AUSTRALIAN WORKPLACE INNOVATION AND SOCIAL RESEARCH CENTRE

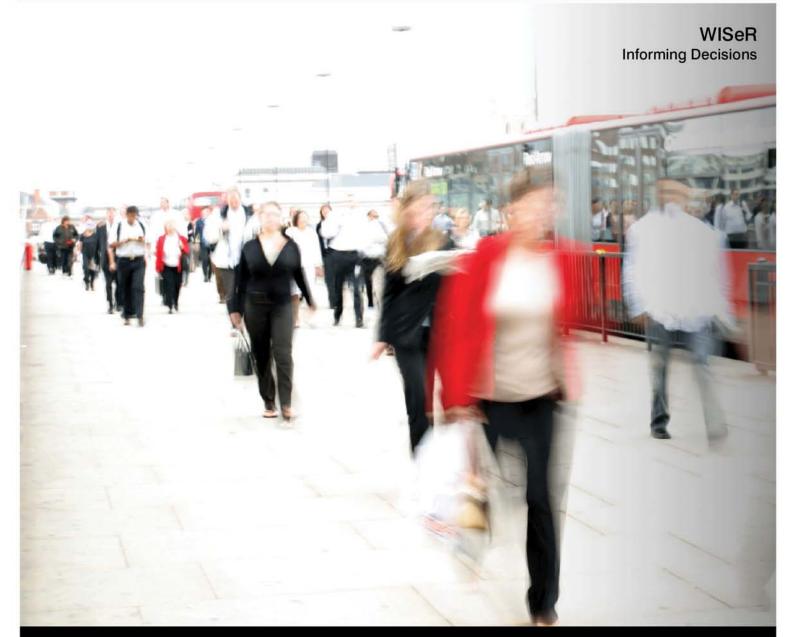


The Energy to Engage:

WIND FARM DEVELOPMENT AND COMMUNITY ENGAGEMENT IN AUSTRALIA

Carlo Tognato and John Spoehr May 2012

Report prepared for the Institute for Mineral and Energy Resources, The University of Adelaide



THE ENERGY TO ENGAGE:

WIND FARM DEVELOPMENT AND COMMUNITY ENGAGEMENT IN AUSTRALIA

Carlo Tognato and John Spoehr

May 2012

Report prepared for the Institute for Mineral and Energy Resources

University of Adelaide

Australian Workplace Innovation and Social Research Centre The University of Adelaide 230 North Terrace Adelaide South Australia 5005

www.adelaide.edu.au/wiser

Published May 2012.

ISBN: 978-0-9871950-6-7

Suggested citation:

Tognato, C. & Spoehr, J. 2012. *The Energy To Engage: Wind Farm Development and Community Engagement in Australia*: Australian Workplace Innovation and Social Research Centre, The University of Adelaide.

The Australian Workplace Innovation and Social Research Centre (WISeR) focuses on work and socioeconomic change. WISeR is particularly interested in how organisational structure and practices, technology and economic systems, policy and institutions, environment and culture interact to influence the performance of workplaces and the wellbeing of individuals, households and communities.

WISeR also specialises in socio-economic impact assessment including the distributional impacts and human dimensions of change on different population groups and localities. Our research plays a key role in informing policy and strategy development at a national, local and international level.

CONTENTS

KEY	FINDINGS AT A GLANCE	3	
1	INTRODUCTION	1	
2	WIND FARMS AND COMMUNITIES: A RELATIONSHIP THAT MATTERS	2	
3	WHAT STRAINS THE RELATIONSHIP	3	
4	ADDRESSING THE STRAIN THROUGH COMMUNITY ENGAGEMENT	5	
5	WHAT WE STILL NEED TO UNDERSTAND	9	
6	CONCLUSION	.4	
REFE	REFERENCES		

KEY FINDINGS AT A GLANCE

- While the importance of community engagement in wind farm development is widely acknowledged, the adoption of more collaborative and authentic forms of community engagement has been slow in Australia, fueling criticism from governments and communities about the authenticity of the commitment of the industry to building productive partnerships and constructively managing conflict.
- In the absence of a suitable analytical framework to underpin engagement, researchers and experts in the wind energy industry have yet to systematically identify the mix of ingredients that constitute an authentic practice of collaborative community engagement. This report makes a contribution to filling this gap in our knowledge.
- We identify the need for two additional ingredients that can add substantially to the authenticity, quality and effectiveness of community engagement in wind farm development.
 - Firstly, the wind energy industry needs a robust business case to quantify the value added of more collaborative forms of community engagement to wind farm developers. Quantifying the economic gains for them from high quality engagement will increase the credibility of their efforts with communities.
 - Secondly, the fact that certain impacts of wind farms are disproved by technical advice does not imply that communities will automatically believe or accept that advice. By enabling communities to collaborate with scientists and engineers on the production of the technical knowledge associated with wind farm developments, developers may give communities additional reasons to believe the scientific evidence that backs such proposals.
 - Moving community engagement up the value chain of the wind farm development process would represent an important innovation in the wind energy industry, acting as an example for other industries eager to demonstrate a genuine commitment to the pursuit of the 'social license to operate'.
 - A partnership between the wind energy industry and academia is urgently needed to pilot and evaluate such a new model of inclusive community engagement. Should the evaluation confirm its benefits, then it would be possible to produce handbooks and best practice guides to assist its replication throughout the wind energy industry, and possibly beyond.



1 INTRODUCTION

In spite of high levels of public support for renewable energy, in particular for wind energy, ¹ wind farm developments have still faced community opposition.² In some cases opposition has been quite considerable. This has led to delays in applications to planning authorities³ which in turn slows down the deployment of renewable energy technologies.⁴ The challenge for the industry as well as key community stakeholders is to develop and apply engagement processes that build greater understanding of the challenges faced by all parties in wind farm development. This is timely given emerging pressures.

Recently, community concerns surrounding various wind farm developments were brought to national attention by the Australian Senate Inquiry into the social and economic impact of rural wind farms in 2011. ⁵ The Victorian Government subsequently enacted legislation requiring developers to gain the consent of owners within 2km of any proposed turbine. The legislative package included additional exclusion zones preventing wind farm development in designated areas.

The need to secure community acceptance of wind farms has led observers to emphasize trust-building between developers and communities,⁶ particularly in the case of large commercial developments, which, unlike cooperative- or community-owned wind farms, have a harder time at winning local support.⁷

The new focus on trust-building, in turn, has drawn increasing attention on the interrelationship between trust and fairness and ultimately on the effects of fairness on public perceptions of wind farms.⁸ While fairness both relates to material outcomes and process, analysts are increasingly emphasizing the importance of procedural fairness,⁹ as they have identified that fair process may mitigate local opposition to wind farms even on the part of those who do not benefit from them.¹⁰ This, in turn, has led both analysts and practitioners to acknowledge the central role that community engagement plays in the construction of trust relations between wind farm developers and communities.¹¹

In this report we review what is known about community engagement in wind energy industry and identify what we still need to understand. After briefly presenting the relationship between wind farms and society as a significant one, we will recapitulate what strains that relationship and how community engagement can address it. We will point out that divergent models of community engagement are currently available to analysts and practitioners; that companies around the world are increasingly shifting towards more collaborative forms of engagement; that Australian business in the wind energy industry and planning authorities have some catching-up to do if they are to align themselves with such a global trend; and that the gap between declarations of principle advocating tighter collaboration between

¹ See Elliott (1994, 2003), Krohn & Damborg (1999), SEI (2003), Devine-Wright (2005a), Wolsink (2007a).

² See Wüstenhagen et al. (2007).

³ See Toke (2005a) and Aitken, McDonald, & Strachan (2008).

⁴ See Barry, Ellis, & Robinson (2008), Bell, Gray, & Haggett (2005), Devine-Wright (2007b), Ellis et al. (2007), Peel & Lloyd (2007).

⁵ See Commonwealth of Australia (2011).

⁶ See Aitken (2010b); Ricci, Bellaby, & Flynn (2010), Walker et al. (2010), Wolsink (2007a,b).

⁷ See Bell, Gray, & Haggett (2005), Hadwin (2009), Toke (2005c).

⁸ See Barry, Ellis, & Robinson (2008), Breukers & Wolsink (2007), Upreti & Van der Horst (2004), Wolsink (2007a).

⁹See Breukers & Wolsink (2007), Ellis et al. (2007), Walker et al. (2010), Wolsink (2007b).

¹⁰ See Frey, Benz, & Stutzer (2004), Gallagher, Ferreira, & Convey (2008).

¹¹ See Aitken (2010a), Breukers & Wolsink (2007), Ellis et al. (2009), Upreti & Van der Horst (2004), Strachan & Lal (2004), Wolsink (2000, 2007b).

wind farm developers and communities and the actual practice on the ground has left some critics wondering whether those declarations are just rhetorical stratagems geared to placate public opinion.

This criticism identifies a relevant issue neither scholars nor practitioners have so far systematically addressed: community engagement must be perceived to be "authentic" in order for it to be convincing. We identify two principal challenges for consideration of industry and government in this respect.

- The wind energy industry needs a robust business case to quantify the value added by more collaborative forms of community engagement to wind farm developers. Without being convinced that high quality collaboration with communities has a dollar benefit, wind farm developers will not be able to persuade communities that they are serious about engaging them more closely.
- The fact that certain impacts of wind farms are disproved by technical advice does not imply that communities will automatically believe it. By involving communities in the production of the technical knowledge that supports wind farm developments, thereby opening university labs, research centres and consulting projects to their participation, developers may give communities additional reasons to believe the scientific evidence that backs their proposals,

2 WIND FARMS AND COMMUNITIES: A RELATIONSHIP THAT MATTERS

Policymakers around the world have come to the realization that, to meet their ambitious national targets on renewable energy, constructive relationships with communities need to be nurtured. They know that poor community engagement is a source of conflict that can undermine wind farm development.¹² It does not matter whether the impacts of wind farms are real or perceived, as misperceptions have been documented to be a key source of community concerns.¹³ For this reason it is vital that developers take all concerns seriously and address them before they escalate. For example Wolsink (2007) argues that, "if local interests are not given a voice in decision-making processes, conditional supporters may turn into objectors".

Giving a voice to community interests requires that developers no longer think of communities as spectators but rather participants that want to be actively engaged in developments that affect their lives. ¹⁴ This makes perfect sense. Through participation communities hope to achieve a fairer and more even distribution of the benefits of developments while avoiding any negative impacts. ¹⁵ Through collaborative planning, developers and communities have a chance to identify ways to accommodate mutual interests, ¹⁶ resolve potential frictions and generate creative solutions to problems. ¹⁷ Where differences persist, giving voice and recognition to these has the potential to mitigate entrenched opposition. ¹⁸

¹² See McKinsey (2007), Wolsink (2000), Hindmarsh & Matthews (2008), Hindmarsh (2010), Valentine (2011).

¹³ See Thompson (2005), Wizelius (2007), NWCC (2001), Zamot, O'Neill-Carrillo, & Irizarry-Rivera (2005).

¹⁴ See Ellis et al. (2006), Walker et al. (2010).

¹⁵ See in particular Ellis et al. (2009).

¹⁶ See Ellis et al. (2009).

¹⁷ See Neely, Adams, & Kennerley (2002).

¹⁸ See Wizelius (2007).

The value of more collaborative approaches to community engagement in wind farm development is increasingly recognized both in Australia and overseas. Wind farm developers in Europe have been particularly active. And other industries, particularly the extractive ones, in Australia and abroad also do it on a regular basis, with many embracing the pursuit of a *social license to operate* as a basic pillar of business operations.¹⁹ In a recent report prepared for CSIRO, Hall, Ashworth & Shaw (2012) have explicitly urged wind farm developers to do the same. Such a cooperative framework, after all, can enhance mutual understanding and trust between wind farm developers and communities. And it can help control adverse impacts and share benefits more fairly. In general, the international experience shows that a commitment to more collaborative planning and implementation has paid off in relation to environmental issues²⁰ and in the deployment of new technologies.²¹

Australian institutions are well aware that the quality of community engagement needs to keep pace with the growth of the wind energy industry if roadblocks to development are to be avoided. Ultimately this will require greater progress in the design and deployment of more collaborative forms of community engagement on the part of wind farm developers. For their part, the Environment Protection and Heritage Council, for example, have recently stressed the relevance of community acceptance for the development of the wind industry in Australia.²² In addition two Inquiry Reports by the States of New South Wales (NSW) and Victoria have agreed on the inadequacy of community consultations carried out by most developers, thereby joining the call with the Environment Protection and Heritage Council for developers to step up their practices of engagement with communities.²³

Dismukes et al. (2007) have observed that "success of radical innovation (such as wide scale wind adoption) requires much of the community it affects: resolution of technical debates about approach, write-down of existing investments, unlearning and relearning of organisational behaviors and practices, creation of new businesses or even industries, perhaps even cultural change. These processes can take years."²⁴ To meet the national targets on renewable energy, the wind energy industry and government must act swiftly to institutionalize a practice of more collaborative community engagement on the part of wind farm developers. To do this we must better understand what the potential sources of strain are in the relationship between developers and communities.

3 WHAT STRAINS THE RELATIONSHIP

Practitioners and researchers initially attributed local resistance to wind farm developments to the so-called NIMBY (*Not In My Back Yard*) attitude that they believed prevailed in some communities. Soon, however, they realized that this concept obscures more than it reveals,²⁵ thereby failing to adequately explain why positive attitudes towards wind energy can coexist with negative attitudes towards particularly projects.²⁶ The challenge remains to explain the actual reasons why some people oppose wind farms.

¹⁹ See Parsons & Moffat (2011), Thomson & Boutilier (2010).

²⁰ See Koehler & Koontz (2008).

²¹ See Jasanoff (2004), Chen & Wu (2007), Hindmarsh & Du Plessis (2008), Fujigaki (2009).

²² See EPHC (2008, p.2); in Hall, Ashworth, & Shaw (2012, 15).

²³ See Hindmarsh (2010: 552-555).

²⁴ See in Valentine (2011: 111).

²⁵ See Thayer & Freeman (1987), Krohn & Damborg (1999), Bell, Gray, & Haggett (2005), van der Horst (2007), Wolsink (2000, 2006, 2007a, b).

²⁶ See Braunholtz (2003), Devine-Wright (2005a), Ek (2005), Eltham, Harrison, & Allen (2008), Wolsink (2007a).

Initially, analysts have focused on physical, technical, and environmental factors. Very soon, though, it has become apparent that social and institutional structures and processes play a crucial role,²⁷ and that, as a result of their context and time-dependence, the way they do so is particularly complex.²⁸

Among the physical factors possibly influencing public perceptions, visual intrusion and noise have commanded most of the attention among scholars and practitioners and have been regarded as the most salient.²⁹ In relation to visual impact, analysts have found that the perceived visual disruption of the unity and harmony of the landscape by wind farms is the greatest cause of public opposition to them.³⁰ Noise, in turn, has been considered to produce a broad spectrum of impacts, such as annoyance, nuisance and dissatisfaction, interference with speech, learning or sleep, tinnitus, anxiety and hearing loss.³¹ While some analysts have found that noise disturbance has a rather limited impact on public perceptions of wind farms,³² others have recently shown that it is the second most cited reason in the Australian media for opposing wind farms.³³

Apart from visual intrusion and noise, analysts have also looked into distance as a physical factor that could potentially affect public perceptions of wind farms.³⁴ Quite curiously, though, various studies have reported that people living closest to wind farms are also strongly supportive of them.³⁵ Further research on the relationship that such people have to wind-farms is necessary to understand this.

Scholars and practitioners have also looked at the potential impact that wind farms could have on wildlife, particularly on bird and bat populations.³⁶ This, however, seems to play a very minor role in public perceptions, unless wind farm developments are perceived to be a threat to ecologically fragile habitats with endangered species.³⁷

After addressing the physical, technical and environmental factors that were initially believed to trigger public opposition to wind farms, scholars and practitioners have increasingly looked into other psycho-social and socio-institutional factors. Among the psycho-social factors they have been the focus of attention are familiarity with wind energy technologies, general knowledge about wind energy, general attitudes towards wind energy, age, gender, the social uses of land, and social networks. More precisely, they have found that lack of familiarity with the technology negatively feeds into public perceptions of wind farms.³⁸ Initially, the lack of knowledge about

²⁷ See Birnie et al. (1999), Kahn (2003), Ek (2005), Devine-Wright (2005a), Toke (2005a), Loring (2007), Wolsink (2007a), Zoellner, Schweizer-Ries, & Wemheuer (2008).

²⁸ For example, familiarity with wind farms seems to be positively changing public attitudes towards them. See Dudleston (2000), Braunholtz (2003), Warren et al. (2005), DTI (2006), Warren and Lumsden (2008).

²⁹ See Devine-Wright (2005b), Warren et al. (2005), Lothian (2008), Pasqualetti, Gipe, & Righter (2002), Warren et al. (2005), Wolsink (2007b), Toke, Breukers, & Wolsink (2008). Warren *et al.* (2005) shows that their salience decreases after the implementation of a project.

³⁰ See Warren et al. (2005), Johansson & Laike (2007), Preston (2007), Pasqualetti (2000, 2001), Thayer & Freeman (1987). This is why opposition may extend beyond the turbines to the transmission lines. See Huber & Horbaty (2010). Also, this is why communities prefer turbines with neutral colors and smaller installations. See Devine-Wright (2005b).

³¹ See Rogers, Manwell, & Wright (2006).

³² See Krohn & Damborg (1999).

³³ See Hall, Ashworth, & Shaw (2012).

³⁴ See Devine-Wright (2005a), van der Horst (2007), Warren et al. (2005), Braunholtz (2003), Johansson & Laike (2007), McGowan, Sauter, & Brighton (2005).

³⁵ See Krohn & Damborg (1999), Dudleston (2000), Braunholtz (2003).

³⁶ See Arnett et al. (2008), Kunz et al. (2007).

³⁷ See Wolsink (2000), Firestone & Kempton (2007).

³⁸ See Wolsink (1994), Krohn & Damborg (1999).

wind energy was also believed to negatively impact public attitudes on wind farms.³⁹ Later studies, though, have shown that the relationship is not significant.⁴⁰

Negative attitudes towards wind energy have also been found to negatively influence public attitudes towards wind farms.⁴¹ Age and gender have been documented to exercise only a slight influence.⁴² Finally, analysts have shown that social networks matter. They are important conveyor belts through which information about wind farms circulates and trust between communities and wind farm developers can be built.⁴³

Among the socio-institutional factors potentially shaping public perceptions of wind farms, analysts have focused on corporate governance frameworks, policy frameworks, and on the modes of interaction between developers and communities. As far as corporate governance frameworks are concerned, share ownership can influence public attitudes towards wind farms and ultimately public acceptance of planning decisions.⁴⁴ Policy frameworks are also likely to play role in this.⁴⁵ Both can influence the way developers engage with communities. In particular, when they fail to push the former to collaborate with the latter, wind farm developers have a harder time at mitigating the potential sources of strain discussed in this section.

4 ADDRESSING THE STRAIN THROUGH COMMUNITY ENGAGEMENT

Community engagement is widely recognized as a key to dealing with the strains that can arise between wind farm developments and communities. Analysts around the world have found that collaborative forms of engagement involving genuine dialogue between parties, is the preferred approach. Australian wind farm developers and planning authorities, however, are still in the process of acknowledging this and adjusting their practices accordingly.

The move from top-down expert-informed decision-making to new practices that capitalize on the participation and dialogue with communities is widely viewed by both scholars and practitioners as a positive development.⁴⁶ As Hindmarsh (2010: 549) has recently observed, engaging the public in a transparent, inclusive, deliberative way, maximizing the diversity of perspectives and interests allowed into the decision-making process, and pursuing partnerships with communities to set agendas and look for creative solutions to problems, can trigger the emergence of trust, the change of attitudes, a more adequate framing of problems, and can in the end deliver better policy outcomes.⁴⁷ This, of course, requires considerable commitment by all parties. After all, adding deliberation into to decision-making may lengthen the process and make it more costly, more open-ended and therefore less controllable.⁴⁸ Still, in spite of that, a world leader in the wind energy industry in

⁴⁷ See Chen & Deng (2007), Edwards et al. (2008), Zografos & Martinez-Alier (2009), Beierle & Konisky (2000), Cavaye (2004), Melo & Baiocchi (2006), Clark & Illman (2001), Dovers (2005), Fischer (2006), Hophmayer-Tokich & Krozer (2008).

³⁹ See Krohn & Damborg (1999).

⁴⁰ See Wolsink (2007b), Ellis et al. (2007).

⁴¹ See Pedersen & Waye (2008).

⁴² See Ladenburg (2008).

⁴³ See Devine-Wright (2005a).

⁴⁴ See Krohn & Damborg (1999), Birnie et al. (1999), Strachan & Lal (2004), Devine-Wright (2005a, 2005b), Toke (2005a, 2005b, 2005c), Walker & Devine-Wright (2008), Breukers & Wolsink (2007), Komor (2004). Community ownership may reduce planning refusals and increase the availability of further sources of capital. See Greenpeace (2007), Patterson (2007), Scottish Renewables (2007). As Bolinger (2001) stresses, though, there are some drawbacks, such as the reduced economies of scale and the greater administrative burden relative to large, private sector wind farms. See McFadyen (2010).

⁴⁵ See Jobert, Laborgne, & Mimler (2007).

⁴⁶ See Connelly & Richardson (2004), Cavaye (2004), McGurk, Sinclair, & Diduck (2006), Wolsink (2007b).

⁴⁸ See Barnes et al. (2003), Oughton (2008).

Europe, has shown that local collaborations have made a vital contribution to successful wind farm planning. $^{\rm 49}$

The shift towards more open deliberative forms of decision-making in wind farm development made its appearance in December 2006 in the *Best Practice Guideline for Implementation of Wind Energy Projects in Australia* published by the Clean Energy Council. At the very beginning of the document, where the Attributes of a Best Practice Wind Farm are laid out, the document states that "the wind farm proponent will actively seek stakeholder participation and support through well-planned, open, inclusive and responsive engagement processes that respect local knowledge and concerns." Then, in *Appendix 4*, which elaborates with some further detail on stakeholder engagement, the document refers to a broad spectrum of channels of communications that allow for openness, inclusiveness and responsiveness.⁵⁰

The 2006 Australian Best Practice Guidelines build on the *Sustainability and Due Diligence Guidelines* published in 2005 by the World Wind Energy Association. While in some respects, this earlier document provides a more detailed discussion of stakeholder engagement it also appears to advocate for a more collaborative model based on genuine dialogue. For example, the *Sustainability and Due Diligence Guidelines* explicitly urge developers to tap into the local knowledge of communities and stakeholders and to actively use it in project planning for the purpose of minimizing adverse impacts and maximizing benefits.⁵¹ They call on developers to allow representation of all impacted stakeholders during the planning and implementation stages of their project, to provide them with "the opportunity to have informed input into the decision making process", and to involve them in the development and implementation of mitigation measures. Finally, they envisage the setup of a grievance management system at the beginning of wind farm projects.⁵²

The 2005 *Sustainability and Due Diligence Guidelines* appear to be bolder than the 2006 Australian Best Practice Guidelines as far as the recommended form of community engagement is concerned. Still, the lack of detail as how to operationalize the guidelines during community engagement leave the door open to a multiplicity of interpretations, which in some cases might end up curtailing the move from expert-informed to more participative forms of decision-making.

The Best Practices for Community Engagement and Public Consultation published in 2008 by the Canadian Wind Energy Association, instead, the Good Practice Handbook on Stakeholder Engagement published in 2007 by the International Finance Corporation, and the CSIRO Report prepared by Hall, Ashworth and Shaw (2012) on Community Acceptance of Rural Wind Farms in Australia clear the path from any possible ambiguity about the model of community engagement companies in the wind energy industry (and beyond) should adopt.

The introduction to *Best Practices for Community Engagement and Public Consultation* report prepared by the Canadian Wind Energy Association is quite telling:

⁴⁹ See Meyer (2007), Jobert, Laborgne, & Mimler (2007), Wolsink (2007a), Zografos & Martinez-Alier (2009).

⁵⁰ This includes written correspondence, letterbox drops, advertisements in newspapers, newsletters and brochures, A dedicated project website, e-newsletters, community groups or community-based events, community consultative committees, community reference groups, stakeholder and participant meetings, focus groups and taskforces, information displays, such as maps and scale models, dedicated telephone number and email address. See Appendix 4 in Clean Energy Council (2006: A4-25).

⁵¹ World Wind Energy Association (2005: 17).

⁵² "A process for addressing future concerns or risks from the project needs to be outlined to stakeholders at the start of the project." See World Wind Energy Association (2005: 18).

For wind energy developments this may create circumstances where there are differences of opinion about the merits of a wind farm in the community. It is important that developers understand and accept the fact that self-determination is the responsibility and the right of everyone in the community and that in order to be welcomed into a community you must "earn your citizenship".⁵³

The report goes on to argue that residents have a right to ask questions, to be skeptical, to be concerned, and to oppose the plans of a wind farm development. This is why developers must engage communities early, proactively, in a collaborative manner, and be open to bring in their suggestions. The report explicitly discourages developers from running "one-way, promotional" programs. Community engagement is "a proactive exercise in seeking out and responding to community issues to ensure everyone has the information they need to make informed decisions about your project." These best practices, in other words, accept that the interaction with communities is open-ended and therefore not pre-determined.⁵⁴

The IFC Good Practice Handbook on Stakeholder Engagement pushes participation in community engagement even further. To improve risk management and achieve better outcomes on the ground, stakeholder engagement must shift "from a short term means of meeting regulatory and lender requirements, to a longer-term, more strategic channel for relationship-building, risk mitigation, and new business identification." 55 Consultation, as a result, cannot be tied down to rules and requirements. It cannot boil down to "a one-time set of public meetings" as "this type of consultation rarely extends in any meaningful way beyond the project planning phase, and is seldom integrated into core business activities or measured in terms of its effectiveness in building constructive working relationships.⁵⁶ Companies, instead, must take a long-term view as building relationships take a long time. And this, in turn, demands from them an adjustment of their internal structures, processes, and postures. For example, they must hire and train community liaison staff and set up grievance management systems to address their stakeholders' grievances. The senior management must integrate stakeholder management into its business plans. And they must abandon such myopic postures as always negotiating for the lowest possible compensation rates, and take, instead, a long-term view that is consistent with the pursuit of a social license to operate.⁵

The application of the 'social license to operate' framework to the Australian wind energy industry is one of the core recommendations in the recent CSIRO Report prepared by Hall, Ashworth & Shaw (2012) on *Community Acceptance of Rural Wind Farms in Australia*.⁵⁸ In line with the IFC *Good Practice Handbook*, this report emphasizes that community engagement geared to pursue a social license to operate is a continual long-term process that, when necessary, must push operations above regulatory standards. The bar, after all, is set by local communities and society at large, not necessarily by existing legal requirements.⁵⁹ For this reason developers must "engage in ongoing, dialogic negotiation of community and societal expectations and perceptions"⁶⁰. The CSIRO Report also refers to an element that does not appear so explicitly in the other three documents: to pursue a social license

⁵³ See CANWEA (2008: 5).

⁵⁴ See CANWEA (2008: 5).

⁵⁵ International Finance Corporation (2007: 1).

⁵⁶ International Finance Corporation (2007: 2).

⁵⁷ The Handbook operationalizes further down the call to open up to communities to the point of asking company officials to informally mingle with communities, socialize, try to solve the little problems the community might have when possible. In short, it lays emphasis on the role that social capital may have on companies' operations.

⁵⁸ See Hall, Ashworth, & Shaw (2012).

⁵⁹ See Gunningham, Kagan, & Thornton (2004), Corvellec (2007), Thomson & Boutilier (2011), Parsons & Moffat (2011), Harvey & Brereton (2005).

⁶⁰ See Parsons & Moffat (2011: 22).

to operate, community engagement must address power inequalities between companies and communities.

The IAP2 Spectrum of Public Participation designed by the International Association of Public Participation features five levels of participation in decision-making processes: *Inform, Consult, Involve, Collaborate* and *Empower*. While the *Inform* model implies a one-way flow of information between decision-makers and communities, , the public provides feedback in the *Consult* model. In the *Involve* model, decision-makers work with the public to understand and keep into consideration their expectations. In the *Involve* model, decision-makers partner up with the public to identify new alternatives and solutions. Finally, in the Empower model, the public ultimately decide on the outcome.

The Best Practices for Community Engagement and Public Consultation published by the Canadian Wind Energy Association, the Good Practice Handbook on Stakeholder Engagement published by the International Finance Corporation and the CSIRO Report on Community Acceptance of Rural Wind Farms in Australia envisage a collaborative model of community engagement. The Sustainability and Due Diligence Guidelines published by the World Wind Energy Association, instead, seems to push as far as the Involve model while the Best Practice Guideline for Implementation of Wind Energy Projects in Australia published by the Clean Energy Council, in turn, meets the requirements for the Inform and the Consult models.

While the Australian guidelines on best practices in the wind energy industry still have some catching up to do with respect to international standards, so do institutional practices unfolding under current governance frameworks across the nation.

In 2006 the Commonwealth proposed a strong participatory National Code for Wind Farms. Senator Ian Campbell, then federal Minister for the Environment and Heritage, observed in the Forward that "the rapid growth of wind farms in Australia has generated significant community concern and debate. Much of this concern has centered on the perceived lack of consistency and transparency in the public consultation process, and a consequent failure to understand how the views of local communities are taken into account in the approval process."⁶¹ In response Senator Campbell called for the consultation of communities throughout the entire life of wind farm projects and for active participation of all stakeholders both at the planning and operation stages.⁶²

As Hindmarsh & Matthews (2008: 222-224) point out, the National Code did not spell out the concrete mechanisms of community engagement that its vision would require. After all, it could have laid out a concrete protocol that local planning authorities and developers would have to sign, like the England's Renewable Energy Agency South West public engagement protocol.⁶³ State governments, however, have resisted a push in that direction, fearing that it would hinder the development of the wind energy industry across Australia and called, instead, for 'adequate' community engagement.⁶⁴

⁶¹ See in Hindmarsh & Matthews (2008: 222).

⁶² See Australian Government (2006: 11).

⁶³ The Regen protocol indicates a broad spectrum of methodologies to deliver "a robust process of engagement that is inclusive, transparent, accessible and accountable, in line with government policy and for the benefit of all stakeholders", such as independent facilitation, participant negotiation and ownership of timescales for engagement plans, information (through public exhibitions and meetings, and regular communication), feedback on planning responses, and monitoring the progress of engagement. It includes an evaluation of the public engagement process (Regen 2004). Still, Hindmarsh and Matthews (2008: 228) also add a battery of objections also to the Regen protocol as it does not go too far and sometimes it does in contradictory ways.

⁶⁴ See Hindmarsh & Matthews (2008: 219).

For its part, the 2007 Auswind-ACNTWind Farms and Landscape Values—National Assessment Methodology emphasized transparent and proactive community engagement and indicated a series of methods to address through dialogue and understanding of the diverse values of different stakeholders. Still, it did not redesign state approval processes, left the choices over community engagement to developers, and did not offer guidance as how to operationalize transparent, inclusive and dialogic community engagement.⁶⁵

As far as the National Wind Farm Development Guidelines developed by the Environment Protection and Heritage Council are concerned, their elaboration also progressively drifted away from the initially strong participatory approach that was initially advocated. For example, in the final July 2010 draft, all references to dialogue with the community were dropped. Submissions were not disclosed to the public and communities did not take part to the formulation of the methodology. This came in later at the public consultative stage of the EPHC process.⁶⁶

At the state level Hindmarsh & Matthews (2008), Hindmarsh (2010) and Hall, Ashworth & Shaw (2012) indicate that the models of community engagement followed by state planning regulations across Australia are still very much centred on the *Inform* and *Consult* models, and therefore have not been able to reap the full benefits if a decisive shift towards more participatory forms of decision-making. A NSW Legislative Council Inquiry, for example, concluded that the current legislative requirements for consultation have the "potential to leave local communities disenfranchised and effectively erodes community support for the environmental imperatives central to renewable energy targets".⁶⁷ In South Australia analysts have stressed that planning processes and policies still lack sufficient detail to push community engagement agenda in the right direction.⁶⁸

5 WHAT WE STILL NEED TO UNDERSTAND

Hindmarsh & Matthews (2008) have recently complained that the push towards more participatory forms of community engagement by wind farm developers and planning authorities in Australia boils down to mere 'deliberative speak', that is, "a strategic language comprising a rhetorical array of terms reflecting deliberative principles and ideals of active public engagement—such as 'inclusive', 'informed', 'transparent', or 'participatory decision-making'—accompanied by a lack of appropriate processes and practices of active public engagement to adequately address those principles and ideals."⁶⁹

This criticism draws attention to one crucial aspect of community engagement that has been generally overlooked by scholars and practitioners. That is, community engagement needs to be carried out in a convincing way, which means that communities must receive it as an 'authentic' effort on the part of developers and government authorities. Only if they believe that the pursuit of community engagement is genuinely meant, will they be willing to believe it and be part of it.

The Best Practices for Community Engagement and Public Consultation prepared by the Canadian Wind Energy Association seem to be aware of this, warning developers that good community engagement builds "trust and cooperation as a result of people seeing first hand that you are serious about involving the community in your

⁶⁵ See Hindmarsh & Matthews (2008:227).

⁶⁶ See Hindmarsh (2010: 551).

⁶⁷ See NSW (2009: xi).

⁶⁸ See Hope (2011) and Crowley (2010).

⁶⁹ See Hindmarsh & Matthews (2008).

planning." ⁷⁰ Other observers have also noticed that suspicion of the developers' motives by the public, distrust of the developers and disbelief in the planning system may be responsible for the failure of wind farm projects.⁷¹

If community engagement needs to be perceived as authentic in order to deliver positive outcomes for communities, then we need to need to be clear about what we mean by authenticity. The latest cutting-edge research in sociology shows that this results from the coherent alignment of all the elements that make up the interaction between developers, planning authorities and communities.⁷²

If we approach engagement as if it were theater, its ingredients will be more directly apparent. There is obviously a script. This is what developers and planning authorities actually say to convince communities that they are serious about collaboratively engaging them. There are actors on stage who enact the script. There is a set of background representations or images of the very idea of open, inclusive, transparent and participatory decision-making. There is obviously a stage on which the interaction between the parties takes place. There are objects on stage that are used by developers and planning authorities to convince communities. And finally, the whole interaction is exposed to the subtle workings of social power. Social or economic hierarchies, for example, may well influence the way developers perform their engagement with communities and the way communities receive those efforts. Institutional rules, as well, may allocate power among the parties in a variably asymmetric way. When all these elements cohere, then communities will receive the engagement from the wind farm developers and planning authorities as authentic and will believe it. When they do not, for example, because the script diverges with respect to the behavior of the actors 'on stage', then communities (and critics) will stigmatize the performance as hardly persuasive, pure rhetoric, or cheap talk.

The proposal to use a dramaturgical approach to pin down the phenomenon of authenticity in community engagement does in no way imply that community engagement is something fake. For various decades sociologists have used this analytical framework to make sense of all type of social interactions. The point here is not about being fake. The point is whether the participants to a social interaction manage to be convincing, whether they can get on the same page or, as social scientists would say, whether they manage to establish a common horizon of meaning.

So far, scholars and practitioners have lacked an overarching analytical framework to address the question of authenticity that Hindmarsh and Matthews (2008) have implicitly touched on. As a result, their interventions have managed to discuss only separately some or single dimensions of community engagement that feed into authenticity, without actually realizing their full bearing on it.

For example, some scholars have looked into public understandings of what constitutes fair, open and transparent processes of participation and tried to infer how they might influence public acceptance of wind farms. In particular, based on the idea of procedural justice, they have suggested that community engagement will be perceived to be fair only if it allows full participation in the process, free expression of opinions and the possibility of being heard, the possibility of being treated with respect, adequate disclosure of information, impartiality of the decision maker and flexibility of decisions when new elements come up and call for revisions or corrections.⁷³ When this happens, they presume that fair engagement will

⁷⁰ See CANWEA (2008: 5).

⁷¹ See Eltham, Harrison, & Allen (2008),

⁷² For further orientation on the theoretical framework suitable to address the question of authenticity see Alexander (2006) and Tognato (2012). For a more policy-oriented application of the framework see Tognato (2010).

⁷³ See Gross (2007: 2730). See also Maguire & Lind (2003: 134), Lind & Tyler (1988).

automatically result into public acceptance of wind farms. The problem with this, though, is that cuing into community engagement well-established public understandings of fair process is *per se* not sufficient to convince communities. If the actors that play the script boil fair process down to some mechanical repetition of an empty liturgy that is incapable of conveying the energy of belief, then fair process will not 'feel and look like real' to those audiences.

The Best Practices for Community Engagement and Public Consultation prepared by the Canadian Wind Energy Association manages to address most of the dimensions that make up a convincing practice of dialogic community engagement. Even if they do not explicitly tackle the question of authenticity, they still manage to address it in part, at least implicitly: "Every time you deal with people in the community - from answering your telephone to participating in a formal presentation - you are shaping the relationship you have with your community. Every interaction is a 'moment of truth' for your reputation and ultimately the degree to which you are welcomed into the community."74 In other words, from the outset of the document the Best Practices alert wind farm developers about the multiplicity of the stages on which they will be required to convincingly perform community engagement. They provide a very thorough orientation on how to cast the actors, how to select the audiences, what scripts should be used, what background representations should underpin the scripts, what media should be brought in to carry out community engagement. Unlike many other handbooks or best practice guides on stakeholder or community engagement, this document directly orients wind farm developers on how to perform 'on stage' and which stages they should select for which audiences and for what purposes. Insisting on the fact that community engagement calls for some adequate 'presentation of the self',⁷⁵ the document warns that "facts are communicated verbally... credibility is communicated non-verbally."⁷⁶ And based on that, it provides guidance on how wind farm developers should appear 'on stage', thereby detailing how their attire should be, how their body should move, where their eyes should turn, how their face should look, how their hands should move, how their voice should sound. Similarly, the document dwells on alternative stages, such as for example conference halls, round tables, classrooms, or U-shaped tables.

The Best Practices for Community Engagement and Public Consultation published by the Canadian Wind Energy Association also dwells on particularly delicate settings of interaction -protests and emotional situations- that are quite critical in revealing how serious developers are about opening up to society. After warning that "developers must respect a community's right to closely examine and scrutinize your plans and to have questions and concerns about how your wind energy development will affect the fabric of the community"⁷⁷, the document urges company officials to establish contact with protestors, invite them to the meeting, remain calm, polite, respectful and open to discussion, receive their written material or verbal expressions of concern, offer them the opportunity to meet face to face. Then, before aggressive questioners who interrupt or stall public meetings, the document remind once again that developers "must at all times show respect for a person's right to be concerned, or to be upset if they have a legitimate complaint".⁷⁸ It recommends that developers stop talking and listen instead, eliminate all barriers with concerned questioners, walk towards them, establish equality with them, use open-ended questions, keep them talking, listen for cues that may reveal their feelings, demonstrate empathy,

⁷⁴ See CANWEA (2008: 5).

⁷⁵ See Goffman (1959).

⁷⁶ See CANWEA (2008: 23).

⁷⁷ See CANWEA (2008: 25).

⁷⁸ See CANWEA (2008: 26).

test for cognitive connection ("Can I suggest a solution for you?") and ultimately be prepared to start the approach all over again if that is not enough.⁷⁹

Although the Canadian *Best Practices* are a remarkably sophisticated and encompassing document, they fall short of acknowledging some important institutional elements that can contribute to the authenticity of community engagement. These are the internal organizational adjustments that wind farm developers will normally need to make to support higher levels of engagement with communities, and the external adjustments in policy and governance frameworks that can support more effective engagement.

With respect to the first element, the IFC *Good Practice Handbook on Stakeholder Engagement* is particularly useful. It points out that being serious about stakeholder engagement requires an alignment with it of all management functions within companies, the introduction of adequate reporting to stakeholders, the establishment of a grievance management system that will operate throughout the life of the project, and the opening up of project monitoring to stakeholder participation.

As far as the overarching policy and governance frameworks are concerned, various scholars have warned that without appropriate policy incentives, communities will start wondering about the real intentions behind community engagement on the part of wind farm developers.⁸⁰

After introducing an analytical framework that may help analysts tackle the question of authenticity in community engagement, we have been able to suggest that the literature generated by scholars and practitioners in the field of wind energy development and in contiguous fields has identified many of the key elements of authentic engagement. Two further elements, however, warrant consideration.

Our review of the scholarly literature and the institutional documents on community engagement in wind farm development reveals that little if any attention has been paid to quantifying the benefits of community engagement for developers. Great clarity is required on the monetary value of more collaborative practices of community engagement in wind farm development because their authenticity also depends on the concrete payoff for developers. If developers know that such practices pay off, and communities know that developers know, then it will be easier for communities to believe that developers mean it when they pursue greater collaboration and dialogue in community engagement. As a result of that, communities will be further motivated to take part into the interaction on those terms.

Harvard Professor and former UN Special Representative on Human Rights and Transnational Corporations, John Ruggie, gained access to a confidential study where one oil company "found that non-technical risks accounted for nearly half of all risk factors faced" in its operations. This study was preceded by one published by Goldman Sachs in 2008 based on 190 oil projects which found that over the previous decade the time for new projects to come on stream had nearly doubled and that political and social risk was a key variable.⁸¹ We believe that the wind energy industry needs a similar study.

⁷⁹ See CANWEA (2008: 26).

⁸⁰ See Hindmarsh & Matthews (2008), Hindmarsh (2010), Hall, Ashworth, & Shaw (2012).

⁸¹ We gratefully acknowledge Alexandra Guáqueta, Special Procedure Mandate Holder and Member of the United Nations Working Group on Human Rights and Transnational Corporations, for pointing us to these reports during the Workshop on Mining and Social Sciences organized on April 27, 2012 by the Institute for Mineral and Energy Resources and the Indo-Pacific Governance Research Centre at the University of Adelaide.

A further issue not canvassed in the literature with an important bearing on the authenticity of community engagement and therefore requiring consideration is the perceived veracity of the research related to wind farm impact assessment. To support their proposals, wind farm developers rely on technical reports prepared by scientists and engineers, who sometimes work directly for them and sometimes are hired as consultants. Consultants, in turn, may work for consulting firms or for academic institutions. In the latter case there is a general social expectation not only among academics but also among segments of the general public that consulting will happen with a higher degree of independence. Occasionally, wind farm developers draw from further scientific literature that has not been produced with particular reference to their specific projects for the purpose of showing that some impacts of wind farms are either do not exist or are not a threat to public health. To date, neither scholars nor practitioners have indicated how community engagement should proceed where communities are deeply skeptical about the technical or scientific material put forwards by wind farm developers to support their projects. Communities may suspect that developers are manipulating them, either because of the bad reputation of such developers or because they have had negative experiences in the past with developers. They may also have been indirectly exposed to a negative experience of community engagement in neighboring communities, or been exposed to some popularized accounts of the impacts of the wind energy industry. Under such circumstances appealing to the independence of the academics that produced the technical reports will not necessarily convince deeply skeptical communities. After all, if the pursuit of community engagement lacks authenticity, why should communities believe the data developers are putting forwards, irrespective of the authors? Popular culture is full of stories of science gone rogue and put to serve the 'greedy interests' of private corporations. A film like The Constant Gardener addressing the biases and misbehavior of a pharmaceutical company, or Michael Moore's iconic interventions against US cigarettes companies are just two examples of the type of cultural resources communities may draw upon to make sense of developers' technical reports.⁸²

When this happens, moving community engagement up the value chain of the wind energy industry development process is likely to prove beneficial. Doing so implies involving communities at beginning of the project development process, in the design of briefs for technical reports, particularly impact assessment reports and in their interpretation. It means opening up the doors of university labs, research centres and consulting projects to the curious, possibly inquisitive, and often refreshingly unorthodox gaze of communities, by interjecting and counter-pointing the technical side of wind energy development with community engagement, and by transforming it into an exercise of citizen's science where scientists, engineers and social scientists may directly interact with communities during the very production of technical knowledge and communities may find more reasons to trust it.

Steering community engagement in this direction implies navigating through some largely uncharted but potentially much less treacherous waters. Academics and practitioners in the wind energy industry will need to thoroughly examine the potential benefits of a model of 'upstream' community engagement, pilot it, evaluate it, and refine it as necessary.

Moving community engagement up the value chain of the wind farm development process would represent an important innovation in the wind energy industry, acting as an example for other industries eager to demonstrate a genuine commitment to the pursuit of the 'social license for operate'.

⁸² Tognato (2011) addresses this point with reference to the extractive industries and shows why the pursuit of a social license to operate differs from the pursuit of a cultural license to operate and why the latter may well be necessary to obtain the former.

6 **CONCLUSION**

Policymakers around the world have come to the realization that, to meet their ambitious national targets on renewable energy, it is crucial to bring communities with them. This is not easy. Various factors may strain the relationship between wind farms and society: physical, technical, environmental, psycho-social, socio-institutional.

Scholars and practitioners have increasingly emphasized that community engagement is one fundamental way to address such strains. Furthermore, they have insisted that, to do it adequately, community engagement must proactively pursue the collaboration and involvement of communities. The international trend clearly points in that direction. The Australian wind energy industry and Australian planning authorities, however, still have some catching up to do in that respect.

The gap between public declarations in favor of more participatory forms of decisionmaking in the wind energy industry and the practice on the ground have led some observers to question the authenticity of a shift of the Australian wind energy industry towards more collaborative forms of community engagement like those happening in other parts of the world.

As experts in the field of wind energy development have so far lacked of an analytical framework to orient them on how to authentically, and therefore convincingly, engage with communities, this report fills this gap by introducing one. Based on that, it flashes out what analytical dimensions make up the 'performance' of community engagement and under what circumstances they yield an 'authenticity' effect..

While we note that scholars and practitioners have so far managed to identify some of the key ingredients of authentic practices of collaborative community engagement, we identify two more that have so far been overlooked and explain in what way they feed into the authenticity of community engagement on the part of wind farm developers.

First, the scholarly literature and the institutional documents on community engagement in the wind energy industry fall short of making a sufficiently robust business case for more collaborative community engagement, thereby failing to quantify the actual dollar return that flows from enhanced risk management and mitigation. We have suggested that communities will be more likely to believe that developers pursuing greater collaboration and dialogue with them actually mean it, If developers know that such practices pay off, and if communities know that developers are fully aware of that.

Second, wind farm developers rely on technical reports prepared by scientists and engineers to underpin their proposals but for communities their credibility is not so automatic. By involving communities in the production of the technical knowledge that supports their projects, and by transforming that stage of wind farm development into an exercise of citizen's science, communities may find additional reasons to trust the data and the interpretations they are faced with.

Acknowledging the centrality of authenticity in community engagement and learning to authentically engage communities in a more collaborative manner can help Australian wind farm developers keep up the steam of their locomotive and maintain a sustained level of growth in their own industry.

Successful wind farm development in Australia requires the energy to engage.

REFERENCES

- Aitken, M. 2010a. "A three-dimensional view of public participation in Scottish land-use planning: empowerment or social control?" *Planning theory*, doi: 10.1177/1473095210366193.
- Aitken, M., 2010b. "Why we still don't understand the social aspects of wind power: a critique of key assumptions within the literature." *Energy Policy* 38(4): 1834–1841.
- Aitken, M., McDonald, S., & Strachan, P. 2008. "Locating 'power' in wind power planning processes: the (not so) influential role of local objectors." *Journal of Environmental Planning and Management* 51(6): 777–799.
- Alexander, J. 2006. "Cultural Pragmatics-Social Performace between Ritual and Strategy." In *Social Performance*, edited by J. Alexander, B. Giesen, & J. Mast, 29-90. Cambridge: Cambridge University Press.
- Arnett, E. *et al.* 2008. "Patterns of bat fatalities at wind energy facilities in North America." *Journal of Wildlife Management* 72: 61–78.
- Australian Government. 2006. *National Code for Wind Farms: A Discussion Paper*. Canberra: Commonwealth Government of Australia, Department of Environment and Water Resources.
- Barnes, M. *et al.* 2003. "Constituting 'the public' in public participation." *Public Administration* 81(2): 379–399.
- Barry, J., Ellis, G., & Robinson, C. 2008. "Cool rationalities and hot air: a rhetorical approach to understanding debates on renewable energy." *Global Environmental Politics* 8(2): 67–98.
- Beierle, T., & Konisky, D. 2000. "Values, conflict, and trust in participatory environmental planning." Journal of Policy Analysis and Management 19(4): 587–602.
- Bell, D., Gray, T., & Haggett, C. 2005. "The Social gap in wind farm siting decisions: explanations and policy responses." *Environmental Politics* 14(4): 460–477.
- Birnie, R. et al. 1999. "A review of the current status of wind energy developments in Scotland." Scottish Geographical Journal 115(4): 283–295.
- Bolinger, M., & Wiser, R. 2009. "Wind power price trends in the United States: struggling to remain competitive in the face of strong growth." *Energy Policy* 37: 1061–1071.
- Braunholtz, S. 2003. "Public attitudes to windfarms: a survey of local residents in Scotland." Edinburgh: MORI Scotland, for Scottish Executive Social Research.
- Breukers, S., & Wolsink, M. 2007. "Wind power implementation in changing institutional landscapes: an international comparison." *Energy Policy* 35(5): 2737–2750.
- CANWEA. 2008. Wind energy development: Best Practices for Community Engagement and Public Consultation. Ottawa: Canadian Wind Energy Association.
- Cavaye, J. 2004. "Governance and community engagement: The Australian experience." In *Participatory governance: Planning, conflict mediation and public decision making in civil society,* edited by W. Lovan, M. Murray & R. Shaffer, 85–102. UK: Ashgate.
- Chen, D.-S., & Deng, C.-Y. 2007. "Interaction between citizens and experts in public deliberation: A case study of consensus conferences in conferences in Taiwan." *East Asian Science, Technology and Society: An International Journal* 1: 77–97.
- Chen, D.-S., & Wu, C.-L. 2007. "Introduction: public participation in science and technology in East Asia." East Asian Science, Technology and Society: An International *Journal* 1:15–18.
- Clark, F., & Illman, D. 2001. "Dimensions of civic science: Introductory essay." *Science Communication* 23(1): 5–27.

- Clean Energy Council. 2006. Best Practice Guideline for Implementation of Wind Energy Projects in Australia.
- Commonwealth of Australia. 2011. *The Social and Economic Impact of Rural Wind Farms*, Community Affairs References Committee, The Senate.
- Connelly, S., & Richardson, T. 2004. "Exclusions: The necessary difference between ideal and practical consensus." *Journal of Environmental Planning and Management* 47(1): 3–17.
- Corvellec, H. 2007. "Arguing for a license to operate: the case of the Swedish wind power industry." Corporate Communications: An International Journal 12(2): 129-144.
- Cowell, R., Bristow, G., & Munday, M. 2011. "Acceptance, acceptability and environmental justice: the role of community benefits in wind energy development." *Journal of Environmental Planning and Management* 54 (4): 539-557.
- Crowley, R. 2010. Letter To Hon. Paul Holloway, MLC, SA Minister For Urban Development And Planning, from Acting Chief Executive Officer, Northern Areas Council, SA, December 20.
- de Vries, B., van Vuuren, D., & Hoogwijk, M. 2007. "Renewable energy sources: their global potential for the first-half of the 21st century at a global level: an integrated approach." *Energy Policy* 35: 2590– 2610.
- Devine-Wright, P. 2005a. "Beyond NIMBYism: towards an integrated framework for understanding public perceptions of wind energy." *Wind Energy* 8 (2): 125–140.
- Devine-Wright, P. 2005b. "Local aspects of UK renewable energy development: exploring public beliefs and policy implications." *Local Environment* 10 (1): 57–69.
- Devine-Wright, P. 2007a. "Energy citizenship: psychological aspects of evaluation in sustainable energy technologies." In Framing the Present, Shaping the Future: Contemporary Governance of Sustainable Technologies, edited by J. Murphy, 63–86. London: Earthscan.
- Devine-Wright, P.,2007b. "Reconsidering public attitudes and public acceptance of renewable energy technologies: a critical review." Working Paper 1.4, /http://www.sed.manchester.ac.uk/research/beyond nimbyism/deliverables/ outputs.HtmS.
- Dismukes J., et al. 2007. "Wind energy electrical power generation: industrial life cycle of a radical innovation." PICMET 2007 Proceedings, Portland, Oregon, 1-13.
- Dovers, S. 2005. *Environmental and sustainability policy: Creation, implementation, evaluation*. Annandale: Federation
- DTI. 2006. *Renewable Energy Awareness and Attitudes Research: Management Summary*. GfK NOP Social Research, UK Department of Trade and Industry, London.
- Dudleston, A. 2000. "Public attitudes towards wind farms in Scotland." Scottish Executive, Edinburgh.
- Edwards, P., et al. 2008. "A three-stage evaluation of a deliberative event on climate change and transforming energy." *Journal of Public Deliberation* 4 (1): Article
 6. <u>http://services.bepress.com/jpd/vol4/iss1/art6</u>
- Ek, K. 2005. "Public and private attitudes towards 'green' electricity: the case of Swedish wind power." Energy Policy 33: 1677–1689.
- Elliott, D. 1994. "Public reactions to wind farms: the dynamics of opinion formation." *Energy and Environment* 5: 343–362.
- Elliott, D. 2003. Energy, Society and Environment: Technology for a Sustainable Future. London: Routledge.
- Ellis, G., Barry, J., & Robinson, C. 2006. *Renewable energy and discourses of objection: Towards deliberative policy-making: Summary of main findings*. Northern Ireland: Queen's University Belfast.
- Ellis, G., Barry, J., & Robinson, C. 2007. "Many ways to say 'no', different ways to say 'yes': applying Q-Methodology to understand public acceptance of wind farm proposals." *Journal of Environmental Planning and Management* 50 (4): 517–551.

- Ellis, G., et al. 2009. "Wind power: Is there a planning problem?" *Planning Theory and Practice* 10(4): 521–547.
- Eltham, D., Harrison, G., & Allen, S. 2008. "Change in public attitudes towards a Cornish wind farm: Implications for planning." *Energy Policy* 36: 23–33.
- EPHC. 2008. *Report on Impediments to Environmentally and Socially Responsible Wind Farm Development.* Canberra: Environment Protection and Heritage Council.
- EPHC. 2010. National wind farm development guidelines—Draft. Adelaide: Environmental Protection and Heritage Council.
- Firestone J, & Kempton W. 2007. "Public opinion about large offshore wind power: underlying factors." *Energy Policy* 35: 1584–1598.
- Fischer, F. 2006. "Participatory governance as deliberative empowerment: The cultural politics of discursive space." *American Review of Public Administration* 36(1): 19–40.
- Frey, B.S., Benz, M., & Stutzer, A. 2004. "Introducing procedural utility: not only what, but also how matters." *Journal of Institutional and Theoretical Economics* 160: 377–401.
- Fujigaki, Y. 2009. "STS in Japan and East Asia: Governance of science and technology and public engagement." *East Asian Science, Technology and Society: An International Journal* 3: 511–518.
- Gallagher, L., Ferreira, S., & Convey, F. 2008. "Host community attitudes towards solid waste landfill infrastructure: comprehension before compensation." *Journal of Environmental Planning and Management* 51 (2): 233–257.
- Goffman, Erving. 1959. The presentation of self in everyday life. Garden City, NY: Doubleday.
- Greenpeace. 2007. Decentralising Scottish Energy: Cleaner, Cheaper More Secure Energy for the 21st Century. London: Greenpeace.
- Gross, C. 2007. "Community perspectives of wind energy in Australia: The application of a justice and community fairness framework to increase social acceptance." *Energy Policy* 35: 2727–2736.
- Gunningham, N., Kagan, R. & Thornton, D. 2004. "Social Licence and Environmental Protection: Why Businesses Go Beyond Compliance." *Law & Social Inquiry* 29(2): 307–341.
- Hadwin, R. 2009. "The problems of planning: a developer's perspective." *Planning Theory and Practice* 10 (4): 532–534.
- Hall, N., Ashworth, P., & Shaw, H. 2012. *Exploring community acceptance of rural wind farms in Australia: a snapshot*. Canberra: CSIRO.
- Harvey, B., & Brereton, D. 2005. "Emerging models of community engagement in the Australian minerals industry." UN Conference on Engaging Communities, Brisbane, August 14-17.
- Hindmarsh, R. 2010. "Wind Farms and Community Engagement in Australia: A Critical Analysis for Policy Learning." *East Asian Science, Technology and Society: An International Journal* 4: 541–563
- Hindmarsh, R., & Du Plessis, R. 2008. "The new civic geography of life sciences governance: Perspectives from Australia and New Zealand." *New Genetics and Society* 27(3): 175–180.
- Hindmarsh, R., & Matthews, C. 2008. "Deliberative speak at the turbine face: Community engagement, windfarms, and renewable energy transitions, in Australia." *Environmental Policy and Planning* 10(3): 217–232.
- Hope, K. 2011. Submission from Northern Areas Council Senate Inquiry into Social and Economic Impact of *Rural Wind Farms*. Canberra: Federal Parliament.
- Hophmayer-Tokich, S., & Krozer, Y. 2008. "Public participation in rural area water management: Experiences from the North Sea countries in Europe." *Water International* 33(2): 243–257.
- Huber, S. & Horbaty, R. 2010. Social Acceptance of Wind Energy: Results of IEA Wind Task 28 (Technical Report). Paris: International Energy Agency.

- International Finance Corporation. 2007. *Stakeholder engagement: A good practice handbook for companies doing business in emerging markets*. Washington DC: International Finance Corporation.
- Jasanoff, S. 2004. "Science and citizenship: A new synergy." Science and Public Policy 31(2): 90-94.
- Jobert, A., Laborgne, P., & Mimler, S. 2007. "Local acceptance of wind energy: Factors of success identified in French and German case studies." *Wind Energy* 10: 2751–2760.
- Johansson, M., & Laike, T. 2007. "Intention to respond to local wind turbines: the role of attitudes and visual perception." *Wind Energy* 10: 435–457.
- Kahn, R., 2000. "Siting struggles: the unique challenge of permitting renewable energy power plants." *The Electricity Journal* 13: 21–33.
- Koehler, B., & Koontz, T. 2008. "Citizen participation in collaborative watershed partnerships." Environmental Management 41: 143–154.
- Komor P. 2004. Renewable energy policy. USA: iUniverse.
- Krohn, S., & Damborg, S. 1999. "On public attitudes towards wind power." *Renewable Energy* 16(1–4): 954–960.
- Kunz, T., et al. 2007. "Ecological impacts of wind energy development on bats: questions, research needs, and hypotheses." *Frontiers in Ecology and the Environment* 5: 315–324.
- Lind, E., & Tyler, T. 1988. The Social Psychology of Procedural Justice. New York: Plenum Press.
- Loring, J. 2007. "Wind energy planning in England, Wales and Denmark: factors influencing project success." *Energy Policy* 35(4): 2648–2660.
- Lothian, A. 2008. "Scenic perceptions of the visual effects of wind farms on the South Australian landscapes." *Geographical research* 46 (2): 196–207.
- Maguire, L., & Lind, E. 2003. "Public participation in environmental decisions: stakeholders, authorities and procedural justice." *International Journal of Global Environmental Issues* 3(2): 133–148.
- McGowan, F., Sauter, R., & Brighton, E. 2005. Public Opinion on Energy Research: A Desk Study for the Research Councils. Sussex Energy Group, Science and Technology Policy Research Unit, University of Sussex.
- McGurk, B., Sinclair, A., & Diduck, A. 2006. "An assessment of stakeholder advisory committees in forest management: Case studies from Manitoba, Canada." *Society & Natural Resources* 19(9): 809–826.
- McKinsey, J. 2007. "Regulating avian impacts under the Migratory Bird Treaty Act and other laws: the wind industry collides with one of its own, the environmental protection movement." *Energy Law J*ournal: 28:71–93.
- Melo, M., & Baiocchi, G. 2006. "Deliberative democracy and local governance: Towards a new agenda." International Journal of Urban and Regional Research 30(3): 587–600.
- Meyer, N. 2007. "Learning from wind energy policy in the EU: Lessons from Denmark, Sweden and Spain." *European Environment* 17(5): 347–362.
- Neely, A., Adams, C., & Kennerley, M. 2002. *The performance prism*. London: Prentice Hall Financial Times Publishing.
- NSW. 2009. *Final report, rural wind farms*. Legislative Council General Purpose Standing Committee No. 5, Report 31, Sydney: NSW Legislative Council.
- NWCC. 2001. Avian collisions with wind turbines: a summary of existing studies and comparisons to other sources of avian collision mortality in the United States. USA: National Wind Coordinating Committee (NWCC).
- Oughton, D. 2008. "Public participation—Potential and pitfalls." Energy & Environment 19(3/4): 485–496.
- Parsons, R., & Moffat, K. 2011. "Constructing the meaning of social license." Canberra: CSIRO

- Pasqualetti, M. 2000. "Morality, space, and the power of wind-energy landscapes." *Geographical Review* 90: 381–394.
- Pasqualetti, M. 2001. "Wind energy landscapes: society and technology in the California desert." Society & Natural Resources 14: 689–699.
- Pasqualetti, M., Gipe, P., & Righter, R. 2002. "A landscape of power." In *Wind Power in View: Energy Landscapes in a Crowded World*, edited by M. Pasqualetti, P. Gipe, & R. Righter, 3–16. San Diego: Academic Press.
- Patterson, W. 2007. Keeping the Lights on: Towards Sustainable Electricity. Earthscan, London.
- Pedersen, E., & Persson-Waye, K. 2005. "Perception and annoyance due to wind turbine noise a doseresponse relationship." *Journal of the Acoustical Society of America* 116: 3460–3470.
- Peel, D., & Lloyd, M. 2007. "Positive planning for wind-turbines in an urban context." *Local Environment: The International Journal of Justice and Sustainability* 12(4): 343–354.
- Preston C., 2007. Judgment: Taralga Landscape Guardians Inc V Minister For Planning And Res Southern Cross Pty Ltd (NSWLEC 59), NSW Land and Environment Court, URL (consulted March 2011): <u>http://www.lawlink.nsw.gov.au/lecjudgments/2007nswlec.nsf/2007nswlec.nsf/WebView2/</u> 8C85A53A35F34D11CA25728E000CD322?OpenDocument
- Regen, S. 2004. South West Public Engagement Protocol and Guidance for Wind Energy. Exeter, UK: South West Renewable Energy Agency.
- Ricci, M., Bellaby, P., & Flynn, R. 2010. "Engaging the public on paths to sustainable energy: who has to trust whom?" *Energy Policy* 38(6): 2633–2640.
- Rogers A., Manwell J., and Wright, S. 2006. *Wind Turbine Acoustic Noise*. Amherst: Renewable Energy Research Laboratory, University of Massachusetts.
- Scottish Renewables. 2007. *Making Connections: Connecting Scotland's Renewable Energy Potential*. Glasgow: Scottish Renewables.
- SEI. 2003. "Attitudes Towards the Development of Windfarms in Ireland." Sustainable Energy Ireland, Bandon.
- Sims, R., Rogner, H., & Gregory, K. 2003. "Carbon emission and mitigation cost comparisons between fossil fuel, nuclear and renewable energy resources for electricity generation." *Energy Policy* 31: 1315– 1326.
- Strachan, P., & Lal, D. 2004. "Wind energy policy, planning and management practice in the UK: hot air or a Gathering Storm?" *Regional Studies* 38(5): 549–569.
- Thayer, R., & Freeman, C. 1987. "Altamont: public perceptions of a wind energy landscape." *Landscape* and Urban Planning 14: 379–398.
- Thompson, R. 2005. "Reporting offshore wind power: are newspapers facilitating informed debate?" *Coast Manage* 33:247–62.
- Thomson, I., & Boutilier, R. 2011. "Social Licence to Operate." In *SME Mining Engineering Handbook*, 1779-1796. Colorado: Society for Mining, Metallurgy and Exploration.
- Tognato, Carlo. 2010. "Diffusing Ruggie's Framework: Why authenticity Matters." Center for Social Studies, National University of Colombia, Bogota, <u>http://www.youtube.com/watch?v=N_KMAwsy2Fg</u>.
- Tognato, Carlo. 2011. "Extractive industries: Ensuring a cultural license to operate." *IPGRC Policy Brief* No. 7, September, University of Adelaide, Adelaide.
- Tognato, Carlo. 2012. "Culture and the Economy". In *The Oxford Handbook of Cultural Sociology*, edited by J. Alexander, R. Jacobs, & P. Smith, 117-156. Oxford and New York: Oxford University Press.
- Toke, D. 2005a. "Explaining wind power planning outcomes: some findings from a study in England and Wales." *Energy Policy* 33(12): 1527–1539.

- Toke, D. 2005b. "Are green electricity certificates the way forward for renewable energy? An evaluation of the United Kingdom's Renewables Obligation in the context of international comparisons. *Environment and Planning C: Government and Policy* 23(3): 361–374.
- Toke, D. 2005c. "Community wind power in Europe and in the UK." Wind Engineering 29: 301–308.
- Toke, D., Breukers, S., & Wolsink, M. 2008. "Wind power deployment outcomes: how can we account for the differences?" *Renewable and Sustainable Energy Reviews* 12(4): 1129–1147.
- Upreti, B., & Van der Horst, D. 2004. "National renewable energy policy and local opposition in the UK: the failed development of a biomass electricity plant." *Biomass and Bioenergy* 26: 61–69.
- Valentine, S. 2011. "Sheltering wind power projects from tempestuous community concerns." *Energy for* Sustainable Development 15: 109–114
- van der Horst, D. 2007. "NIMBY or not? Exploring the relevance of location and the politics of voiced opinions in renewable energy siting controversies." *Energy Policy* 35: 2705–2714.
- van der Horst, D., & Toke, D. 2009. "Exploring the landscape of wind farm developments; local area characteristics and planning process outcomes in rural England." *Land Use Policy* 27(2): 214-221.
- Warren, C., & McFadyen, M. 2010. "Does community ownership affect public attitudes to wind energy? A case study from south-west Scotland." *Land Use Policy* 27: 204–213.
- Warren, C., et al. 2005. "'Green on green': public perceptions of wind power in Scotland and Ireland." Journal of Environmental Planning and Management 48(6): 851–873.
- Walker, G, et al. 2010. "Trust and community: exploring the meanings, contexts and dynamics of community renewable energy." *Energy Policy* 38(6): 2655–2663.
- Walker, G., & Devine-Wright, P. 2008. "Community renewable energy: what should it mean?" *Energy Policy* 36 (2): 497–500.
- Warren, C.R., & Lumsden, C. 2008. "Familiarity breeds content? Public perceptions of wind power in the Scottish Borders." In *Energy and the Natural Heritage*, edited by C. Galbraith, & J. Baxter, 259–264. Edinburgh: TSO Scotland.
- Wizelius T. 2007. Developing wind power projects: theory and practice. UK: Earthscan.
- Wolsink, M.1994. "Entanglement of Interests and motives assumptions behind the NIMBY-theory on facility siting." *Urban Studies* 31: 851–866.
- Wolsink, M. 2000. "Wind power and the NIMBY-myth: institutional capacity and the limited significance of public support." *Renewable Energy* 21: 49–64.
- Wolsink, M. 2006. "Invalid theory impedes our understanding: A critique on the persistence of the language of NIMBY." *Transactions of the Institute of British Geographers* 31: 85–91.
- Wolsink, M., 2007a. "Wind power implementation: the nature of public attitudes: equity and fairness instead of 'backyard motives'." *Renewable and Sustainable Energy Reviews* 11(6): 1188–1207.
- Wolsink, M. 2007b. "Planning of renewables schemes: deliberative and fair decision-making on landscape issues instead of reproachful accusations of noncooperation." *Energy Policy* 35 (5): 2692–2704.
- World Wind energy Association. 2005. *Sustainability and Due Diligence Guidelines*. Bonn: World Wind Energy Association.
- Wüstenhagen, R., Wolsink, M., & Bürer, M. 2007. "Social acceptance of renewable energy innovation: an introduction to the concept." *Energy Policy* 35(5): 2683–2691.
- Zamot H., O'Neill-Carrillo E., Irizarry-Rivera, A. 2005. "Analysis of wind projects considering public perception and environmental impact." *37th Annual North American Power Symposium*, Missouri, USA, IEEE, 591–6.
- Zoellner, J., Schweizer-Ries, P., & Wemheuer, C. 2008. "Public acceptance of renewable energies: results from case studies in Germany." Energy Policy 36(11): 4136–4141.

Zografos, C., & Martinez-Alier, J. 2009. "The politics of landscape value: A case study of wind farm conflict in Catalonia." *Environment and Planning A* 41: 1726–1744.