Renewable energies and a social licence to operate: Australian wind farm case study

Dr Nina Hall, Social Scientist, Science into Society Group, CSIRO Australia
Low Emission Technologies Summer Academy Guildford, UK, July 2011
Contested and difficult: the Australian Carbon plan

Alan Moir, Sydney Morning Herald, 15/7/11
Today’s presentation

1. Renewable energy in Australia
2. Wind energy in Australia
3. CSIRO wind research
4. Commonwealth Scientific and Industrial Research Organisation
5. Social licence to operate
6. SLO findings: compensation, consultation
7. Summary and key findings
8. Workshop discussion
Renewable energy in Australia

- **Target:** 20% RE by 2020

- **Currently:** 9% RE

- **Uptake gap:** Installation rate and proposed insufficient

Operating renewable energy generators in Australia (Geoscience Australia, 2010; http://www.agso.gov.au/renewable/)
Wind energy in Australia

• Wind the priority RE

• Currently RE= 1.5% total generation

• Wind to provide 80% of new RE by 2020?

• Slow uptake and installation:
  1. Market
  2. Community opposition

Australian wind farms >100kW (CEC, 2010)
The research problem

95% public support for wind

Power of public: ‘Public preference, consumer choice, and community sanction will play a critical role in determining the eventual mix of technologies adopted’ (Ashworth, 2011).

Wind opposition affects the approval rate

Negative media portrayal

Community acceptance: affected by physical, contextual, political, socio-economic, social, local and personal aspects
Which community acceptance factors are limiting the installation of rural wind farms to meet the Renewable Energy Target in Australia?
CSIRO: Commonwealth Scientific and Industrial Research Organisation

Australia’s national science agency

One of the largest and diverse in the world

Ranked in top 1% in 13 research fields

Internationally recognised staff

Award winning talent

Building national prosperity & wellbeing
CSIRO’s Energy Transformed Flagship

- economic modelling and technology
- renewable energy for electricity and transport
- managing energy supply and demand.
CSIRO Science into Society Group

Applied social research on socially contested issues

Areas of interest:
• sustainable industry and community development
• assessment of technology
• social licence to operate
• investigation of related behavioural change.

Working with leaders in government, industry, civil society and other relevant stakeholders

Seeking to inform decisions and improve scientific understanding.
What is a Social licence to operate?

‘Organisations cannot run their operations unless the communities in which they operate accept their presence’ (Corvellec, 2007)
Features of SLO

• Dynamic

• Levels: acceptance → approval

• Boundaries:
  1. Legitimacy
  2. Credibility
  3. Trust

Levels of Social Licence to Operate, featuring boundary criteria (Thomson and Boutilier, 2011)
A social licence to operate wind farms

• Concept emerging in RE industry:
  “I believe [SLOs] will be the greatest barrier once the [market price issues] pass” (XX- wind co. rep)

• Informal SLO exists for wind

• Several key features: transparency, mutual trust, stakeholder demands set

• SLO and community-owned wind: easier to achieve
Grounded theory methods used with interview transcript analysis from above themes (Hoepfl, 1997) ....

... filtered through decision criteria for SLOs:

• whether the benefits represent acceptable trade-off (‘benefits’)
• trustworthiness of information provision and regulation surrounding that industry (Mason et al., 2010) (‘trust-building’)

Renewable energy’s social licence to operate
Features of a social licence to operate

Social licence to operate

- Benefits
  - Direct
  - Flow on
  - Compensatory

- Trust-building
  - Integrity
  - Processes
  - Understanding
Benefits

- Direct
  - For host
  - For community
  - For local govt

- Flow on
  - Synergy with farming
  - Tourism
  - Property price

- Compensatory
  - Compensation
  - Manage risks
  - Maintenance (eg roads)
Direct benefits

Gain for host:

“The financial security that I have achieved out of this ... I haven't been able to get in any other aspect of farming” (XJ)

“But the money that they've got ... they're pouring back into their places and doing lots of fixing up and weed control” (XJ)
Direct benefits

Gain for community:
“it's not about climate change, it's about regional development ... a way of providing a long-term revenue stream for that community to be able to then bring back new enterprise and thus new people and jobs into the community” (XO)

Gain for local government
Flow on benefits

Synergy with farming:
“The stock absolutely love it. … it's warm in the winter”
“(XW)"

Tourism gains:
“it has increased tourism; it's put them on the map a bit”
(XB)"

Increase in property price/ demand:
“You try and buy a block of land around [here] - you can't buy. They're just crazy prices” (XW)
Compensatory benefits

Compensation payment proposals
“wind farm lease payments should be shared differentially amongst people affected by a development and not only paid to the hosts of the turbines” (XP)

Prevent or repair road damage
“the legacy of that is that after the wind farms are completed, councils are faced with a lot of deteriorating roads” (XV)
Managing risks

• **Appropriate design:** layout, no. per region, visual impact

• **Consider health impacts:**

  *it's amazing how if you're getting money off something it doesn't actually worry you” (XM)*

  “I met some of the people who are sick. They're not making it up. ... I think some of that illness may be attributable to stresses and strains and psycho-social aspects of the wind industry” (XX)

• **Minimise Environmental impacts**
Renewable energy’s social licence to operate

- Trust-building
  - Integrity
    - Local decisions
    - Local agency
    - Listening
  - Processes
    - Engagement
    - Feedback
    - Communication
  - Understanding
    - Support
    - Opposition
• Allow local determination

• Ensure agency and opportunity to influence plan:
  “the tide was flowing very much in favour of this project, so I'm not sure that they ever felt they could stop it” (XD)

• Meaningfully hear individuals
Meaningful processes

• Telling non-hosts personally
  ‘We all just picked up the newspaper one day and here it was - full page, front page. Full front page, "[Local] Wind Farm" and we just - my God, what is this? Yep, we had no previous warning, no contact, no nothing from anyone’ (XQ)

• Ensure sufficient time for feedback

• Constant and transparent communication
Support

Presence of silent majority support:
“you just don't hear from the people that are happy because you don't ... [the media] take the positives out because people don’t seem to want to hear them” (XT)

Opposition ≠NIMBY: more complex; person vs ideological
Personal feelings of negativity

• Fear of unknown
• Jealousy
  “if you suddenly put a whole heap of wind turbines on your property that affect all your neighbours; and you get lots of money they get none, it's going to affect the relationship” (XB)
• Self interest
• Nothing to gain but much to lose:
  “people didn't come here to live in an enormous industrial estate. They came here [to] enjoy the rural amenity that this area offers” (XY)
Ideological opposition

• Rural response to city’s neglect
  “there is this resentment of people in the city and this resentment of government: we're always left out, you never consult us, we just get pushed around, we get told what to do ... the wind farm is becoming kind of the symbol of the rallying point for all of those sentiments” (XC)

• Anti-development

• Anti-greens/ anti-climate action
  “I've been to a few Landscape Guardians meetings and I reckon if you asked everyone who was a climate sceptic to leave, I think you'd be left with a handful” (XX)
Summary

Stages/outcomes of developments

Community-owned wind farms

SLO ambition of wind developer

Forced acceptance if govt overrides approval

Rejected proposals

1. Benefits (influences levels)
2. Trust-building (influences boundaries)

Illustrated levels of Social Licence to Operate, featuring boundary criteria (Thomson and Boutilier, 2011)
Key findings

• Social licence to operate (SLO) important

• SLO concept already exists; requires definition

• Key features of an SLO:
  • Benefits
  • Trust-building

• Effective SLO = increased RE
References


Bailey, A. (2011), 'Witness statement to Senate Inquiry into Social and economic impact of rural wind farms’, from the First Assistant Secretary, Renewables Energy Efficiency Division, Department of Climate Change and Energy Efficiency, March 25, Canberra.


ROAM Consulting (2010), The true costs and benefits of the enhanced RET, Report (CEC00003), Clean Energy Council, Melbourne.

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Thank you

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Discussion

• **Sharing**: What are the international experiences of wind and other energy technology social licences to operate?

• **Brainstorming**: How can the benefits of community-owned farms be applied at an industrial scale?

• **Identifying**: How to develop a RE SLO acceptable to communities?

• **Building**: Next steps for research and research alliances?
Delivering our science: key outcome domains

- Environment
- Energy
- Manufacturing, Materials and Minerals
- Agribusiness
- Information and Communications

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Australian GHG emissions and targets

Emissions:
• Emissions highest per capita in worlds
• Emissions rising 2% pa
• GHG sources: 30% electricity; 22% fugitive, 15 % each gas, transport, agricultural, 3% land use/forest change

Targets:
• Currently 5% on 2000 levels by 2020
• RET: 20% total energy generation by 2020
• New: 80% cuts on 2000 levels by 2050
Clean Energy Future plan
(proposed July 2011; vote in August)

C price:
• $23/t from July 2012
• Market trading from July 2015 (with $15 price floor)

Action:
• Close 2000MW most GHG polluting energy generation (coal fired power)
• C price on top 500 polluting co.s; domestic aviation
• Ag initiatives (conservation, C farming)
• vehicle emissions standards

RE support:
• $10nb RE investment
• $3.2 bn RE R&D
• RET
2. Trust-building

- Local decisions
- Local agency
- Listening

- Engagement
  - Feedback
  - Communication

Understand:
- Support
- Opposition

Integrity  Processes  Background understanding
1. Benefits

- for host
- for community
- for local govt

- Synergy with farming
  - Tourism
  - Property price

- Compensation
  - Maintenance (e.g., roads)
  - Manage risks

**Direct**

**Flow on**

**Compensatory**