7 assumptions about public opposition to renewable energies

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As governments and businesses around the world promote schemes for the development of renewable energies, it feels like the public is pushing back. Public hostility towards renewable energies, particularly wind, is evident in the US, Australia, Asia, England and many European countries as well as in New Zealand. Such resistance has been identified as a major stumbling block in global aspirations for a low-carbon energy future. And it seems particularly puzzling when it is clear that in almost all national surveys, the public prefers renewable sources of energy to non-renewable.

There are certain commonly-used explanations about why this is happening. But are these borne out by research? In this paper we select seven quotes about opposition to renewable energy developments, identify the underlying assumption about human behaviour, and discuss some recent research which may challenge these assumptions. The paper draws from a more detailed study undertaken by the authors for New Zealand's Energy Efficiency and Conservation Authority.[1]

1

Opinion polls show that renewable energy is strongly supported by the public

"... wind energy has always been controversial, polarising opinion at both a local community and national political level. Groups set up specifically to oppose wind have been active consistently since then and have influenced politicians and the media; ironically over the same period opinion polls have shown that public support for wind has remained consistently high." European Wind Energy Association[2]

It is true that opinion polls internationally show consistently high levels of public support for renewable energy.[3] New Zealand is no exception, with 2009 research showing 69.75 per cent of the public supportive or very supportive of renewable energies compared with just 21.75 per cent for non-renewable energy technologies.[4] But when it comes to specific RE projects, the level of support from the public can be far lower than public opinion surveys would suggest.

So ... are the polls wrong, or are the public just fickle? Part of the problem might be the way the polls themselves are written and interpreted.[5] By asking questions with very limited scope (e.g. 'do you support wind energy?') the polls don't reveal the more nuanced view that many people hold. For example, even where people believe renewable energy is a good idea, there may be situations in which they feel it should not occur, or where they are not comfortable with aspects such as scale or location. As a member of the public we interviewed put it "I can't say unreservedly, universally, that I in every case support renewable energy. I do believe renewable energy is a great positive for Ne Zealand, but not in the way it's currently being put forward." By not asking questions about how people might qualify their support, polls may be giving a false reading of public opinion.

2

People oppose because they're NIMBYs

"Recent polling said 63 per cent of Americans support renewable energy investment ... in theory. But in practice, Not In My Back Yard, or NIMBY opposition to new energy infrastructure prevents about 45 per cent of renewable energy proposals from being built around the country, according to the U.S. Chamber of Commerce". The Energy Collective.[6]

The term NIMBY is often used as an accusation, implying that people oppose developments because of self-interest – that they don't like new developments in their locality even if they think it's a good idea for the country generally. The energy sector and policy-makers commonly use the NIMBY concept as if it was the primary explanation for oppositional behaviour. But this has been widely discredited by research.[7]

In fact, opposition is rarely motivated by pure self-interest. In relation to wind farm developments, motivations for opposition include concerns abou the technology, concerns about the planning process, concerns about the bigger picture, and concerns about specific aspects

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of the project.[8] These categories of oppositional response are likely to be relevant across all developments.

Even where opposition can be categorised as 'patch protection', this is not necessarily motivated by selfishness. People vest a great deal of their emotional wellbeing in their relationships with place, and these attachments can be deeply disturbed by proposed changes.[9,10] Understanding the nature of these attachments is crucial to anticipating how people may respond to a proposal.

In the relatively rare cases where opposition does relate purely to self-interest, this is fundamentally a concern for personal utility[11], a concept that is used without pejorative associations as the basis of economic theory.

In short, NIMBY is not an explanation but a label. The continued use of NIMBY as if it was an explanation can obscure the fact that there are diverse motivations for opposition, and can thus hamper the search for solutions.[12,13] The energy sector and government would benefit by discarding NIMBY and using research findings such as these to develop a more nuanced understanding.

3

People are most opposed to developments that are closest to them

"The evidence so far is that the public largely supports wind energy, but also that not everyone wants a wind farm across their back fence." Report to New Zealand's Ministry of Economic Development and the Energy Efficiency and Conservation Authority. [14]

The NIMBY concept assumes that people oppose developments most strongly where they are closest to them (in their 'back yard'). Yet research shows there is no reliable relationship between proximity and opposition. Some studies have found that those living closer to wind farms are more likely to speak positively of them than those not living in the vicinity.[15,16] Research in the Netherlands revealed that support or rejection of wind turbines in the Wadden region bore no relationship to the distance of respondents from the site.[17]

New Zealand research has similarly found no reliable relationship between the attitudes of submitters to planning applications and their proximity to the site.[18] The research compared numbers of submissions in support and opposition for three wind farm proposals, using a 15km radius to distinguish between 'locals' and 'non-locals'. For Project Hayes, local support was higher and local opposition lower than for non-locals. In contrast,

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Project Mahinerangi had no local support, and local objections outweighed non-local objections. For Project Whitehill, locals had higher proportions of both supporting and opposing submissions, while neutral views were more common among non-locals. These mixed findings are consistent with the variation observed internationally on the relationship between proximity and attitude for wind farms.

A review of research in this field in 2007 concluded that, on aggregate, proximity has an influence on attitudes to proposed projects, but the nature of the response will vary according to local context. Proximity has less influence on people's opinions of existing wind farms, and in fact in many cases opposition weakens once a development is in place and operating.[19] Overall, then, proximity does influence responses to some extent, but does not do so consistently, and many other factors are at play.[20]

4

People don't like developments when they can see them

"Wind farms in some regions have attracted strong public support, but can also be perceived as a visual intrusion..." Discussion paper, New Zealand's Ministry for Economic Development.[21]

Visibility is particularly an issue for wind farms. While many other concerns can be addressed through technical solutions, the nature of wind farms means that they are generally on hills or ridges where wind speeds are greater, and hence are more visible. Recognising this, research during the 1990s focused strongly upon visual impacts, attempting "to render turbines as ... invisible as possible, presuming that this will increase their social acceptability".[22]

Yet is visibility really the issue? In New Zealand, the proposed Project Hayes wind farm on the isolated Lammermoor range in Central Otago attracted over 1000 submissions, with almost equal numbers in support and opposition. Feelings ran high, and a prolific crop of letters to the editor and opinion pieces appeared in local newspapers over some years as the proposal inched its way through three protracted sets of hearings.[23] The Project Hayes site was exceedingly isolated, and would be visible to a very small number of local people, and fleetingly at a distance from a minor state highway. In contrast, Project Whitehill, located on a ridge in the intensively farmed Waimea Plains in Southland, and visible to a far greater number of farmers, travellers and occupants of small towns, drew only 99 submissions and the overwhelming majority of these were in support.[24] Clearly, something more than just the visibility of the proposed turbines was at stake.

This is not to say visibility is not a factor in social acceptance of wind farms, and considerable research effort has gone into ways to reduce the visual impact of turbines through tower design, colour, and the siting of turbines in relation to viewpoints. Yet it is becoming clear that the reason for landscape-oriented resistance is not only to do with visibility or even aesthetics. It is the perceived qualities of a landscape in which a wind farm is sited that is the more significant factor in acceptance, and whether the development fits with those qualities.[25, 26] In the New Zealand example, the isolated Project Hayes site was perceived by the public, and eventually by the Environment Court, as having outstanding natural values, while the Project Whitehill site was perceived as a largely utilitarian landscape.

Quite simply, landscapes have varied values, and the perceived 'fit' of turbines with these qualities appears to be far more influential on public opinion than visibility alone. [27,28]

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5

"People object because they are poorly informed"

"Some residents may be apprehensive about any proposed local wind developments. When accurate information and knowledge is made available, experience shows that the initial concerns are reduced and support for wind farm schemes increases." Fact sheet, Friends of the Earth

It is commonly believed that if opponents of new developments were better informed then they would change their minds and support the project. While it may be true that some opponents will grasp at any 'knowledge' they can find in literature or on the internet to back up their beliefs about a development, this can be equally argued of some supporters. Research has found no clear relationship between knowledge and acceptance of renewable energy developments, and that many objectors are in fact very well informed.[30] This conclusion is echoed in New Zealand research which found that both supporting and opposing submitters to two wind farm proposals were well informed, but that non-submitters were poorly informed.[31]

While it is clearly in the interests of the public to have access to the most robust knowledge available, knowledge does not necessarily translate into acceptance.

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6

"There is a 'silent majority' of people who support proposals but don't make submissions"

"Just two weeks ago, EECA released its survey of the public's attitudes towards different types of generation. I am sure that many of you were delighted by the results with wind coming out most preferred with an approval rating of 82 per cent. The general public are often the silent majority when it comes to all sorts of developments. Now their views are known." Former NZ Minister for Energy.[32]

There is a widely-held assumption that those who object to renewable energy proposals are a vocal minority, and that there is a 'silent majority' in support who just don't make their views known. But there is surprisingly meagre research on the views of those who do not make submissions on planning proposals. New Zealand research, reported in the previous Planning Quarterly[33] found no evidence of a 'silent majority' of support amongst the non-submitters. Most of them were ambivalent about the project, and the rest of the non-submitters were divided between support and opposition, and even these opinions were rarely wholehearted.

Most of the non-submitters' reasons for not submitting related to personal circumstances, or to feeling that the development would not impact on them personally. Some other factors, such as lack of information, a sense of powerlessness, and perceptions about local benefits, also seemed to play a role.

In short, it cannot be assumed that silence (i.e. not making a submission) equates with support.

7 A successful project is one that has no public resistance

"Wind turbines are roaring into British Columbia's vast and rugged Peace River region, and unlike some regions of Canada, they're generating little protest from local communities [...] Locals and energy developers alike credit acceptance of wind power largely to the region's pragmatic entrepreneurial attitude, and its intimate familiarity with energy development." CBC News, Canada

Is a successful project one which has no or minimal objections? Or does public resistance have a useful role in robust project decision-making? Opposition is often seen as less legitimate because it deviates from the majority view.[35] Research has focused almost exclusively on objectors, and in the view of some researchers this works to "marginalise and denigrate oppositional voices to schemes that are portrayed as being environmentally progressive".[36]

Yet the role of objectors can be important in creating opportunities for explicit debates about the trade-offs and unintended consequences involved in establishing renewable energy, not only local trade-offs of environmental or cultural qualities, but broader trade-offs around other options such as energy efficiency and energy conservation measures, or other options. If there is a lack of understanding of the trade-offs involved in having access to cheap and available sources of electricity, then possibly this is a debate that needs to be entered into at a broader scale rather than argued in an unsatisfactory way at each local hearing where a specific development is opposed. It would certainly assist policy makers in considering the implications of policy.

In short, resistance is not necessarily something to be avoided, and may bring to light issues that are crucial to long-term social, economic, cultural or ecological wellbeing but are not necessarily accounted for at a project level.

Conclusion

The danger of simplistic understandings of opposition to renewable energy developments is that they can lead to less-than-helpful responses, and can exacerbate the ill-feeling between the energy sector, government and the public. When we looked into the seven assumptions discussed here, we found they were either unfounded or at least far more nuanced than is commonly expressed in the renewable energy discourse.

We consider that the lack of translation of knowledge from the academic sphere to 'real-world' situations is playing a part in hindering constructive discussions of the issues. Government, policy and developer approaches based on assumptions may unwittingly be exacerbating public negativity.

A deeper understanding of these everyday assumptions would encourage a greater openness in discussions around trade-offs, and an appreciation that opposition is nuanced and multi-faceted. Avoiding assumptions might also open up opportunities for stakeholders to think and work through difficult issues without feeling pushed to immediately take a 'side' or fearing recrimination if they adapt their thinking over the course of the process. In exposing how current research evidence differs from assumptions, we hope to lay the ground for more informed responses to public concerns, and achieve more robust thinking and good process during the policy-making, planning, and decision-making processes. PQ

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