INQUIRY INTO RURAL WIND FARMS

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Effective Transitions for Renewable Energy & Beyond:
Community Engagement and Wind Farms

Submission to the

Parliament of New South Wales General Purpose Standing Committee No. 5 Rural wind farms (Inquiry)

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Ms Rachel Callingan
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General Purpose Standing Committee No. 5
Legislative Council
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Macquarie St, Sydney NSW 2000

Dear Ms Callingan,

Thankyou for your invitation to make a submission to the NSW Parliament's Inquiry on wind farms, informed by my current research, supported by an Australian Research Council *Discovery Projects* funding scheme grant (project DP0986201) grant titled 'Meeting 2020 Targets: Effective Transitions for Renewable Energy & Beyond' (2009-2011). This grant was preceded by earlier work supported by a Griffith University Research Grant (2006-07) where a key outcome was the published paper 'Deliberative speak at the turbine face: community engagement, windfarms, and renewable energy transitions, in Australia', *J. Environmental Policy and Planning*, 10(3): (Hindmarsh R., Matthews C. 2008). The paper is attached for the perusal by committee members as part of my submission.

The tile of that journal signals that my expertise lies in the analysis of environmental and social issues raised by controversial science and technology developments in the broader contexts of environmental politics and planning. My focus lies on a conjunction of dynamic policy areas referred to as the *politics of life*: energy, environment, health, agrifood and the life sciences. All refer to dimensions of life and innovation difficult to manage, or where serious problems exist to socio-political control and policy steering. Here, transformations to renewable energy systems.

My submission is partly based on the research for the afore mentioned paper and partly on research underway and some early findings, which have been presented at conferences in New Zealand, Brisbane and the recent UK Royal Society for Geography's conference, Manchester University (August 2009), where they found much resonance with leading UK wind energy researchers engaged in similar but more established research.

I am currently preparing a journal paper based on the research outlined in my submission and early findings, which is that existing approval processes for wind farm development and location in communities across all Australian states developing wind farms, including NSW, is increasingly open to question with regard to the adequacy of community input into decision making, and indeed appears to be strongly contributing directly to social conflict. The conclusion is that institutional and procedural systems redesign is needed for effective renewable energy transformations and sustainability transitions, led by wind farms as the most feasible renewable energy for at least the foreseeable future.

The submission is presented in two parts: (1) the research project thrust, background and aims; and (2) stakeholder analysis and research findings (p, 15), which is concluded with section 2.4 key findings (p. 32).

Yours sincerely

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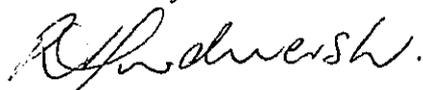
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PART 1: KEY ELEMENTS OF RESEARCH PROJECT: BACKGROUND, AIMS, SIGNIFICANCE AND INNOVATION; AND NEW PARTICAPTORY APPROACHES FOR WIND ENERGY LOCATION

1.1 Background and aims

My ARC funded project 'Meeting 2020 Targets: Effective Transitions for Renewable Energy & Beyond' (2009-2011)' addresses the **major and pressing policy challenge** of the federal government's commitment to generate 20% of Australia's power from renewable energy by 2020. Two significant problems inform the challenge, one technical and the other, socio-political. While the latter is the focus of this project, it recognises that the technical and socio-political are co-produced elements of the same socio-technical system (Shove 1998; Jasanoff 2004).

The technical problem for Australia is that insufficient development of geothermal and solar power (ESAA 2007), and limited opportunities for more hydropower (Australian Government 2004), requires a significant reliance on wind energy as a viable and proven technology. If a near total reliance on wind resulted over the next decade at least, this would imply increasing Australia's amount of some 563 wind turbines (comprising 42 wind farms) to some 4500 (ESAA 2007), which poses some difficulties construction-wise. Even if this latter figure turns out to be an over estimate, by 2007, a further 87 wind farms were proposed, and were either at the planning or approvals stage (Tennant-Wood 2007), an amount that in itself constitutes a major expansion that will increase with the new Renewable Energy Target (RET) to be operationalised in 2010.

The key problem addressed here, however, for wind energy expansion is socio-political. Wind power initiatives entail negotiating a maze of inconsistent state, federal and local government policy positions and planning approval procedures, which include developer-driven community consultation processes. While this is an obvious problem for wind energy development harmonisation across Australia for the wind energy industry, the focus here is on local communities, which—either saddled with windfarms or facing wind farm proposals—have highly criticised wind farm location and approval processes for not

adequately including their views about wind farm development (Hindmarsh and Matthews 2008), that is, adequate community engagement processes and mechanisms by which to include their views. An apt concept of community engagement in this context is given by Mulligan and Nadarajah (2008: 87):

> Community engagement can be broadly described as the process of working collaboratively with groups of people affiliated by geographical proximity, special interest and/or similar situations to address issues affecting the well-being of those groups of people … Discussion of the notion of community engagement suggests that its aim must be the "empowerment" of individuals and community-based organisations which can, in turn, implement relevant practices and influence broader policies.'

Such is the local contestation to wind farms in affected rural communities in Australia that one oppositional coastal or landscape guardian group has, at one time or another, formed for every second wind farm (as of 2007).

The **key problematic** of this policy challenge is that windfarms (often over 100 metres high: higher than the Sydney Harbour Bridge) are usually sited *within* communities, which are then confronted with a range of issues every day. The aesthetic or scenic impact tends to dominate the literature on wind farm impacts just they tend to dominate the landscape, as Brittain (2001: 177) commented: 'Typically, they so dominate the horizon that it is difficult to integrate them in any sort of way with their landscapes, even in a rather distant perspective.' Other key everyday impacts raised include noise, tourism and socio-economic impacts; environmental impacts of construction and location; property value impacts; community divisiveness; rural-urban equity issues; all heightened by local exclusion from decision-making.

The latter's importance in achieving successful renewable energy transitions is well shown by the European experience, which began long before the Australian one. A typical finding of European studies is: 'If local interests are not given a voice in decision-making processes, conditional supporters may turn into objectors' (Wolsink 2007). This highlights a key community rationality of democratic participation due to distrust of government, regulatory processes and wind farm developers (Ellis et al. 2006). Clear policy lessons

pose collaboration, local embedment, with strong inclusive participatory frameworks employing new participatory techniques (Lund 2003), which build on a long history of civic engagement and movements (Wagenet and Pfeffer 2006). Enhanced participatory strategies, which have especially emerged over the last decade, and especially in the European context (Videira et al. 2006), represent a shift from overly top-down approaches to less formalised, more inclusive and flexible governance (Hartz-Karp 2004, Fischer 2006). They are an emergent form of state re-regulation, aiming to regain public trust and democratic legitimacy, as well as a more effective way than the top-down approach to address local problems, as typified through partnership, collaborative planning, or consensus-building, approaches.

More broadly, inclusive participatory decision-making approaches are being increasingly acknowledged by international governance systems. For example, in June 2007, the *United Nations 7th Global Forum on Reinventing Government* (2007) emphasised civil society engagement and participation in public-private partnerships. In relation to climate change, the UN Framework for the Convention on Climate Change and the International Panel on Climate Change's 3rd and 4th reports, and various governmental documents, have called for more inclusive approaches (for example, Few et al. 2006.) . Following this trend, initially catalysed by Agenda 21, emergent climate change adaptation policies, within which renewable energy transitions also lie, of all Australian governments mark public participation as important. Notably, regarding sustainability, Western Australia's Ministry of Planning and Infrastructure has been especially active in initiating larger-scale, top-down participatory initiatives in relation to transport and urban development.

Other recent examples include the UK's *Climate Change Citizen Summit* held in May 2007, and New Zealand's 2007 *Climate Change Communication and Engagement Programme*. In the Australian context, emergent participatory approaches have included the *Climate Smart Adaptation—What Does Climate Change Mean for You?* (Queensland Government 2006), and the 2008 *Victorian Climate Change Summit* (Victorian Government 2008), however, reliance has overly remained with experts and elites in decision-making stakeholder engagement more than with publics, either because this is still the dominant mode of decision-making and resistance remains to change or because current policy-makers and their advisors have little knowledge of how to design enhanced participatory approaches if they wanted to, or because these two reasons are interrelated.

More research needs to be undertaken on these aspects which is also the intention of this project downstream through interviews with policy-makers.

That research is important to conduct because the research findings in this field, and in relation to Australia (for example, Cuthill 2002), find that sustainability initiatives—as also represented by renewable energy transitions—would best be implemented through a collaborative planning approach at the local community level involving local citizens in partnership with local government. They also reflect emergent Australian shifts in natural resource management (NRM) to new partnership approaches to develop social trust by aligning government and community goals in addressing failures of sustainable development (Wallington et al. 2008; Syme et al. 2006). A 2006 NRM review, however, found poor understanding and trust existed between stakeholders, poor communication, and local groups often feeling disempowered (Keogh et al. 2006). The reviewers' solution was to *maximise* community engagement in decision-making.

Relevant to that and to this project, a participatory planning project for improved catchment management project provides useful ideas (Eggins et al. 2004; also Dovers 2005), as does considerable participatory literature in NRM and environmental management (for example, Gooch and Warburton 2009), and more recently on climate change adaptation, which stresses whole of society approaches as being most effective with regard to the development of resilience through social cohesion, for example, as well as the contribution to decision-making that inclusion of local knowledge's bring for more innovative and acceptable solutions to the problem at hand in relation to adaptive capacity (Adger 2003, Thomas et al. 2005, Tompkins and Adger 2005, Smit and Wandel 2006). More broadly, social capital as a precursor for collaborative planning success and community sustainability is often referred to (for example, Flora 1998, Mandarano 2009).

One example that reinforces such arguments concerns rural water management in Europe's North Sea countries. It showed that the concerted attempt to represent all stakeholders (although lacking in actual citizens, more so stakeholder representatives) and partake in fair and democratic process of decision-making—involving transparency of information and incorporation of local skills and knowledge to identify polluting practices and appropriate measures to remedy issues—led to improved relationships and legitimacy. Increased trust and cooperation resulted, which led to better formulation and easier

implementation of remediation measures, and behavioural changes in practice that reduced pollution (Hophmayer-Tokich and Krozer 2008).

Enhanced participatory techniques depart from traditional, passive (one-way) participation, for example, town hall meetings, information sessions and submissions (McGurk et al. 2006), by ideally encouraging and constructing active and early involvement, relevant information, transparency, inclusiveness, deliberation, participant diversity, and participation in agenda setting. An increasing array of new techniques includes citizen forums, roundtables and juries; e-democracy; and open space technology; all underpinned by deliberative dialogue (for example, Cronin and Jackson 2004).

However, proponents of the new techniques have found that to be most effective and not simply add-on components that more represent 'talk' than 'doing' (Irwin 2006; Hindmarsh and Matthews 2008), appropriate techniques need to be selected that help build approaches that address the whole institutional, policy and stakeholder context of the socio-technical system under investigation (Grove-White 2001), which this project is addressing.

However, the project also recognises that some caution is needed with respect to the 'widely held view' that improved participatory procedures will automatically lead to progress. The area is complex, and is embedded in dualities of agency/structure, negotiation/deliberation and exclusion/inclusion, which a participatory transition management approach addresses in its analysis and design.

The central problem the project thus addresses is: *How can existing wind energy management structures and processes be improved such that those developing and regulating windfarms establish effective participatory partnerships with affected communities to ensure productive, democratically legitimate transitions to renewable energy, in response to the broader societal implications of climate change?*

To address this problem in a transformative context, this research is investigating the utility of the 'transition management' approach being developed especially in the Netherlands, but which is now finding much currency internationally as contributing to a sustainability

transitions approach.[1] The thrust of transition management is social learning and overarching planning based on long-term (25 year) visions to inform, guide and re-direct current short-term (and divergent) policy through top-down (expert) and bottom-up (community) approaches using international best practice regarding new forms of governance and participatory decision-making. It will involve thinking and action on multi-domains and levels (federal to state and local government) with multiple actors directed at system innovation and improvement in the decision-making processes connected to renewable energy transitions, especially with regard to community engagement (Rotmans et al. 2000, Bogason and Musso 2006).

As a leading renewable energy technology with a history of highly contested planning and policy processes, wind energy indeed offers a prime opportunity for exploring the utility of developing transition management in the Australian context. The appropriateness of wind energy as a case study is further indicated by early international developments in geothermal, solar, native wood waste electricity generation, tidal energy, biomass, waste incineration, and wave energy projects, which have also attracted intense social conflict (for example, Matthews and Hindmarsh 2003, Devine-Wright 2005, West et al. 2009).

In relation to this overview, the project's **main objective** is to develop and apply a participatory transition management approach to enhance the capacity of Australian governments, industries and communities to create productive and democratically legitimate transitions to renewable energy in response to climate change. To achieve this objective, the project addresses the following **aims**:

(1) To generate increased understanding of the underpinning rationalities—values, beliefs and attitudes—of local communities towards wind farm location and climate change, which can then inform improved community engagement frameworks and wider institutional practices.

(2) To analyse the current (problematic) institutional contexts and policy and planning procedures of community engagement with windfarms to investigate how system innovation and improvement in community participation can be achieved.

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[1]   For example, see: http://www.ksinetwork.nl/conference2009/

(3)   To identify, evaluate and recommend combinations of top-down and bottom-up
        participatory approaches to key policy and stakeholder actors for new transitional
        governance approaches to operate across multi-domains (Australian states) with
        multiple actors (governments, industry and community) to bring about coinciding and
        coherent system innovation and improvement.

1.2   Transition management stages and modifications

The transition management approach, developed for the Netherlands environment plan
2002, offers an innovative approach to address 'big persistent environmental problems',
defined as 'complex, unstructured, involving many stakeholders, surrounded by
fundamental uncertainty and deeply rooted in societal structures and institutions' (Driven
et al. 2002).

The general thrust is to generate long-term, large-scale system transition towards greater
environmental, social and economic sustainability through a new, participatory governance
model (Sondeijker et al. 2006). This involves four phases: (a) 'pre-development': setting
up the transition with steering and coordinating mechanisms; (b) 'policy take-off': system
cultures, processes and structures begin to shift; (c) 'acceleration': socio-cultural and
institutional changes create greater structural change; and (d) 'stabilisation': the long-term
goal (Rotmans et al. 2000, Driven et al. 2002. This project aims to build the important and
foundational **pre-development stage** for b-d.

To date, transition management has been implemented for climate change transitions in
four areas: energy, biodiversity and natural resources, agriculture, and mobility (Drift
2008). The approach focuses on government as the primary actor in the formation and
continuation of a participatory 'transition arena' (Rotmans et al. 2000, Loorbach 2002),
involving business, NGOs, citizens, and knowledge (or research) institutions.

However, while gaining good ground for productive environmental democratic transitions,
the Netherlands process does demonstrate some noted imbalances between entrepreneurial
and democratic goals. This is because it suffers from a lack of involving small-to-medium
enterprises, diverse societal groups and the broader public (Hendriks 2008), which, of
course, all densely populate the renewable energy field. To improve input and output

legitimacy, and more effective transitions, critics argue for more open and inclusive participation, but which also takes into account considered limitations of inclusive governance, for example, where too much inclusivity might generate bottlenecks that overly stall transitions (Connelly and Richardson 2004).

Drawing on those insights and ones relating to enduring social conflict around wind energy in Australia (Hindmarsh and Matthews 2008), and the policy lessons of broader European wind development that stress local embeddedness, the aim of this project is to develop a more inclusive participatory transition management approach for constructive policy transfer to Australia

In that context, in relation to the key top-down role of government for environmental policy and planning, and the important bottom-up role of communities to achieve successful transitions, two key aspects of the **pre-development stage** involve gaining in-depth understanding of (a) community rationalities (values, beliefs and attitudes) so that better collaborative positions can inform community engagement and wider institutional practices, and (b) institutional contexts and policy and planning procedures. In this early stage of the research, again, the focus is on better understanding of key stakeholder rationalities, especially community rationalities, to detect insights of how to better address the problem of social conflict around wind farms for effective renewable energy transitions.

In that vein, this project follows recent pioneer research in the UK directed at increased understanding of community rationalities in relation to windfarms, renewable energy and climate change, and improved community engagement and wider institutional practices (Ellis 2004), which, in turn, builds on earlier findings about the importance of understanding energy related attitudes and perceptions that influence public approval and opposition (for example, Geuzendam, cited in Ratto and Solari 1998: 147-160).

An emergent finding of European studies challenges the tendency of perhaps uncompromising or ill-informed wind energy proponents to dismiss oppositional viewpoints as illegitimate and anti-public interest NIMBYism (not-in-my-backyard) (for example, Diesendorf 2006). These studies show that NIMBYism masks a deeper complexity of policy and planning institutional arrangements, the costs and benefits of

turbines in terms of public interest, and top-down policy styles that limit opportunity for local views to be heard (for example, van der Horst, 2007; for a summary: see Hindmarsh and Matthews 2008).

Instead, underpinning the desire for inclusive community engagement are diverse rationalities related to place, development and environment (Bell et al. 2005), but these are not well understood. These rationalities point to a 'social gap' of qualified support where people support wind energy in principle but oppose a specific development because of social or environmental circumstances (Bell et al. 2005). Compounding this situation is where policymakers worry that objectors may fail to engage adequately with climate change adaptation and the need to meet 2020 targets.

1.3 Inadequate community engagement in Australia

The lack of adequacy in community engagement processes regarding windfarms for local communities in Australia arguably began with the first Australian Government initiative to create a 'wind rush'—the Mandatory Renewable Energy Target—simply because it *overlooked* the role of inclusive community input apart from superficial engagements by developers (For example, Tambling et al. 2003, Wawryk 2004). By 2006, inadequate community engagement had emerged as a major issue of affected communities, alongside visual amenity (Hindmarsh and Matthews 2008, also Gross 2007).

Federal government intervention drew further attention to the issue in late 2006 with the federal minister for the Department of Environment and Heritage proposing a National Code on Windfarms to involve local communities actively in project implementation (Australian Government. 2006), which state governments rejected as posing as too much red tape for wind development. Alternatively, the federal government's position was that inadequate community engagement would lead to stalling wind development (Hindmarsh and Matthews 2008).

In a renegotiation of this ground—signalled as being due to the election of the new Australian Labor government (in late 2007) and its quick ratification of the Kyoto Protocol and desire to implement that through lowering carbon emissions through cleaner energy, as well as to better manage issues raised by wind energy—the Environmental Protection and

Heritage Council of Australia and New Zealand (EPHC), established in 2001 by the Council of Australian Governments (COAG), struck a deal between federal, state and territory governments to move on from a contentious national code to more flexible national guidelines.

1.4 National guidelines

With no reference of the scrapped proposed National Code on Windfarms, on 7 November, federal environment minister Peter Garret announced the agreement of state and territory environment ministers to develop national wind farm guidelines (Garret 2008). Instead, the referral was to one of the recommendations of a report on impediments to wind farm development by the EPHC (2008a). The issues for better management included ones 'like turbine noise, impacts on landscapes, and animals like birds and bats'. The press release also claimed that 'new guidelines would improve consistency and transparency in the wind farm planning and approval process and help address some of the barriers to wind farm development'. One of those barriers, of local resistance to wind farms, was clearly signalled by the concomitant Communiqué of the EPHC's 17th meeting:

> Building community acceptance of this technology is vital to the continued
> development of renewable energy in Australia. Council agreed to develop a set of
> National Wind farm Development Guidelines in collaboration with the Local
> Government and Planning Ministers Council to deliver a higher degree of
> consistency and transparency in the planning, assessment, approval and
> environmental monitoring of wind farms (EPHC 2008b).

The support by the States and Territories for softer public engagement through national guidelines is clearly indicated in the EPHC report, on the discussion around community consultation (EPHC: 31-36). Prepared by a working group of government officials representing federal and state governments, and a representative of the Local Government and Planning Ministers' Council, with wind industry consultants from Hydro Tasmania Consulting providing drafting and technical advice, the report supported non-statutory guidelines (in conjunction with the proposed National Wind Farm development Guidelines) for community consultation applied to all wind farm proposals by the

applicable proponent/developer, drawing on industry (Auswind) Best Practice Guidelines and existing state guidelines and supporting documentation.

As such, the guidelines 'should ... encourage consultation to commence as early as early as reasonably possible within development of a new project' (EPHC 2008a). That was preferred to a statutory community consultation process being defined in legislation and undertaken as part of the planning approvals process, 'to ensure potentially affected parties are aware of the development and have the opportunity to participate in the approvals processes'. Anyway, existing regulatory frameworks were seen as adequately addressing the issue and therefore such requirements were 'a matter for individual states and territories legislative and regulatory frameworks', which varied between jurisdictions with developers having to satisfy planning requirements specific to each state. In other words, little suggested action was suggested apart from what already was happening except earlier engagement by developers along Auswind best practice guidelines, which however do not offer that much scope for improvement in briefly mentioning that developers should adopt community consultative processes (Hindmarsh and Matthews 2008). In other words, reliance on the limited public engagement model appears to be the way forward, with a slight shift to inclusion through earlier engagement but with a continuation of passive consultation processes and mechanisms that offer little improvement for affected communities to input into decision-making.

Also signalling lack of participatory innovation to address real concerns about input and output legitimacy, or perhaps resistance to change, by the EPHC working group was its reference to the Development Assessment Forum (DAF) as a model of how might national harmonisation be achieved without 'interfering with jurisdictional independence or existing legislative processes and requirements'. Somewhat similar to the makeup of the EPHC working group, DAF membership comprises the three spheres of government, the development industry and related professional associations. In that capacity, DAF provides advice and recommendations to local government and planning ministers

Such largely intractable policy signals to embrace international policy lessons for the promise of participatory policy and planning approaches for the resolution of complex interrelated environmental and social problems again reinforces the need for policy transfer and change if renewable energy transitions are to gain better traction with affected

communities. There is little doubt that the limited guideline approach to address change is, in part, the result of industry pressure as indicated by the May 2009 correspondence to Peter Garret from the Clean Energy Council's CEO Matthew Warren regarding national guidelines for wind farm development, which read (in part):

> The industry fears that the guidelines will add unnecessary restrictions to appropriate wind farm development, putting at risk our shared renewable energy ambitions ... additional requirements [to planning regimes at a state level] would place an unnecessary burden on the clean energy sector ... [The EPHC] report clearly documents that the wind industry is already heavily regulated within state planning regimes ... the planning processes at a State level are already extensive ... the industry does not support the introduction of mandatory guidelines ... (Warren 2009: 1-2.)

No qualification, however, was given to the rather limited community engagement part of this claimed context of overburdening regulation (EPHC 2000a: 35).

Such developments clearly signal a lack of understanding of community rationalities of concern about, resistance to, or arguably deepening social conflict around, wind farms that, in turn, signal an perhaps apathy, reluctance, or resistance, by State policy makers and wind energy developers to acknowledge the importance of understanding the importance of including affected communities more robustly in decision-making around wind farm development and location.

PART 2: EARLY RESEARCH FINDINGS: ENHANCED UNDERSTANDING OF STAKEHOLDER AND ESPECIALLY COMMUNITY RATIONALITIES: COALITIONS OF CONTESTATION

This section summarises preliminary research (or first stage) findings to probe why: (1) existing approval processes involving public involvement appear inadequate to deal with critical concerns of affected communities in a way that engenders a better understanding of them; and (2) it appears important to redesign the decision-making process to better incorporate those concerns through inclusive, partnership or collaborative planning approaches.

To best achieve such understanding, which, again, is severely lacking in Australia, what is sought is a clearer picture, conducted through several stages, of analysing community rationalities (values, beliefs and perceptions) as well as of any divergences/convergences between and among proponents and critics so as to better analysis the dynamics of the contestation and the positions of the protagonists, and what might this reveal for policy learning.

To achieve an initial representation of the debate, the first stage of research conducted a key stakeholder analysis to identify key social actors, with an emphasis on affected community self-nominated representatives who displayed problems with wind farms. This was considered a good starting point (following preliminary research: Hindmarsh and Matthews 2008), as social representations of their rationalities and were relatively accessible through text on websites and in reports. The analysis has now moved onto stage 2 involving an Australia-wide media analysis on the debate. Other stages will include analysis of submissions to the current New South Wales and Victorian Inquiries into wind farms; analysis of any State planning approval reports referring to public consultation (with an initial identification that reports are accessible in Victoria and Western Australia); interviews with policy makers, wind public engagement researchers, industry representatives; and interested citizen views in affected Australian communities through an interactive website medium.

2.1 Stakeholder analysis

From preliminary analysis, five stakeholder groups were targeted as being key ones: government, environmental non-governmental groups (ENGO), research institutes, wind energy industry, and landscape and coastal guardian groups. The number of each stakeholder type found is shown in Table 1.

Table 1: Numbers of each stakeholder group included in analysis

Stakeholder group	Number
Industry	22
Government (State and Federal)	12
Environment groups	11
Research Institutes	5
Landscape guardian groups	11
Total number of stakeholders	61

Key stakeholders can be grouped into a pro-wind farm coalition comprising industry, government, ENGOs, and wind energy research institutes, and a 'community contestational' coalition, here, of coastal and/or landscape guardian groups (hereafter 'guardian groups'). Guardian groups have formed so far for every second wind farm proposed, usually in areas known for their scenic beauty.

While most groups fall into these 'pro' or 'contestational' positions, we found that two stakeholders expressed a degree of support for both positions, although it should be noted that support for renewable energy is also found in guardian groups albeit for low impact ones. One of the ambivalent stakeholders was the ACT government, and the other was the South Australian Conservation Council. They were accordingly included in the analysis of both pro and community contestational arguments. Typically, the largely polarised alignment of the Australian debate, of 'discourse coalitions', mirrors the European debate (for example, Szarka 2004).

From key stakeholder sources, data was identified and gathered concerning the benefits and costs of wind farms/energy/power, from governmental (both state and federal) policy documents about the need for wind farms, often embedded in renewable energy and also climate change mitigation and adaptation policy texts; materials (typically promotional) issued by wind farm developers and research organisations; and materials critical of wind farm development and/or their location (guardian groups).

The data was analysed through interpretive analysis. Here, the investigator goes 'inside' the situation to gain better understanding of the meanings of their rationalities from the actors' own viewpoints (for example, Flick 1998). Attention is paid to language, for example, narratives (Hajer and Wagenaar 2003), or storylines (Hendriks 2005), or more simply, lines of arguments or claims. The data was thematically coded using the Nvivo qualitative data analysis software package (Version 9, QSR 2008). The coding framework was used as a sensitising device that helped to specify whether an article offered narratives about meanings, understandings and perceptions about wind farms, that is, **ways of knowing** especially with regard to **practices** (ways of doing) regarding location of wind farms and community engagement about that (for example, concerning developer engagement with affected communities as part of the initial social and environmental impacts assessment process, and community representation in (State) government approval processes).

Given preliminary research that showed the top two contestational issues (over time) in the Australian debate were 'visual amenity of place' and 'inadequate consultation' about wind farm location in place (Hindmarsh and Matthews 2008), the research was also interested to probe into how those critical of wind farms in affected communities where wind farms are located, or proposed, based their rationalities in relation to:

- 'sense of place': variously, place identify, place attachment, belonging to place, fulfilment of needs by place, perceptions of local distinctiveness and quality, and/or individual's connectedness with place (Hidalgo and Hernandez 2001, Pretty et al. 2003, Stedman 2003, Knez 2005, Devine-Wright 2009); where a 'place' is generally conceived as being a space imbued with meaning (Vanclay 2008: 3);

- 'sense of community' (the extent a person feels part of a readily available, supportive and dependable structure) (Pretty et al. 2003, also Devine-Wright 2009);

- 'senses of selves-in-place' regarding the local environment (Cantrilla and Senecah 2001: 185), or connectedness to nature (Schultz et al. 2002), through narratives of environmental identity which contribute to the formation of group identities in interrelated social and environmental contexts, for example, landscapes that are given moral considerations by individuals/groups who care about environmental issues (Clayton and Opotow 2003: 8), as articulated, for example, through the formation of guardian groups.

Of further interest was to probe the role of climate change for all stakeholder rationalities, given increasing policy justifications to shift to renewable energies under the threat of climate change. In other words, did the urgency to mitigate and/or adapt to climate change pose as an increasing or prominent narrative of proponents, and as an emergent one that might qualify or temper contestational coalitions to wind farms?

The preliminary analysis found that often a stakeholder text contained several narratives, that overall, variously formed environment, social, economic, and governance themes. The **environment** theme related to narratives about climate change, clean energy, noise, environmental impacts, landscape value, scenic amenity and appearance, and flora and fauna impacts. The **social** theme related to narratives about place, community, and health, place, community, rural employment, rural income, community cohesion, compensation and aboriginal heritage. The **economic** theme related to narratives of industry, jobs, security of supply, income, property values, efficiency of wind turbines, and subsidies. Finally, the **governance** theme related to governmental policy concerning wind farms, for example, issues concerning approval processes of wind farms, government support and development of the industry, and public consultation mechanisms and processes.

2.2 Proponents' narratives about wind farms

The pro-wind farm coalition's texts provided a number of key narratives in support of wind farms, as shown in Figure 1.
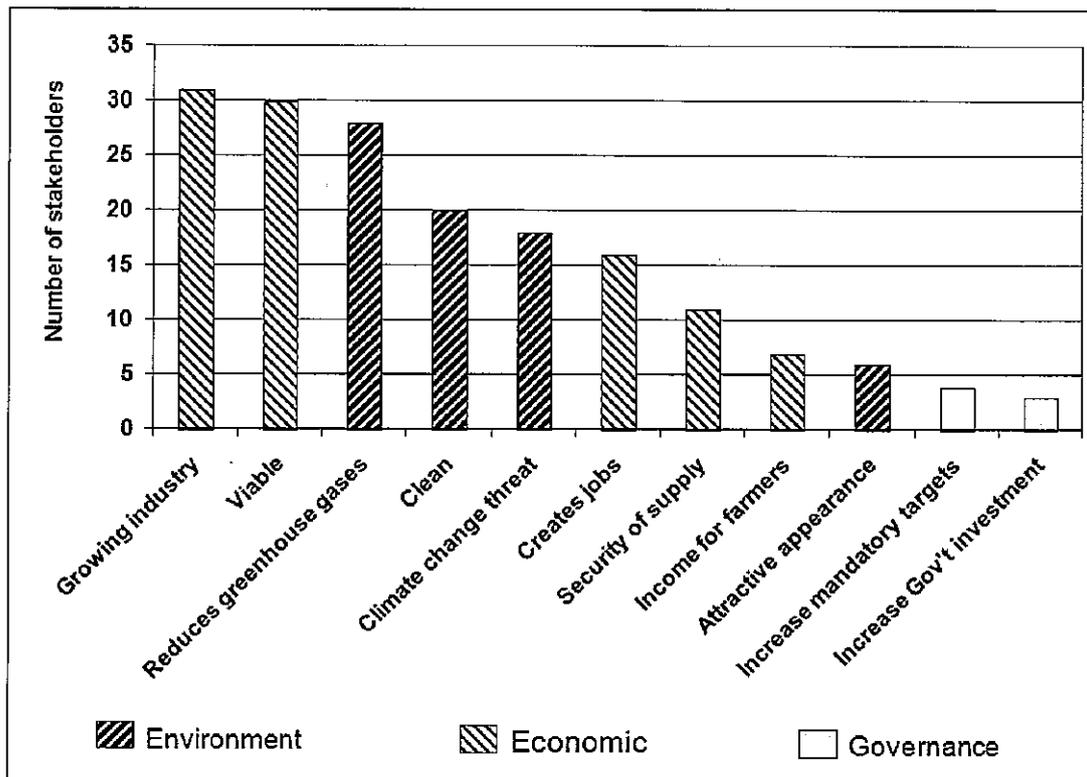

Figure 1: Proponent narratives about wind farms

Economic

Economic narratives in favour of wind farms coalesce around economic opportunities for Australia in participating in a growing industry, especially based on international examples of the expansion of wind farms. The positive assumption is that a lot more growth is possible as more governments tackle the task of reducing greenhouse emissions. For example:

> We have a unique opportunity to invest our new-found financial wealth in the
> creation of an energy-and-resource-efficient, renewable energy-fuelled system that

will be part of a sophisticated economy that builds a competitive advantage in innovative new industries, uses non-renewable resources judiciously and that will deliver enormous dividends to future generations.[2]

Economic opportunities are also discussed in terms of creating jobs, especially with regard to creating jobs in regional areas that have little in the way of industry. Wind farms also increase the viability of local farms by providing an alternative guaranteed income stream, for example:

> Already, every year, some $3 million goes directly to landholders who host wind turbines on their land, while another $24 million is spent on operational and maintenance costs, much of it in regional areas. This investment has created hundreds of jobs and a guaranteed income for many farmers who are still able to carry out normal farming activities on 98% of their land.[3]

Other economic arguments in favour of wind farms emphasise that wind farm technology is a mature technology available now, that it is viable: it is affordable in the sense that wind farms have relatively low start up costs (compared to coal-fired or nuclear energy start up costs), they are modular, so a small wind farm can increase in size over time as demand for green energy increases, and as returns accumulate. For example:

> It's affordable and available right now. Wind is the best placed renewable technology to deliver cuts in greenhouse pollution on a large scale, quickly. Fostering wind power is a long term strategy to develop the renewable energy industry, along with other technologies such as solar and geothermal, which are not yet as technologically-advanced or cheap as wind.[4]

Another argument is that wind farms provide a secure supply of energy, which increases the reliability of the energy system, making it less dependant on supply of fossil fuels and

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[2] The Greens. Available from http://greensmps.org.au/content/re-energising-australia [accessed 5/07/09].

[3] Future Energy Pty Ltd, available from: http://www.futureenergy.com.au/facts.html [accessed 11/06/09].

[4] Environment Victoria, available from: www.envict.org.au/inform.php?item=416 [accessed 17/06/09].

less vulnerable to failures. In remote areas, wind farms will provide viable power generation off the main electricity grid, offer a security of supply otherwise unavailable, and reduce the cost of diesel and the risk of diesel fuel spills.

Environment

The wind industry narrative of 'reduces greenhouse gases', as the most prominent proponent narrative, is closely related to the environmental NGOs (ENGOs) narrative of 'climate change threat'. An example of the latter by Environment Victoria is:

> Already climate change is killing millions of birds. If we don't act now, global warming will devastate almost all of earth's ecosystems, not just those of birds. If you truly love birds, halting global warming should be your number one priority. Help create a sustainable energy future, in which wind power will play a key role.[5]

In contrast, the wind industry would approximate the reduction in greenhouse gases that a wind development would produce, as such:

> Depending on siting, a typical wind turbine can produce the equivalent energy needs of up to 1,000 homes. A typical 50 megawatt (MW) wind farm in Australia displaces between 65,000 and 115,000 tonnes of carbon dioxide per annum—enabling tens of thousands of tonnes coal to be left in the ground each year.[6]

In seeming association with climate change narratives, all proponent stakeholders emphasised the word 'clean' in relation to renewable energy sources in general, and to wind energy in particular. For example:

> It's clean. Wind power is non-polluting and safe. During operation it does not contribute to global warming. There is no legacy of pollution for future generations. In contrast brown coal, the main source of Victoria's electricity production, is the

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[5]   Future Energy, available from: www.futureenergy.org [accessed 30/06/09].
[6]   AusWEA, available from: www.auswea.com.au [accessed 11/06/09].

most-polluting of the fossil fuels, making this state the worst greenhouse polluter in Australia. If we are to avoid climate change we must drastically cut emissions.[7]

Seemingly countering the visual amenity argument of landscape guardian groups, ENGOs and industry groups often referred to the 'elegant appearance' of wind turbines, for example, Friends of the Earth imaged wind farms as 'symbols of a better, less polluted future'.[8]

Governance

For proponents, governance narratives focussed on increasing the mandatory targets in the push for a renewed MRET, and, by association, more investment in wind farms. That emphasis on lobbying policy makers for favourable operating conditions is also reflective of the European wind energy's approach (Szarka 2004: 324).

Overall representation of proponents' narratives

Collapsing the proponents' arguments into the key themes, as shown in Figure 2, it can be seen that economic arguments just edge out environmental arguments as the main justification of wind farms but as there is such a slim edge of only 1%, it can be advanced that the two constitute hand-in-hand narratives advanced for wind farms.

Perhaps unsurprisingly, these convergent Australian proponent narratives of environment and economy again mirrors what Szarka (2004) found with regard to (earlier-forming) European proponent narratives where wind energy industry and proponent ENGOs seemingly represent an advocacy coalition coalesced around narratives (or as Szarka puts it, 'discourses') of scientific and economic rationality, respectively, which develop within bodies of technical expertise, but which tends to neglect communicative rationality, which more characterises critics' coalitions.

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[7] *Environment Victoria, available from:* www.envict.org.au/inform.php?item=416 *[accessed 17/06/09]*
[8] Friends of the Earth, available from: http://www.foe.org.au/media-releases/2005-media-releases/mr_18_8_05.htm [accessed 25/6/09].
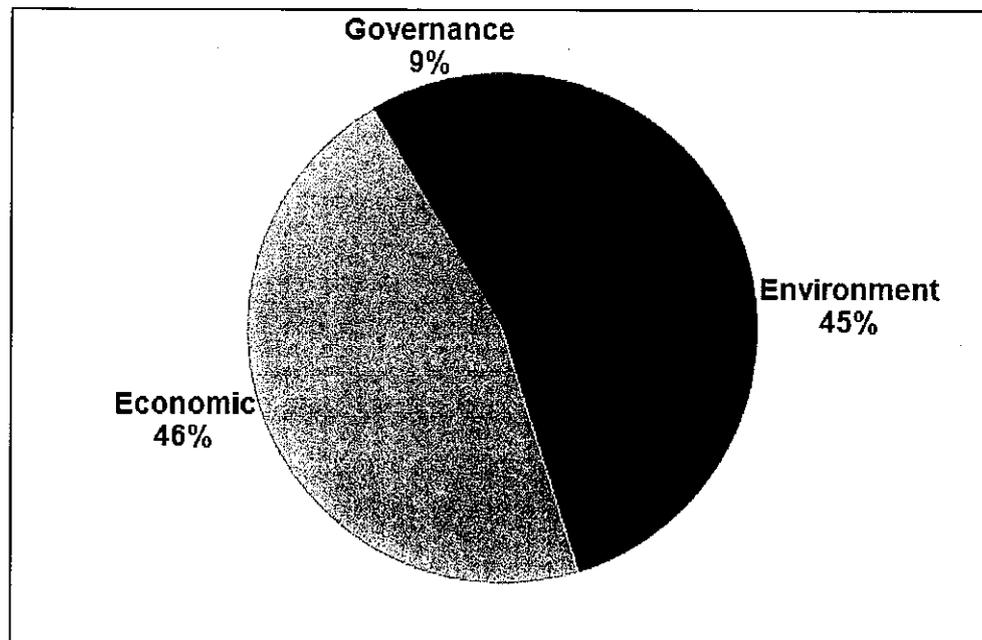
Figure 2: Proponents' key themes about wind farms

To explore this ground, it is useful to get a better idea of what is referred to 'coalition' in this context. Sabatier and Jenkins-Smith (1999: 127) argue that 'coalition membership can be positively identified by the fact that actors engage "in some nontrivial degree of co-ordinated activity in pursuit of common policy objectives'. However, given the lack of evidences at this stage that the Australian pro-wind advocacy coalition displays any degree of coordination, perhaps a more cautious definition is to define a coalition as being constituted of like-minded interests who tend to 'sing in chorus—but not necessarily in the same choir' (Szarka 2004: 319, following Hajer 1993). This may or may not also be the case with the community contestational coalition. Deeper investigation in the case of both proponent and the community contestational network is thus needed to clarify this point, which can be important to define for policy directions and outcomes given relative weightings of power and influence in agenda setting (for example, Ham and Hill 1984, Clegg 1989).

Certainly, however, many of the narratives seem similar with regard to both coalitions, but there are clear divergences in the weightings given to different issues, as Figure 3 shows in

the narratives of proponent coalition stakeholders, and as the Figure 5 (below) shows in the weightings given by 'members' of the community contestational coalition.
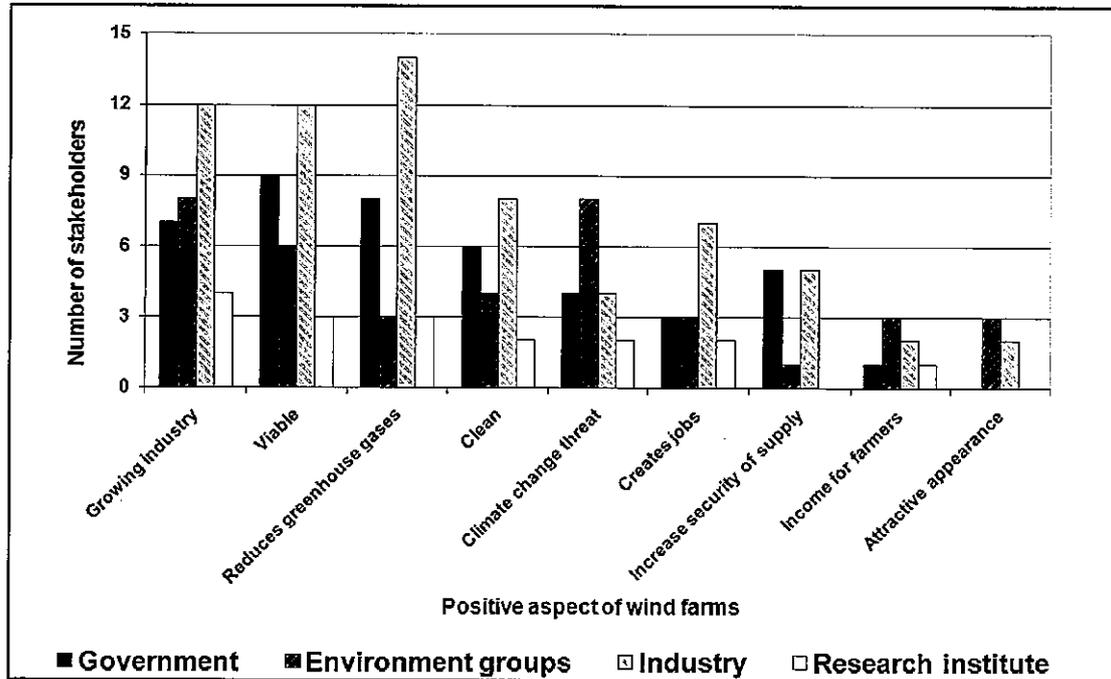

Figure 3: Narrative weightings of proponent coalition stakeholder narratives

Returning to the notion of communicative rationality, Szarka explains that this 'connects to contemporary debates on the conduct of democracy and the scope for citizen choice'. Significantly, Rydin (2003: 167),

> cross-links these discourses to the "three pillars" of sustainable development agenda: "these three dimensions—the environmental, the economic, and the social—are closely related to the three rationalities that have been examined in terms of their individual legitimation of environmental planning. Scientific rationality supports the claims of environmental sustainability; economic rationality relates directly to the economic dimension; and communicative rationality justifies the involvement of a broad range of actors and consideration of a wide range of perspectives, a key link to social sustainability"

We return to this observation in discussion below of the proponents and critics narratives, but before moving to community contestational narratives; it is pertinent to more address scientific rationality in relation to environment planning as presented in the arguments for wind farms. While economic rationality appears more straightforward regarding proponent's arguments, for example, of a growing viable industry and creating jobs and security of supply, scientific rationality is less clear with the two clearly differing emphasises by industry and ENGOs (see Figure 3); with the former emphasising reducing greenhouse gas emissions and the latter emphasising the threat of climate change.

The first observation in this regard is that climate change represents by far the key environmental rationale in proponents' arguments for wind farms, with the lesser one of wind farms as 'clean' closely associated. The second is that internationally, in Europe especially (see European Directive 2001/77/EC), the stress was placed by the pro-wind lobby on the need to make a transition to renewables because of climate change (Szarka 2004), which appear as synonymous to Australian narratives now. The industry position stresses reduction of greenhouse gases, while ENGOs are similarly critical of pollution but emphasise more the threat of climate change. The problem here is that in the latter, scientific and moral narratives fuse, thus questioning the scientific rationality of the argument. ENGOs are also more vocal publicly in pushing wind energy.

At the same time, Szarka outlines that pro-wind lobbying has created a(nother) moral dilemma for environmental NGOs, and environmentalists per se, because wind farms are not that environmentally benign. Most prominently, the reason given is that they disrupt nature scenically, which can be of much concern for environmentalists as well as residents in communities that live in areas where wind farms are located or proposed. For environmentalists, the aesthetic appeal of the landscape is traditionally a key rationale for the protection of the environment from industrialisation and a technological world (see, for example, Tennant-Wood 2007, Buijs 2009); however, in early research we found noise a higher concern, though marginally.

2.3 Community contestational narratives about wind farms

Figure 4 shows the themes that community contestational narratives populate and of what percentage they represent with regard to each other. In contrast to proponent narratives, community contestational themes also include the social in reflecting communicative rationality. In turn, Figure 5 shows in detail the range of issues raised by guardian groups, with environmental issues at the forefront, but economic and social issues not far behind, and arguably underpinning all three (for example, Hindmarsh and Matthews 2008), the issue of inadequate consultation which occupied the governance realm by itself.
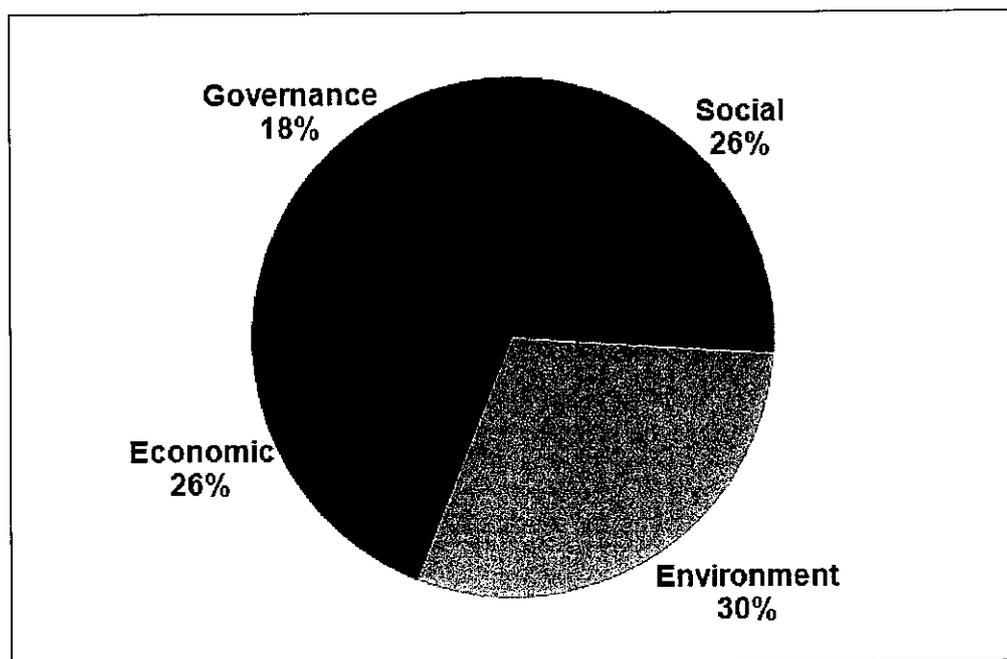

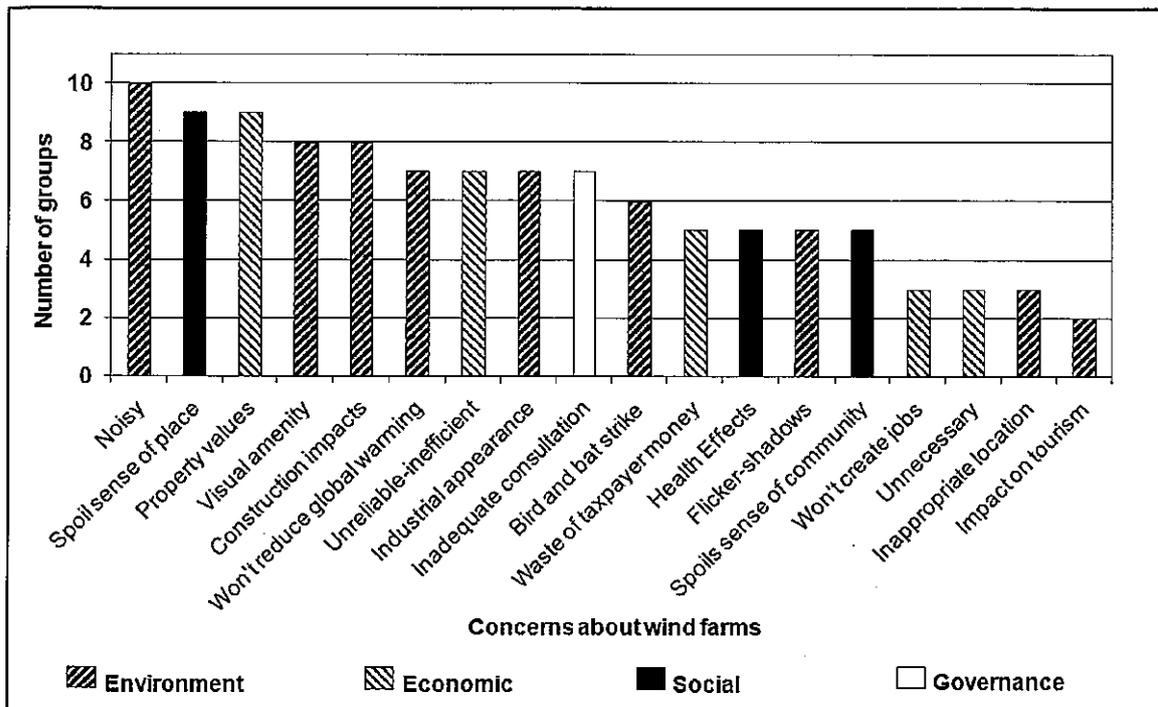**Figure 4: Community contestational key themes about wind farms**

Figure 5: Community contestational narratives about wind farms

Environment

The most numerous of community contestational narratives were environmental, in particular, noise and visual amenity (including industrial appearance, flicker and shadows), environmental impacts during wind farm construction, and ongoing threat of bird strikes. Of the 11 guardian groups analysed, seven groups disputed claims made by the wind industry that wind turbines reduce greenhouse gas emissions. Lesser narratives related to the proposed development being in the wrong location (with wind farms considered a good idea); that wind farms increased threat or risk to person and property posed by bushfires; that wind farms would not be decommissioned due to the high cost of doing so, leaving the landscape blighted by 'rusting' turbines; and adverse impacts for tourism and the hospitality industry due to visual pollution and disruption to scenic views; which is also an economic argument.

Economic

The second cluster of narratives were economic, most prominently, potential loss of property value. Narratives of a technological nature question the economic wisdom of

building wind farms in relation to: (1) unreliable and intermittent wind; and (2) the inadequacy of wind farms to produce enough power to substantially reduce the production of greenhouse gases. In that context, governmental subsidisation of wind farms was considered a waste of tax-payers monies, and seemed more representative of a 'green façade' pursued by governments as an easy way to appear greener than they actually were in a deeper sense of genuinely changing the economy to be comprehensively green, for example. Three groups questioned whether any jobs would actually be created from the installation of wind farms. Two groups were concerned that the turbines would deter tourism, and one group was concerned about the effect on mobile phone and television transmission.

Social

The social comprised three narratives: spoiling sense of place, spoiling sense of community, and health effects, as Figure 6 shows. Here 'spoiling sense of place' is clearly of most concern regarding the social, with health effects (such as stress from noise especially prominent, for example, Wilson 2009) and spoiling sense of community (community conflict) also clearly important.
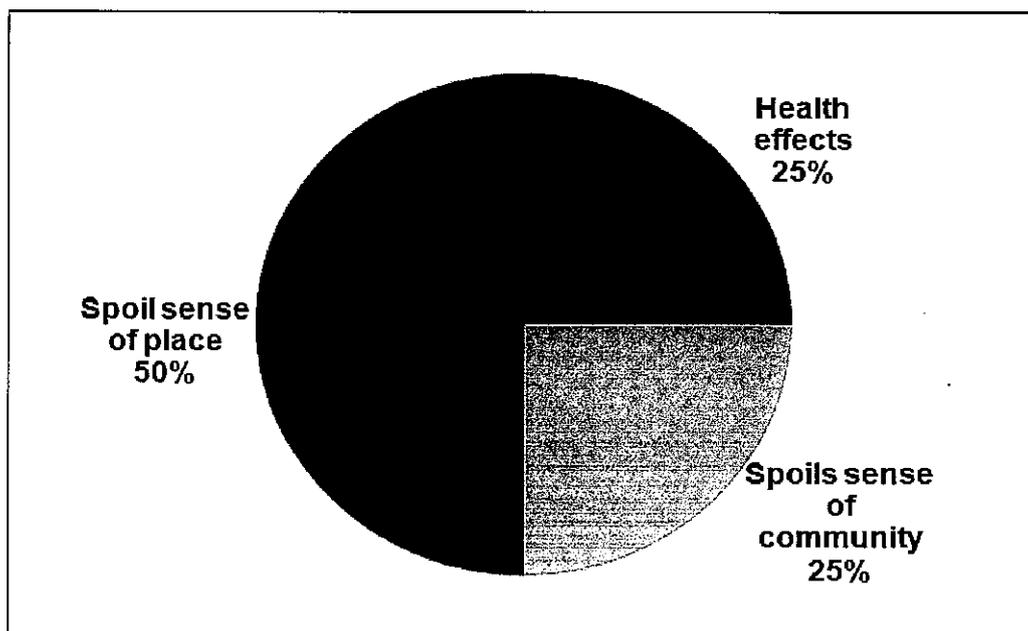

Figure 6: Social arguments of community critics about wind farms

With spoiling sense of place prominent, and more complex than spoiling sense of community (for example, location of wind farms 'dividing' communities), preliminary analysis has focussed on it, with research questions asking: What comprises spoiled sense of place for guardian group members? What are the rationalities involved? Probing into the narratives, three key sub-narratives were identified: 'outsiders', 'environmental identity', and 'destruction of our way of way', as Figure 7 shows. The sub-narrative of 'outsiders' is prominent in comprising 62% of the spoiling sense of place narrative.
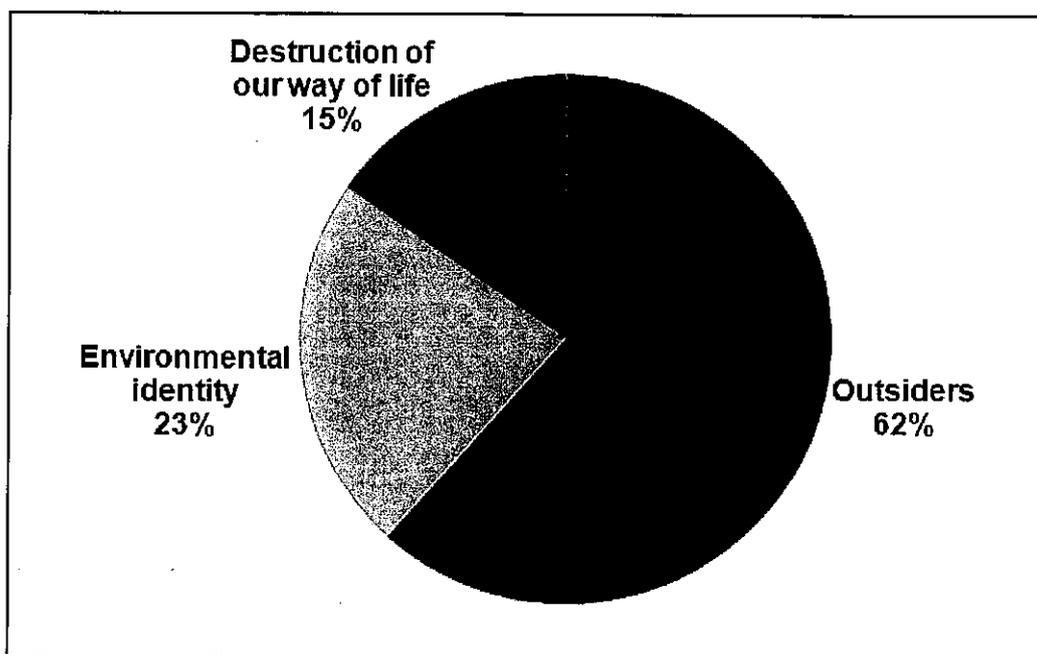

Figure 7: Spoiled sense of place sub-narratives

Outsiders

Guardian groups position themselves as defending their way of life against 'outsiders', such as wind farm developers, government bureaucrats and overseas based businesses. These concerns are also linked to the profit motive of these outsiders, which is seen as a motive preventing 'outsiders' from objectively assessing wind farm impacts on the landscape. For example,

> Spring Range welcomes and will seek to support any proposal which offers a
> sincere and genuine strategy to reduce greenhouse emissions. The obvious profit

motive and surreptitious approach to date at Spring Range gives good cause to suspect that concern for the planet or society was not at the heart of ActewAGL efforts ... There has been considerable opposition to wind turbines on a broad range of issues. These include questions about the motives of the financial backers (often overseas companies that obtain tax concessions for the investment).[9]

Another example is:

The wind industry has done a splendid job in promoting its "green" image, when the truth of the matter is that wind power station developers such as Stanwell Corporation, Pacific Hydro and Meridian Energy are only interested in one thing— making as much money as they can as quickly as possible, and they don't care what environmental damage is done, or who gets hurt along the way ... The only beneficiaries will be fly-by-night wind power station developers and overseas manufacturers of wind turbines. Our precious and irreplaceable landscapes are worth more than this.[10]

Environmental identity

Guardian groups talked in general terms about their feeling of *connectedness* to their local areas. The following quote well illustrates this:

The Western Plains is an area of unique and remarkable beauty and provides critical habitat for many rare and unusual species of plants and animals. It is also our home and has been the home of many generations of human occupants, both black and white, who have formed strong attachments to the landscape ... We place the highest value on our landscapes and environment, and believe in the development of low impact renewable energy projects where the environmental

9   Spring Range Landscape Guardian Association, available from: http://www.springrange.org.au [accessed 12/06/09]

10   Prom Coast Guardians, available from: http://www.mretreview.gov.au/pubs/mret-submission60.pdf [accessed 5/07/09]

damage is minimal or none and where there is real and informed community support.[11]

Destruction of our way of life

Members of landscape groups feel that their way of life is under threat. For example:

As well as the destruction of our landscape and wildlife we will suffer damage to our property values, our health and the quiet, convivial character of our neighborhood. We need your help to prevent the destruction of our properties by an uncaring or ignorant minority.[12]

That minority is especially represented as local landholders who allow turbines to be placed on their land.

Overall, the spoiling sense of place narrative well conveys that guardian groups are not against renewable energy in their 'back yards' per se, but illustrate understandable and arguably reasonable attitudes and values pertaining to place where if renewable energies are to located, low impact ones are preferred and supported. In also displaying 'ownership' of place, outsiders need to seek 'permission' to enter place, especially through adequate consultative processes and mechanisms. This introduces and reinforces communicative rationalities of involving a broad range of actors and perspectives in governance of wind farms through enhanced modes of public participation.

Governance

The majority of guardian groups narrated strongly, inadequate community consultation. Two landscape guardian groups describe their experience thus:

Wind Power have refused requests from [our group], the Pyrenees Shire and effected neighbours for public presentations about their proposed wind development in the towns of Beaufort and Skipton. A public meeting is long overdue and critical so that all the community has all the information about the development. The community is

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[11]   Western Plains Landscape Guardians, available from: www.savethewesternplains.org.au [accessed 12/06/09].
[12]   Residents against Turbines of Tooborac, available from: http://www.rats.org.au/ataglance.asp [accessed 20/06/09].

generally confused on details about the project and has a right to proper presentation from Wind Power and a chance to ask questions in a public forum.[13]

and,

Roaring Forties/Hydro Tasmania recently delivered a newsletter letting us know the progress on their plans to erect thirty four 135m (440 feet) tall turbines that have the potential to cast 3km long rotating shadows across our landscape, emit disturbing audible and low frequency noise levels and annoying blade glint. While it is true that Roaring Forties has been out and about in the community, their consultation has generally consisted of telling us what they are going to do.[14]

2.4 Key findings

The analysis highlights that 'spoiled sense of place'—as formed by sub-narratives of outsiders, environmental identity and destruction of our way of life—is the main social factor contributing to local resistance or opposition to, or concerns about, wind farms. It appears closely associated with 'ownership of place' (especially in rural community settings where wind farms are predominantly located in Australia) and place-protective action (Devine-Wright 2009), and the interrelated governance issue of inadequate community consultation both about development and location of wind farms in a locality or place.

That mirrors the findings of most European studies on wind farms, where the three key European rationalities include:

1. 'Colonisation': externally imposed wind farms, paying for other people' electricity, and so forth;

2. Commercialisation and industrialisation of the countryside; and,

3. Lack of community consultation

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[13]   Western Plains Landscape Guardians, available from: www.savethewesternplains.org.au [accessed 12/06/09]

[14]   Macedon Ranges Landscape Guardians, available from: http://www.syris.com.au/SyRenew/images/stories/Macedon%20Ranges%20Landscape%20Guardians %20Newsletter.pdf [accessed 5/07/09]

Another finding well connects to the observation of Rydin (2003) that the three dimensions of the environment, the economic and the social make up the 'three pillars of sustainable development, or, in Australia, ecological sustainable development (ESD). As Rydin (2003: 167) made clear: 'these three dimensions—the environmental, the economic, and the social—are closely related to the three rationalities that have been examined in terms of their individual legitimation of environmental planning'. The presence of these three rationalities underpinning ESD is important to reflect on regarding wind farm development and location practices as all Australian jurisdictions have implemented the ESD agenda. What is found is that the rationalities of the proponents' arguments appear to lack the social in any depth with regard to community consultation, and to resist important international policy lessons about the need to embed wind farm development in a local context especially through enhanced participatory procedures and mechanisms. That leaves local communities largely disempowered or marginalised in developer processes of consultation, which reinforces a strong practice of tokenism or one-way information dissemination (see Hindmarsh and Matthews 2008), where affected communities become passive observers or onlookers instead of active participants in decision-making concerning 'their place', contributing to decision-making their local knowledge's and preferences in collaborative planning. That does not auger well for ESD considerations in a democratic society.

The **key findings** of this submission are that:

- **'Sense of place'** (underpinned by ownership and protection of place) appears the main social explanatory factor for community contestation of wind farms, and informed by **a range of issues**, needs to be much better understood and addressed for effective renewable energy transitions, especially regarding wind farms.

  In that context, with regard to issues of landscape amenity and place, Gooch and Warburton (2009: 168) referred to a profound commitment to the environment as the likely transition factor that 'transforms an area into a "landscape"'. That indicates that there are no easy answers regarding controversial development such as wind farms in a context of landscape, community ownership and place-protective action.

This preliminary research finding about sense of place is well supported by the more established research of Professor Patrick Devine-Wright of Manchester University in relation to the UK. It is worth quoting at some length Devine-Wright's (2009: 437) response for **wind energy policy development** with regard to his research findings in suggesting a 'novel' framework comprising the inclusion of 'understanding psychological aspects of place change, connectedness literatures on place attachment with the social psychology of social representations and identity processes':

> [This] framework also has applied implications, for example suggesting a less pejorative means of engaging with public opposition that goes beyond the labelling of opponents as irrational or ignorant, and a need to expect, rather than decry, emotional responses from local residents. Policy makers and developers face the challenge of devising energy projects and procedures that are interpreted to enhance rather than disrupt places, promoting support rather than opposition, and managing conflicts when they arise, mindful of the symbolic, emotional and evaluative aspects of place attachments and place identities. To that end, the framework suggests psychological principles that can be used to inform practices of public engagement, whereby project instigators can seek to anchor and objectify change in such a way as to enhance rather than threaten place-related continuity, distinctiveness, self-efficacy and self-esteem.' (Devine-Wright 2009: 437.).

- In the absence of inclusive participatory decision-making approaches, in reflection of the European and Australian experiences (as well as elsewhere), there is a arguably a good chance that **social and political conflict** will increase with regard to Australian wind farm development and location, as well as public distrust and divisiveness, and ongoing problems with democratic legitimacy and the effectiveness of environmental decision-making and interrelated energy and sustainability transitions.

- What this reinforces is the need for redesigned institutional decision-making approaches with regard to intersections of place, renewable energy development, environment, and participation, that introduce collaborative, consensus-building, or partnership approaches built around **inclusive participatory procedures and mechanisms**.

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