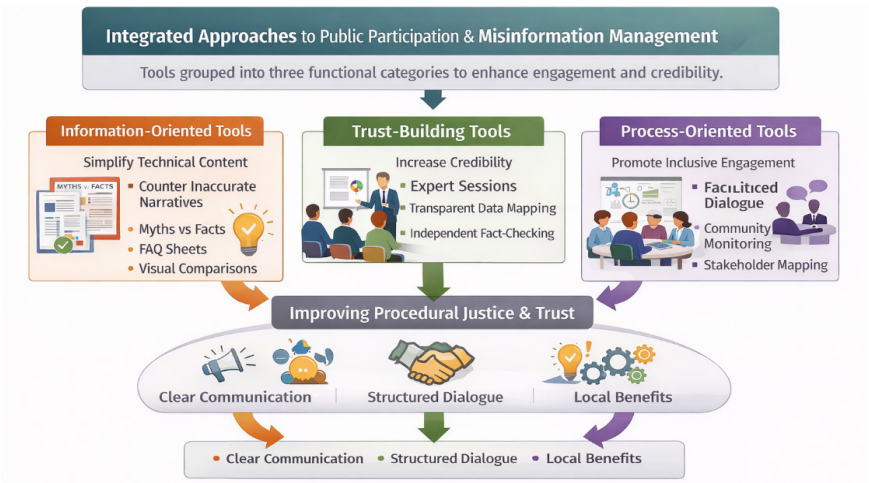

Fig. 3. Integrated framework of misinformation management and public engagement tools in renewable energy planning.

Figure 3 illustrates how different categories of tools complement each other in addressing misinformation and improving public engagement in renewable energy planning. It highlights that information provision alone is insufficient without parallel efforts to build trust and structure inclusive participation processes. The integration of these tools creates a more balanced and effective engagement framework, where communication, credibility, and procedural design reinforce one another. The framework emphasises that reducing conflict requires not only correcting misinformation but also strengthening transparency, dialogue quality, and perceived fairness.

An important finding is that misinformation does not operate in isolation. Instead, it interacts with historically rooted distrust and cultural interpretations of land as identity and heritage. Participants often described wind development not as a neutral technical project but as an external intrusion imposed on the community. The belief that decisions are predetermined and that consultations are merely symbolic was repeatedly expressed and acted as a core driver of procedural injustice perceptions. To integrate the survey patterns, qualitative insights, and planning system diagnosis, the study developed an explanatory model of resistance and acceptance summarised in Table 7. This model shows that trust and perceived fairness are the key mediating variables that translate information, benefits, and engagement design into social acceptance outcomes.

Table 7. Drivers of the Resistance and Acceptance Model

Factor	Direction	Mechanism	Evidence source
Trust in institutions	Increases acceptance	Legitimacy and credibility	Survey and focus groups
Perceived procedural fairness	Increases acceptance	People accept outcomes if the process is fair	Focus groups and pilots
Local added value visibility	Increases acceptance	Benefits justify local burdens	Economic assessment
Misinformation exposure	Increases resistance	Risk exaggeration, conspiracy framing	Document and focus groups
Historical "top-down" memory	Increases resistance	Skepticism toward imposed decisions	Qualitative analysis
Poor science literacy	Increases resistance	Myths replace technical reasoning	Qualitative analysis

The results further demonstrate that community concerns are not limited to abstract values but strongly include questions about tangible socio-economic outcomes. Participants repeatedly demanded clear information about what the municipality gains, whether local employment was realistic, how road infrastructure might change, what the tax effects were, and whether household electricity prices could decrease [34], [35]. The absence of such information reinforces the belief that the project benefits external actors while imposing local burdens, which in turn strengthens resistance even among residents who generally support renewable energy.

To address this gap, the study proposes a "local added value balance" approach that makes benefits and burdens visible through simple indicators. This tool does not remove disagreement, but it reduces uncertainty and improves the quality of debate by shifting the discussion from rumours to measurable categories.

Results indicate that replacing formalistic hearings with structured dialogue workshops, clear facilitation rules, and a "myths against facts" segment improves public understanding and reduces emotional escalation. Importantly, the study outcomes suggest that even when residents remain skeptical, they become more willing to engage conditionally if they perceive fairness and clarity.

The strongest improvement observed during the study was not an immediate "support" increase for energy, a certain source or/and technology, but a reduction in chaos and a clearer separation between evidence-based concerns and misinformation-driven claims. Participants were more likely to ask practical questions about location, mitigation measures, and compensation mechanisms, rather than repeating slogans or conspiracy narratives. This indicates that procedural reform creates a space where disagreement can become manageable rather than destructive.

The summary of pilot consultation outcomes, which link the before and after qualitative assessment results and changes observed, can be seen in Table 8.

Table 8. Summary of Pilot Consultation Outcomes

Evaluation dimension	Before (typical format)	After (new structured format)	Change observed
Meeting atmosphere	Emotional, chaotic	More structured and calmer	Improved
Participation equality	Dominated by vocal actors	More balanced speaking turns	Improved
Information clarity	Low	Medium–high	Improved
Trust perception	Low	Slightly higher	Improved
Misinformation correction	Rare	Direct "myths vs. facts" section	Improved
Conflict intensity	High	Medium	Reduced

The study findings can be summarised as an engagement-effect pathway. Traditional consultations produce low trust and high conflict, which amplifies resistance and reduces the legitimacy of planning decisions. The structured format improves clarity, fairness, and the perceived seriousness of public input, which reduces escalation and increases the potential for negotiated outcomes.

The study results, therefore, show that the main obstacle to renewable energy planning in Latvia is not simply "public opposition," but a combination of procedural weaknesses, misinformation-driven risk perception, and low institutional trust. Wind energy becomes the most conflict-sensitive technology because it is locally visible, symbolically linked to landscape identity, and surrounded by strong myth narratives. The study also demonstrates that evidence-based engagement reform can reduce conflict intensity and improve legitimacy, especially when combined with tools that clarify local economic impacts and directly address misinformation in a respectful and culturally sensitive way.

4. CONCLUSION

The findings of this study provide a comprehensive basis for understanding the key drivers of renewable energy conflicts and identifying pathways for improving public acceptance and procedural legitimacy in Latvia, leading to the following main conclusions:

- Renewable energy conflicts in Latvia are primarily governance and legitimacy challenges rather than technological barriers, as the findings clearly demonstrate that resistance to renewable energy projects does not stem from a general rejection of decarbonisation goals or renewable technologies themselves. Instead, it is rooted in how decisions are made, communicated, and perceived by local communities. The gap between high-level policy support and local opposition reflects institutional and procedural shortcomings rather than technical feasibility issues. This highlights the need to reframe renewable energy deployment as a socio-political process, where legitimacy and inclusiveness are as important as efficiency. Addressing these governance dimensions is therefore essential for ensuring the successful implementation of energy transition policies.
- The study confirms that public attitudes toward energy technologies are not uniform, but vary significantly depending on perceived risks, benefits, and local impacts. Solar energy, storage solutions, and grid modernisation are generally associated with low risk and high acceptance, while wind energy generates the strongest polarization. This is largely due to its visibility, perceived landscape impacts, and symbolic associations with loss of local control. Wind energy projects therefore act as focal points for broader societal tensions, including distrust and perceived injustice. As a result, targeted engagement strategies are particularly necessary for technologies with high conflict potential.
- A major conclusion of the study is that the design and implementation of public participation processes significantly influence public acceptance. Consultations that are perceived as one-directional, poorly facilitated, or lacking meaningful feedback mechanisms tend to reduce trust and increase opposition. Communities are more likely to reject projects when they feel excluded from decision-making or when participation is seen as symbolic rather than substantive. Conversely, even controversial projects can gain conditional acceptance if the process is perceived as fair and transparent. This underscores the importance of procedural quality as a key determinant of social acceptance.
- The study shows that misinformation does not operate independently, but interacts with existing distrust, uncertainty, and limited technical understanding. Simplified and emotionally persuasive narratives often replace complex scientific explanations, especially in contexts where communication is ineffective. These narratives can significantly shape risk perception and reinforce opposition, even when they lack an empirical basis. Addressing misinformation, therefore, requires more than factual correction; it demands proactive, accessible, and credible communication strategies. Integrating myth-correction tools into structured engagement processes is essential for mitigating this effect.
- Trust determines how information is interpreted, whether stakeholders are willing to engage in dialogue, and how trade-offs are evaluated. When trust in municipalities, developers, or state institutions is low, even accurate and transparent information may be dismissed or reinterpreted as manipulation. The study highlights that trust is built through consistent, transparent, and responsive engagement rather

than one-time communication efforts. Strengthening institutional credibility is therefore a long-term process that must accompany technical and policy development. Without trust, even well-designed projects face a high risk of resistance and delay.

- Another key finding is that communities often struggle to identify tangible benefits from renewable energy projects. When economic, social, or infrastructural gains are unclear, residents tend to focus on perceived risks and burdens. This imbalance strengthens narratives that projects primarily benefit external actors while imposing local costs. Providing clear, measurable, and locally relevant benefit information can significantly improve acceptance. Tools such as locally added value assessments help shift the discussion from abstract concerns to concrete and negotiable outcomes.
- The study demonstrates that replacing traditional consultation formats with structured dialogue-based approaches leads to measurable improvements in participation outcomes. Facilitated discussions, equal speaking opportunities, and clear communication formats reduce emotional escalation and prevent domination by vocal minorities. Although such approaches do not eliminate disagreement, they create conditions for more constructive and informed debate. Importantly, the results show improvements in clarity, participation balance, and perceived fairness, even if full consensus is not achieved. This suggests that the goal of engagement should be better-quality disagreement rather than forced agreement.
- The findings indicate that improving procedural justice, communication quality, and trust-building mechanisms can significantly enhance the social feasibility of renewable energy projects. The integration of myth-correction tools, transparent feedback loops, and locally grounded benefit frameworks provides a practical pathway for reducing resistance. These measures are particularly important in contexts like Latvia, where institutional trust and public participation practices remain uneven. The study contributes to a broader understanding that energy transition success depends not only on technological innovation but also on the quality of governance and societal engagement.

ACKNOWLEDGEMENT

The research has been funded by the Latvian Council of Science, project "Mitigating Energy Poverty through Innovative Solutions", No. lzp-2023/1-0214.

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